

US Cash Interest Rate Product Analytics Package

For Business: November 29, 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
Potential Fed Secondary Market Purchase Candidates - Nominal Coupon Securities	17
10-Year Treasury Fair Value Model	18
5s/30s Treasury Benchmark Yield Curve Model	19
TRACE Treasury Daily Aggregate Statistics	20
Economic Data Surprise Report	22
Cash Treasury Market Liquidity Summary - New York, London, Tokyo	23
Hot Run vs. Off-the-run Spreads Report	26
T-bill Issuance Report	27
Treasury Issuance Forecast Report	28
US Treasury Butterfly Report	29
Forward Butterfly Report	31
CFTC Positions Report	33
Speculative Futures Traders' Positions Report	34
Treasury Dealer Positions and Transactions Report	36
Macro Hedge Fund Exposure and Leverage Report	37
Relative Value Hedge Fund Exposure and Leverage Report	38
CTA Exposure and Leverage Report	39
Excess Exposure of Active Core Bond Fund Managers	40
Large Domestic Commercial Bank Flows Report	41
Treasury Curves and Butterflies Risk-Adjusted Carry Report	43
Treasury Auction Reports	47
Synthetic USD Government Bond Report	50
Synthetic Yield Pickup using FX Basis	51

TIPS

TIPS Hot-run Relative Value Report	57
TIPS Summary Report	58
TIPS Fitted Curve Relative Value Report	60
Graphs: Seasonally-Adjusted Model Yields and Yield Errors	62
Potential Fed Secondary Market Purchase Candidates - TIPS	63
TIPS Forward Yields and Breakevens	64
TIPS Breakeven Fair Value Model	67
Tips Forward	70
Primary dealer positions in TIPS	72
Primary dealer transactions in TIPS	73
Excess Exposure of TIPS Fund Managers	74
TIPS Asset Swap Spread Reports	75
Inflation Data Surprise Report	80

STRIPS

US Treasury Strips Relative Value and Asset Swap Report	81
STRIPS Spread to Treasuries Report	91
Current C-STRIPS Yield minus P-STRIPS Yield	92
Most Mispriced STRIPS Pairs	95

Agencies

Agency Relative Value Report	96
Agencies Spread to Treasuries Report	97
Short-term Agency Report	98
Agency Issuance Summary	99
Agency Callables Spread Report	100
Agency Euro Callable 3M BreakEven Report	101

Contacts:

jpmorganmarkets.com

Jay F Barry (212) 834-4951
Phoebe White (212) 834-3092

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	(C+R)/Risk	3M Repo Special
3m	4.51	0.4	4.54	4.70	5.12	4.51	3	-12.4	-1.3	-13.7	-1.7	0	0.0	0.0	0.0	0.0	0
6m	4.46	-2.1	4.46	4.51	4.87	4.37	41	-6.7	-1.1	-7.9	-1.0	0	-27.4	-7.9	-35.4	-1.1	0
12m	4.37	-3.9	4.36	4.24	4.46	3.93	78	-4.8	-1.0	-5.7	-0.7	0	-15.4	-4.3	-19.7	-0.6	0
2y	4.21	-4.0	4.25	3.95	4.37	3.52	78	-2.1	-1.1	-3.3	-0.4	0	-7.0	-3.3	-10.2	-0.3	0
3y	4.15	-5.8	4.21	3.86	4.31	3.41	75	-1.5	-0.3	-1.8	-0.2	6	-4.6	-1.0	-5.6	-0.2	5
5y	4.11	-6.5	4.22	3.86	4.31	3.40	70	-1.0	-0.2	-1.2	-0.1	0	-3.3	-0.3	-3.6	-0.1	0
7y	4.17	-6.6	4.28	3.94	4.38	3.50	67	-0.7	0.1	-0.6	-0.1	0	-2.2	0.6	-1.6	-0.1	0
10y	4.24	-6.1	4.35	4.04	4.45	3.62	65	-0.1	-0.2	-0.3	0.0	38	-0.5	-0.7	-1.2	0.0	28
20y	4.51	-5.5	4.64	4.38	4.74	4.00	59	-0.1	0.1	0.0	0.0	0	-0.3	0.4	0.1	0.0	0
30y	4.43	-5.2	4.54	4.30	4.64	3.94	59	-0.1	-0.1	-0.2	0.0	6	-0.3	-0.4	-0.7	0.0	5

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	-5	-2.5	-8	-18	-3	-34	94	-5.7	-0.1	-5.8	0.0	0.0	0.0
3m/12m	-14	-4.3	-18	-46	-9	-94	89	-7.7	-0.3	-8.0	0.0	0.0	0.0
6m/12m	-9	-1.7	-10	-27	-4	-59	83	-2.0	-0.2	-2.2	-12.0	-3.6	-15.6
1/2	-18	1.0	-13	-28	-7	-53	73	-1.1	-0.8	-1.9	-3.5	-3.7	-7.2
2/3	-6	-1.8	-4	-8	-2	-18	65	-0.6	-0.8	-1.4	-2.4	-2.3	-4.7
2/5	-10	-2.5	-3	-9	2	-23	35	-1.1	-1.0	-2.1	-3.7	-3.0	-6.7
2/10	3	-2.1	10	9	23	-4	16	-2.0	-0.9	-2.9	-6.5	-2.5	-9.0
5/10	13	0.3	13	18	26	9	10	-1.0	0.1	-0.9	-2.8	0.4	-2.4
5/20	40	0.9	42	53	65	36	14	-0.9	-0.3	-1.2	-3.0	-0.7	-3.6
10/20	27	0.6	29	35	41	26	11	0.0	-0.3	-0.3	-0.2	-1.1	-1.3
2/30	22	-1.2	29	36	58	20	2	-2.0	-1.0	-3.0	-6.7	-2.9	-9.5
5/30	31	1.2	32	45	61	26	13	-0.9	0.0	-1.0	-3.0	0.1	-2.9
10/30	19	0.9	19	27	35	14	19	0.0	-0.1	-0.1	-0.2	-0.3	-0.5
20/30	-9	0.3	-10	-8	-4	-12	37	0.0	0.2	0.2	0.0	0.8	0.8

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	-1.9	2.0	-0.7	7.1	-10.5	95.2	1.2	-0.8	0.4	6.7	-1.4	5.3
1/2/3	-6.0	1.4	-4.3	-9.7	-1.5	-19.6	76.2	0.3	0.0	0.2	0.6	0.7	1.3
1/5/30	-29.4	-1.3	-23.9	-40.6	-18.6	-62.0	69.8	0.6	0.9	1.5	2.1	3.4	5.5
2/3/5	-0.8	-0.6	-2.6	-4.0	-0.2	-8.1	96.8	0.1	0.3	0.4	0.5	0.8	1.3
2/5/10	-11.2	-1.4	-8.1	-13.4	-6.5	-21.2	63.5	0.1	0.5	0.6	0.4	1.7	2.2
2/5/30	-20.6	-1.8	-17.6	-26.7	-14.5	-35.7	69.8	0.1	0.5	0.5	0.4	1.6	1.9
5/7/10	-0.7	-0.3	-0.2	-0.8	1.3	-2.3	52.4	-0.1	0.3	0.2	-0.3	1.1	0.8
2/10/30	-7.9	-1.5	-4.2	-8.7	-0.7	-16.5	57.1	1.0	0.4	1.4	3.2	1.1	4.3
5/10/30	-3.0	-0.3	-2.7	-4.3	-1.0	-6.1	77.8	0.5	-0.1	0.4	1.3	-0.4	0.9

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 butterfly 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

jpmorganmarkets.com

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				
9128283J7	2.125	Nov 30, 2024	0.0	7	9.178	424.4	421.8	0.00	0	259.1	97	3.5	277.8	0.0	4.7	0	0.4	0.0	5.3	0	0.4	0	0	0	0	30	23	0		
912828YV6	1.500	Nov 30, 2024	0.0	5	12.846	615.0	298.7	0.00	0	519.4	98	5.5	542.1	0.0	-0.1	0	0.0	0.0	0.1	0	0.0	0	0	0	0	44	23	62		
91282CFX4	4.500	Nov 30, 2024	0.0	2	12.795	606.0	882.9	0.00	0	530.4	98	5.6	548.0	0.0	7.1	0	0.5	0.0	7.5	0	0.6	0	0	0	0	47	10	11		
91282CDN8	1.000	Dec 15, 2024	0.0	3	4.650	16.8	6.2	0.04	4	6.3	85	1.1	-30.2	5.9	16.8	100	3.5	6.6	14.9	100	3.5	0	0	0	62	13	11			
9128283P3	2.250	Dec 31, 2024	0.1	7	4.419	4.4	0.0	0.09	9	-5.5	33	-0.6	-28.8	-11.7	0.6	55	0.1	-10.0	-0.3	55	-0.1	0	0	0	32	21	14			
91282CGD7	4.250	Dec 31, 2024	0.1	2	4.531	2.0	0.0	0.09	9	6.0	65	0.6	-17.6	-0.4	6.3	85	1.2	1.2	5.2	77	1.0	0	0	0	42	0	0			
912828YY0	1.750	Dec 31, 2024	0.1	5	4.603	-2.2	0.0	0.09	9	14.9	92	1.5	-10.4	6.8	12.5	100	2.2	8.4	11.2	100	2.0	0	0	0	45	30	45			
91282CDS7	1.125	Jan 15, 2025	0.1	3	4.490	0.4	0.0	0.13	13	4.3	73	0.6	-20.3	-2.1	4.8	100	1.8	0.0	3.7	100	1.3	0	0	0	60	14	13			
9128283V0	2.500	Jan 31, 2025	0.2	7	4.532	1.8	0.0	0.17	17	5.6	77	0.8	-15.4	3.3	6.5	100	1.9	5.7	5.2	100	1.5	0	0	0	32	19	13			
91282CGG0	4.125	Jan 31, 2025	0.2	2	4.501	3.4	0.0	0.17	18	1.4	59	0.2	-18.5	0.2	3.1	97	0.9	2.5	1.9	87	0.5	0	0	0	42	0	0			
912828Z52	1.375	Jan 31, 2025	0.2	5	4.470	1.7	0.0	0.17	17	1.4	64	0.2	-21.6	-2.9	4.0	100	1.2	-0.5	2.7	100	0.8	0	0	0	45	36	43			
912810ET1	7.625	Feb 15, 2025	0.2	30	3.870	-34.5	28.7	0.21	22	-0.7	55	0.0	-94.5	-60.7	5.6	42	0.8	-58.7	3.9	32	0.6	0	0	0	10	65	1027			
912828J27	2.000	Feb 15, 2025	0.2	10	4.504	-2.9	7.8	0.21	21	-8.6	9	-1.2	-33.5	2.7	-0.3	75	-0.1	4.7	-1.9	70	-0.4	0	0	0	66	19	650			
91282CDZ1	1.500	Feb 15, 2025	0.2	3	4.495	-3.5	5.8	0.21	21	-8.7	12	-1.3	-34.4	1.8	-0.9	67	-0.2	3.7	-2.5	47	-0.6	0	0	0	80	38	29			
9128283Z1	2.750	Feb 28, 2025	0.3	7	4.432	0.5	0.0	0.25	25	-0.4	41	-0.1	-16.0	-3.7	0.8	90	0.2	-1.9	-1.0	72	-0.3	0	0	0	36	27	6			
912828ZC7	1.125	Feb 28, 2025	0.3	5	4.380	-0.8	0.0	0.25	25	-5.6	17	-1.0	-21.1	-8.8	-2.0	67	-0.4	-7.1	-3.6	57	-0.7	0	0	0	47	32	11			
91282CGN5	4.625	Feb 28, 2025	0.3	2	4.495	-0.3	0.0	0.25	25	5.0	89	1.0	-9.7	2.6	4.3	100	1.4	4.4	2.5	100	0.8	0	0	0	52	19	0			
91282CED9	1.750	Mar 15, 2025	0.3	3	4.450	-4.4	3.3	0.29	29	3.0	58	0.5	-19.6	-1.0	3.0	83	1.1	0.6	1.0	68	0.4	0	-122.4	-6.2	-128.6	-125.6	1.121	56	14	44
9128284F4	2.625	Mar 31, 2025	0.3	7	4.404	-4.2	0.0	0.33	33	0.8	48	0.1	-16.9	-4.0	-1.3	75	-0.3	-2.5	-3.4	55	-0.8	0	-82.8	-8.7	-91.5	-90.7	1.106	34	54	22
91282CGU9	3.875	Mar 31, 2025	0.3	2	4.426	-2.7	0.0	0.33	34	0.1	45	0.0	-14.6	-1.8	-2.3	58	-0.6	-0.3	-4.3	42	-1.0	0	-76.2	-8.6	-84.8	-84.7	1.111	42	0	3
912828ZF0	0.500	Mar 31, 2025	0.3	5	4.375	-6.7	0.0	0.33	33	-4.4	21	-0.8	-19.7	-6.9	-5.3	48	-1.0	-5.4	-7.3	25	-1.3	0	-91.0	-8.7	-99.7	-104.1	1.099	47	15	6
91282CEH0	2.625	Apr 15, 2025	0.4	3	4.367	-1.7	0.0	0.37	37	0.8	56	0.1	-19.2	-6.0	-1.0	73	-0.2	-4.6	-3.1	65	-0.5	0	-64.5	-8.5	-73.0	-72.2	1.093	57	19	21
9128284M9	2.875	Apr 30, 2025	0.4	7	4.400	-2.8	0.0	0.41	41	-4.7	23	-0.7	-12.5	-1.6	-5.3	50	-1.0	-0.2	-7.4	30	-1.3	0	-41.3	-8.8	-50.1	-54.8	1.093	33	25	10
91282CGX3	3.875	Apr 30, 2025	0.4	2	4.420	-3.1	0.0	0.41	41	-2.8	38	-0.5	-10.4	0.5	-3.4	62	-0.7	1.9	-5.5	42	-1.1	0	-38.3	-8.8	-47.1	-49.9	1.098	46	9	0
912828ZL7	0.375	Apr 30, 2025	0.4	5	4.405	-2.9	0.0	0.41	41	-4.0	18	-0.7	-11.9	-1.0	-4.5	48	-1.0	0.4	-6.7	28	-1.4	0	-40.5	-8.8	-49.3	-53.3	1.095	46	10	13
912828XB1	2.125	May 15, 2025	0.5	10	4.420	-0.8	0.0	0.45	45	-3.8	23	-0.8	-9.8	1.7	-2.4	65	-0.7	3.0	-4.5	45	-1.2	0	-31.9	-8.3	-40.2	-44.0	1.095	66	24	723
91282CEQ0	2.750	May 15, 2025	0.5	3	4.421	-1.5	0.0	0.45	45	-3.6	27	-0.8	-9.6	1.9	-2.3	55	-0.6	3.2	-4.3	47	-1.1	0	-31.6	-8.3	-39.9	-43.5	1.095	75	42	0
9128284R8	2.875	May 31, 2025	0.5	7	4.440	-2.2	3.2	0.48	49	-1.8	27	-0.5	-6.2	5.0	0.2	90	0.1	6.3	-1.7	77	-0.6	0	-27.8	-8.2	-36.0	-37.8	1.078	35	36	117
912828ZT0	0.250	May 31, 2025	0.5	5	4.428	-2.7	0.3	0.49	48	-5.5	9	-1.4	-7.4	3.8	-3.4	40	-1.1	5.1	-5.4	17	-1.6	0	-28.9	-8.2	-37.1	-42.6	1.074	49	18	64

Notes:

1. Treasury GC Repos O/N 4.61 1M 4.65 3M 4.62 6M 4.54
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	Yld Issue	1-D Yld Chg	Spot Bad	Mod Dur	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					
91282CHD6	4.250	May 31, 2025	0.5	2	4.440	-2.5	4.6	0.48	49	-1.7	39	-0.4	-6.1	5.1	0.3	90	0.1	6.3	-1.6	80	-0.5	0	-27.7	-8.2	-35.9	-37.6	1.079	50	16	0
91282CEU1	2.875	Jun 15, 2025	0.5	3	4.372	-4.4	1.5	0.53	53	-6.0	20	-1.0	-15.4	-0.6	-2.2	82	-0.4	0.6	-4.1	72	-0.7	0	-29.9	-7.7	-37.6	-43.6	1.059	47	6	3
91282XZ8	2.750	Jun 30, 2025	0.6	7	4.358	-1.2	0.0	0.57	57	-0.8	56	-0.2	-11.2	-0.8	2.6	100	0.6	0.4	0.9	95	0.2	0	-26.8	-6.9	-33.7	-34.5	1.056	34	48	20
91282CHL8	4.625	Jun 30, 2025	0.6	2	4.421	-1.5	0.0	0.56	57	-0.6	48	-0.2	-4.9	5.6	2.4	100	0.8	6.8	0.6	98	0.2	0	-22.3	-6.8	-29.1	-29.7	1.072	42	0	0
91282ZW3	0.250	Jun 30, 2025	0.6	5	4.393	-3.1	0.0	0.57	56	-4.2	6	-1.4	-7.7	2.8	-1.6	72	-0.6	4.0	-3.6	50	-1.2	0	-24.2	-6.9	-31.1	-35.3	1.064	53	19	9
91282CEY3	3.000	Jul 15, 2025	0.6	3	4.353	-3.0	0.0	0.61	61	-1.8	47	-0.3	-10.5	0.2	1.2	100	0.2	1.3	-0.5	98	-0.1	0	-24.9	-6.8	-31.7	-33.5	1.050	48	11	19
91282Y79	2.875	Jul 31, 2025	0.7	7	4.422	-2.9	0.0	0.65	65	1.1	65	0.5	-2.4	8.3	3.2	100	1.0	9.4	1.4	98	0.5	0	-18.8	-6.8	-25.6	-24.5	1.062	32	33	66
91282CHN4	4.750	Jul 31, 2025	0.7	2	4.434	-3.5	0.0	0.65	66	0.8	59	0.4	-1.4	9.4	2.0	98	0.9	10.6	0.1	80	0.1	0	-18.2	-6.7	-24.9	-24.1	1.066	37	0	0
91282CAB7	0.250	Jul 31, 2025	0.7	5	4.429	-3.3	0.0	0.66	64	-0.1	38	-0.1	-1.6	9.0	1.5	100	0.6	10.2	-0.3	68	-0.1	0	-18.2	-6.9	-25.1	-25.2	1.063	53	17	11
912810EV6	6.875	Aug 15, 2025	0.7	30	3.881	-1.9	0.0	0.68	71	0.6	47	0.0	-55.9	-44.5	-3.2	43	-0.3	-43.4	-5.2	23	-0.5	0	-47.2	-7.3	-54.5	-53.9	0.925	11	70	993
912828K74	2.000	Aug 15, 2025	0.7	10	4.430	-3.3	0.0	0.69	68	0.0	47	0.0	-0.7	10.3	1.7	93	0.9	11.5	-0.2	80	-0.1	0	-17.0	-7.1	-24.1	-24.1	1.058	66	18	381
91282CFE6	3.125	Aug 15, 2025	0.7	3	4.426	-4.1	0.0	0.69	69	-0.5	36	-0.4	-1.2	9.9	0.6	80	0.3	11.1	-1.3	58	-0.7	0	-17.3	-7.0	-24.3	-24.8	1.058	65	42	0
9128284Z0	2.750	Aug 31, 2025	0.8	7	4.460	-3.6	2.0	0.73	72	0.6	61	0.5	4.0	14.3	2.8	98	1.1	15.5	0.9	92	0.4	0	-10.8	-12.2	-23.0	-22.4	1.056	33	34	0
91282CHV6	5.000	Aug 31, 2025	0.8	2	4.459	-3.3	3.6	0.72	73	0.2	44	0.2	3.8	14.2	2.0	100	0.9	15.4	0.1	85	0.1	0	-11.0	-12.2	-23.2	-23.0	1.056	50	9	0
91282CAJ0	0.250	Aug 31, 2025	0.8	5	4.466	-3.4	0.2	0.73	71	0.5	59	0.3	4.7	14.9	2.6	98	1.0	16.1	0.7	92	0.3	0	-10.4	-12.3	-22.7	-22.2	1.056	55	18	12
91282CFK2	3.500	Sep 15, 2025	0.8	3	4.396	-3.7	0.0	0.77	77	-2.2	20	-0.9	-4.0	8.9	2.0	98	0.7	10.1	0.1	95	0.0	0	-13.0	-11.0	-24.0	-26.2	1.041	41	0	5
9128285C0	3.000	Sep 30, 2025	0.8	7	4.382	-3.9	0.0	0.81	80	-3.2	9	-1.6	-3.3	8.6	0.1	95	0.0	9.9	-2.0	73	-0.8	0	-13.7	-8.8	-22.5	-25.7	1.039	31	29	148
91282CJB8	5.000	Sep 30, 2025	0.8	2	4.408	-4.0	0.0	0.81	82	-1.5	8	-1.4	-0.9	11.2	0.6	93	0.3	12.4	-1.4	78	-0.6	0	-12.7	-8.8	-21.5	-23.0	1.046	48	0	0
91282CAM3	0.250	Sep 30, 2025	0.8	5	4.422	-3.4	0.0	0.82	79	-0.5	30	-0.5	0.8	12.7	1.7	100	0.8	13.9	-0.3	90	-0.1	0	-11.8	-8.9	-20.7	-21.2	1.048	60	13	0
91282CFP1	4.250	Oct 15, 2025	0.9	3	4.378	-4.5	0.0	0.85	85	-1.6	17	-1.0	-2.6	9.3	1.2	95	0.5	10.5	-0.9	85	-0.4	0	-13.0	-8.2	-21.2	-22.8	1.039	40	0	0
9128285J5	3.000	Oct 31, 2025	0.9	7	4.386	-4.2	0.0	0.89	88	-0.4	36	-0.3	-0.8	11.0	1.9	97	0.9	12.3	-0.1	95	0.0	0	-10.9	-8.8	-19.7	-20.1	1.039	31	38	14
91282CJE2	5.000	Oct 31, 2025	0.9	2	4.400	-3.8	0.0	0.89	90	-0.1	41	-0.1	0.6	12.5	1.5	98	0.8	13.8	-0.5	95	-0.3	0	-10.4	-8.7	-19.1	-19.2	1.043	50	0	0
91282CAT8	0.250	Oct 31, 2025	0.9	5	4.402	-3.6	0.0	0.90	87	-0.3	36	-0.4	0.8	12.6	1.6	100	0.8	13.9	-0.4	92	-0.2	0	-10.2	-8.8	-19.0	-19.3	1.042	59	12	16
91282CFW6	4.500	Nov 15, 2025	1.0	3	4.393	-4.0	2.5	0.93	93	0.4	79	0.7	-1.4	13.0	1.0	97	0.5	14.3	-1.1	80	-0.6	0	-10.0	-8.3	-18.3	-17.9	1.041	54	26	1
912828M56	2.250	Nov 15, 2025	1.0	10	4.401	-4.3	1.3	0.94	92	0.5	76	0.7	-0.6	13.7	0.9	98	0.4	15.1	-1.1	87	-0.5	0	-9.7	-8.3	-18.0	-17.5	1.043	66	12	375
9128285N6	2.875	Nov 30, 2025	1.0	7	4.406	-3.0	0.8	0.96	96	2.7	98	3.0	5.7	15.0	2.1	100	1.1	16.4	0.1	95	0.1	0	-9.8	-7.0	-16.8	-14.1	1.046	34	32	0
91282CJL6	4.875	Nov 30, 2025	1.0	2	4.388	-5.0	1.3	0.95	97	0.6	70	0.6	3.7	13.2	-0.3	93	-0.2	14.6	-2.3	65	-1.4	0	-10.5	-7.0	-17.5	-16.9	1.043	54	1	0
91282CAZ4	0.375	Nov 30, 2025	1.0	5	4.398	-3.8	0.1	0.98	94	1.1	91	1.7	4.9	14.1	0.7	98	0.4	15.5	-1.3	80	-0.7	0	-10.0	-7.0	-17.0	-15.9	1.041	65	21	0
91282CGA3	4.000	Dec 15, 2025	1.0	3	4.366	-4.4	0.0	0.99	101	0.4	76	0.7	0.1	12.7	0.0	83	0.0	14.2	-2.0	53	-1.0	0	-10.8	-6.4	-17.2	-16.8	1.037	40	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						
9128285T3	2.625	Dec 31, 2025	1.1	7	4.362	-4.0	0.0	1.04	104	0.2	67	0.5	0.5	13.9	0.0	97	0.0	15.4	-2.0	58	-1.3	0	-10.2	-6.2	-16.4	-16.2	1.034	32	33	0
91282CJS1	4.250	Dec 31, 2025	1.1	2	4.373	-3.3	0.0	1.03	105	0.4	73	0.6	1.6	15.1	-0.4	80	-0.3	16.6	-2.4	22	-1.7	0	-9.9	-6.2	-16.1	-15.7	1.038	57	0	0
91282CBC4	0.375	Dec 31, 2025	1.1	5	4.373	-3.7	0.0	1.06	102	0.9	85	1.2	1.7	15.0	0.3	92	0.2	16.5	-1.6	62	-1.0	0	-9.8	-6.3	-16.1	-15.2	1.035	68	19	0
91282CGE5	3.875	Jan 15, 2026	1.1	3	4.329	-2.8	0.0	1.08	109	-0.4	21	-0.7	-2.2	12.0	-0.7	88	-0.5	13.7	-2.7	37	-1.7	0	-11.1	-5.6	-16.7	-17.1	1.027	40	0	0
9128286A3	2.625	Jan 31, 2026	1.2	7	4.342	-2.5	1.2	1.13	111	1.1	98	2.1	0.9	14.7	0.3	98	0.2	16.4	-1.7	65	-1.1	0	-10.5	-5.0	-15.5	-14.4	1.029	32	20	1
91282CJV4	4.250	Jan 31, 2026	1.2	2	4.353	-2.4	2.0	1.12	113	1.0	88	1.3	1.8	15.8	-0.1	82	-0.1	17.5	-2.0	25	-1.6	0	-10.3	-5.0	-15.3	-14.3	1.032	60	0	0
91282CBH3	0.375	Jan 31, 2026	1.2	5	4.361	-2.6	0.2	1.14	109	1.2	97	2.1	2.9	16.6	0.6	97	0.5	18.3	-1.4	70	-1.1	0	-9.9	-5.1	-15.0	-13.8	1.032	69	14	0
912810EW4	6.000	Feb 15, 2026	1.2	30	4.177	-3.7	2.6	1.15	119	4.7	83	1.3	-18.0	-0.1	0.7	78	0.2	1.6	-1.2	60	-0.4	0	-15.0	-4.5	-19.5	-14.8	0.990	13	52	380
91282CGL9	4.000	Feb 15, 2026	1.2	3	4.318	-2.5	1.8	1.16	117	-0.4	24	-0.5	-3.9	14.0	-0.6	73	-0.4	15.7	-2.5	22	-1.7	0	-11.1	-4.5	-15.6	-16.0	1.023	56	28	1
912828P46	1.625	Feb 15, 2026	1.2	10	4.331	-4.1	0.7	1.17	114	-0.8	14	-1.1	-2.4	15.3	-0.7	78	-0.5	17.0	-2.6	18	-2.0	0	-10.6	-4.6	-15.2	-16.0	1.025	65	20	321
9128286F2	2.500	Feb 28, 2026	1.3	7	4.317	-4.3	1.1	1.21	119	-1.0	11	-1.3	0.8	14.6	-0.8	73	-0.7	16.4	-2.8	10	-2.1	0	-9.1	-5.6	-14.7	-15.7	1.025	34	22	0
91282CKB6	4.625	Feb 28, 2026	1.3	2	4.348	-2.5	2.0	1.19	121	0.9	82	1.0	3.8	17.7	-0.2	80	-0.2	19.5	-2.1	32	-1.5	0	-8.4	-5.6	-14.0	-13.1	1.034	66	4	0
91282CBQ3	0.500	Feb 28, 2026	1.3	5	4.343	-3.3	0.2	1.22	117	0.4	68	0.4	3.6	17.2	-0.7	67	-0.4	19.1	-2.6	23	-1.4	0	-8.3	-5.7	-14.0	-13.6	1.030	72	19	324
91282CGR6	4.625	Mar 15, 2026	1.3	3	4.311	-3.7	1.0	1.23	125	-0.9	5	-1.4	-0.9	15.3	-1.7	30	-1.3	17.2	-3.6	3	-2.4	0	-9.0	-5.3	-14.3	-15.2	1.025	40	0	0
9128286L9	2.250	Mar 31, 2026	1.3	7	4.307	-3.6	0.0	1.29	126	-0.9	5	-1.7	0.1	16.0	-1.5	32	-1.3	17.9	-3.4	5	-2.6	0	-9.1	-4.7	-13.8	-14.7	1.022	32	20	0
91282CKH3	4.500	Mar 31, 2026	1.3	2	4.319	-3.1	0.0	1.27	129	0.0	47	-0.1	1.1	17.2	-0.9	58	-0.7	19.1	-2.8	13	-1.8	0	-9.0	-4.7	-13.7	-13.7	1.026	66	0	0
91282CBT7	0.750	Mar 31, 2026	1.3	5	4.327	-4.2	0.0	1.30	124	0.3	53	0.3	2.2	18.0	-0.9	42	-0.8	19.9	-2.8	15	-2.2	0	-8.6	-4.7	-13.3	-13.0	1.026	72	22	61
91282CGV7	3.750	Apr 15, 2026	1.4	3	4.304	-3.9	0.0	1.32	132	0.3	68	0.5	0.3	16.7	-0.8	50	-0.7	18.7	-2.7	8	-2.1	0	-9.0	-4.5	-13.5	-13.2	1.021	43	6	0
9128286S4	2.375	Apr 30, 2026	1.4	7	4.295	-4.8	0.0	1.37	134	-0.4	21	-0.8	0.9	16.7	-0.8	53	-0.7	18.8	-2.7	5	-2.1	0	-8.2	-4.7	-12.9	-13.3	1.020	32	40	0
91282CKK6	4.875	Apr 30, 2026	1.4	2	4.301	-3.4	0.0	1.36	137	-0.2	39	-0.3	1.3	17.3	-1.1	42	-0.9	19.4	-3.0	8	-2.0	0	-8.2	-4.7	-12.9	-13.1	1.023	69	0	0
91282CBW0	0.750	Apr 30, 2026	1.4	5	4.306	-3.6	0.0	1.38	132	0.1	67	0.1	2.1	17.8	-1.0	35	-0.7	19.9	-2.9	8	-1.9	0	-7.9	-4.7	-12.6	-12.5	1.022	73	23	0
91282CHB0	3.625	May 15, 2026	1.5	3	4.287	-4.1	0.0	1.40	139	-0.1	36	-0.2	0.6	16.9	-0.9	53	-0.6	19.0	-2.8	5	-1.7	0	-8.2	-4.6	-12.8	-12.9	1.019	50	22	0
912828R36	1.625	May 15, 2026	1.5	10	4.293	-3.3	0.0	1.42	137	0.4	73	0.8	1.3	17.5	0.0	80	0.0	19.6	-1.8	32	-1.3	0	-8.0	-4.6	-12.6	-12.2	1.019	69	27	335
9128286X3	2.125	May 31, 2026	1.5	7	4.289	-5.4	0.4	1.44	141	0.7	94	1.4	2.3	18.0	-0.2	58	-0.2	20.1	-2.1	5	-1.7	0	-8.3	-4.1	-12.4	-11.7	1.018	35	32	0
91282CCF6	0.750	May 31, 2026	1.5	5	4.297	-4.0	0.1	1.46	139	0.3	68	0.4	3.3	18.8	-1.0	38	-0.7	20.9	-2.9	5	-1.8	0	-8.0	-4.1	-12.1	-11.8	1.019	72	19	59
91282CKS9	4.875	May 31, 2026	1.5	2	4.300	-3.7	0.9	1.40	145	0.7	86	1.2	3.3	19.1	-0.7	52	-0.6	21.2	-2.6	7	-1.9	0	-8.2	-4.1	-12.3	-11.6	1.024	73	6	0
91282CHH7	4.125	Jun 15, 2026	1.5	3	4.280	-4.4	0.0	1.45	148	0.0	56	0.0	0.3	18.0	-1.4	17	-1.0	20.2	-3.2	3	-2.1	0	-8.4	-3.9	-12.3	-12.3	1.017	40	0	0
9128287B0	1.875	Jun 30, 2026	1.6	7	4.259	-4.0	0.0	1.53	148	-0.6	30	-0.7	-0.4	16.8	-0.8	50	-0.7	19.0	-2.6	5	-2.0	0	-8.3	-3.7	-12.0	-12.6	1.011	34	30	0
91282CCJ8	0.875	Jun 30, 2026	1.6	5	4.282	-4.3	0.0	1.54	147	0.6	79	1.0	1.9	19.0	-1.0	25	-0.7	21.2	-2.8	5	-2.0	0	-7.9	-3.8	-11.7	-11.1	1.016	70	26	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					
91282CKY6	4.625	Jun 30, 2026	1.6	2	4.275	-3.4	0.0	1.49	152	-0.2	38	-0.4	1.0	18.4	-1.6	18	-1.3	20.6	-3.5	3	-2.3	0	-8.2	-3.7	-11.9	-12.1	1.018	71	3	0
91282CHM6	4.500	Jul 15, 2026	1.6	3	4.269	-4.1	0.0	1.53	156	0.8	91	1.5	0.8	18.5	-0.7	45	-0.5	20.7	-2.5	3	-1.6	0	-8.3	-3.4	-11.7	-10.9	1.015	40	0	0
91282Y95	1.875	Jul 31, 2026	1.7	7	4.255	-4.4	0.0	1.61	156	-0.6	9	-1.4	0.1	17.9	-1.6	13	-1.1	20.1	-3.4	3	-2.1	0	-8.4	-3.2	-11.6	-12.2	1.008	33	28	0
91282CCP4	0.625	Jul 31, 2026	1.7	5	4.271	-3.9	0.0	1.63	154	0.6	85	1.0	1.9	19.5	-0.9	18	-0.8	21.8	-2.7	7	-2.0	0	-8.0	-3.2	-11.2	-10.6	1.011	66	17	0
91282CLB5	4.375	Jul 31, 2026	1.7	2	4.262	-4.0	0.0	1.57	160	-0.3	35	-0.5	0.6	18.5	-1.9	10	-1.6	20.8	-3.7	3	-2.6	0	-8.4	-3.1	-11.5	-11.8	1.012	73	5	0
912810EX2	6.750	Aug 15, 2026	1.7	30	4.096	-4.4	2.0	1.59	169	1.3	73	1.0	-17.1	2.8	-0.8	45	-0.4	5.1	-2.6	13	-1.4	0	-11.5	-2.8	-14.3	-13.0	0.972	9	58	737
91282CHU8	4.375	Aug 15, 2026	1.7	3	4.247	-4.1	1.4	1.61	164	-0.2	27	-0.6	-1.8	17.9	-1.4	12	-1.2	20.2	-3.2	3	-2.3	0	-8.7	-2.9	-11.6	-11.8	1.008	58	27	0
912828A7	1.500	Aug 15, 2026	1.7	10	4.253	-3.4	0.5	1.65	159	0.1	52	0.2	-0.9	18.5	-0.2	65	-0.2	20.8	-2.0	15	-1.5	0	-8.3	-2.9	-11.2	-11.1	1.007	65	17	23
912828YD6	1.375	Aug 31, 2026	1.8	7	4.242	-4.5	0.0	1.69	162	-0.8	5	-1.4	-1.2	18.0	-1.2	42	-1.0	20.4	-3.0	5	-2.3	0	-7.3	-4.1	-11.4	-12.2	1.001	36	35	0
91282CCW9	0.750	Aug 31, 2026	1.8	5	4.264	-3.9	0.0	1.70	161	0.4	82	0.9	1.0	20.2	-0.6	27	-0.4	22.5	-2.3	7	-1.7	0	-6.9	-4.1	-11.0	-10.6	1.006	68	12	0
91282CLH2	3.750	Aug 31, 2026	1.8	2	4.259	-4.1	0.0	1.66	166	-0.1	30	-0.1	0.3	19.7	-1.4	7	-1.3	22.1	-3.2	3	-2.4	4	-6.5	-4.1	-10.6	-10.7	1.007	74	7	0
91282CHY0	4.625	Sep 15, 2026	1.8	3	4.249	-4.3	0.0	1.69	172	0.0	55	0.1	-0.3	19.3	-0.7	38	-0.6	21.7	-2.5	3	-1.9	0	-7.2	-3.9	-11.1	-11.1	1.005	44	0	0
912828YG9	1.625	Sep 30, 2026	1.8	7	4.231	-3.6	0.0	1.77	170	0.5	71	0.5	-1.0	18.1	0.2	82	0.2	20.5	-1.5	50	-1.0	0	-7.5	-3.4	-10.9	-10.4	0.999	35	49	0
91282CCZ2	0.875	Sep 30, 2026	1.8	5	4.254	-3.9	0.0	1.78	168	1.6	94	1.9	1.4	20.4	-0.1	30	-0.1	22.9	-1.9	7	-1.5	0	-7.1	-3.4	-10.5	-8.9	1.005	68	17	0
91282CLP4	3.500	Sep 30, 2026	1.8	2	4.246	-3.8	0.0	1.75	173	0.4	79	0.9	0.4	19.6	-0.7	9	-0.5	22.1	-2.5	5	-1.6	4	-6.7	-3.4	-10.1	-9.7	1.005	70	2	0
91282CJC6	4.625	Oct 15, 2026	1.9	3	4.236	-4.1	0.0	1.77	179	0.1	55	0.3	-0.2	19.2	-0.7	42	-0.5	21.7	-2.5	3	-1.7	0	-7.4	-3.3	-10.7	-10.6	1.003	46	0	0
912828YQ7	1.625	Oct 31, 2026	1.9	7	4.215	-3.3	0.5	1.86	177	-1.5	11	-1.3	-1.0	17.6	-1.2	35	-1.0	20.2	-3.0	5	-2.1	0	-7.0	-3.6	-10.6	-12.1	0.995	35	34	0
91282CDG3	1.125	Oct 31, 2026	1.9	5	4.242	-4.0	0.3	1.86	176	0.4	88	1.0	1.7	20.3	-0.3	53	-0.2	22.8	-2.0	8	-1.6	0	-6.6	-3.6	-10.2	-9.8	1.002	67	15	6
91282CLS8	4.125	Oct 31, 2026	1.9	2	4.238	-3.8	1.1	1.82	182	0.4	76	1.0	1.0	19.9	-0.8	41	-0.7	22.4	-2.5	9	-1.6	7	-5.7	-3.6	-9.3	-8.9	1.002	70	2	0
912810EY0	6.500	Nov 15, 2026	2.0	30	3.921	-4.2	0.9	1.84	193	1.1	50	0.4	-31.4	-11.2	-1.8	10	-1.1	-8.6	-3.6	3	-1.8	0	-11.6	-3.5	-15.1	-14.0	0.925	11	61	1051
91282CJK8	4.625	Nov 15, 2026	2.0	3	4.231	-4.1	0.6	1.86	187	0.4	85	1.1	-0.3	19.8	-0.5	45	-0.5	22.4	-2.3	3	-1.8	0	-6.7	-3.5	-10.2	-9.8	1.001	49	2	0
912828U24	2.000	Nov 15, 2026	2.0	10	4.219	-4.0	0.3	1.89	181	-0.3	41	-0.3	-1.2	18.6	-0.2	55	-0.2	21.2	-1.9	7	-1.6	0	-6.8	-3.5	-10.3	-10.6	0.997	69	26	43
912828YU8	1.625	Nov 30, 2026	2.0	7	4.210	-4.2	0.0	1.92	184	-1.2	12	-1.4	-1.0	18.2	-1.6	37	-1.2	20.8	-3.4	3	-2.2	0	-7.1	-3.1	-10.2	-11.4	0.996	34	38	0
91282CDK4	1.250	Nov 30, 2026	2.0	5	4.229	-4.1	0.0	1.93	183	0.6	97	2.1	0.9	20.1	-0.7	40	-0.6	22.7	-2.5	10	-1.8	0	-6.8	-3.1	-9.9	-9.3	1.000	64	8	0
91282CLY5	4.250	Nov 30, 2026	2.0	2	4.212	-4.0	0.0	1.90	190	0.1	80	0.9	-0.9	18.3	1.0	100	1.0	20.9	0.8	100	0.7	0	-7.0	-3.3	-10.3	-10.2	0.958	74	0	0
91282CJP7	4.375	Dec 15, 2026	2.0	3	4.225	-3.8	0.0	1.90	194	1.0	98	2.4	0.5	20.5	-0.6	43	-0.5	23.1	-2.3	7	-1.8	0	-6.9	-2.9	-9.8	-8.8	1.003	50	0	0
912828YX2	1.750	Dec 31, 2026	2.1	7	4.192	-4.2	0.0	2.00	192	-0.9	9	-1.5	-2.2	17.9	-1.6	23	-1.2	20.6	-3.3	3	-2.2	0	-7.0	-2.9	-9.9	-10.8	0.991	35	34	0
91282CDQ1	1.250	Dec 31, 2026	2.1	5	4.207	-4.4	0.0	2.01	191	0.8	94	1.8	-0.6	19.4	-0.7	23	-0.7	22.1	-2.5	3	-1.9	0	-6.8	-2.9	-9.7	-8.9	0.994	65	12	0
91282CJT9	4.000	Jan 15, 2027	2.1	3	4.213	-4.4	0.0	1.99	201	0.2	68	0.6	0.1	20.8	-0.9	32	-0.9	23.5	-2.7	5	-2.1	0	-6.9	-2.7	-9.6	-9.4	0.999	52	0	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				
912828Z78	1.500	Jan 31, 2027	2.2	7	4.211	-4.3	0.2	2.09	198	0.2	82	0.8	1.5	21.2	-1.0	17	-0.8	24.0	-2.7	3	-2.0	0	-6.8	-2.5	-9.3	-9.1	0.995	99	22	1054
912810EZ7	6.625	Feb 15, 2027	2.2	30	3.974	-4.0	0.8	2.02	217	-0.7	3	-1.4	-24.0	-1.7	-1.6	40	-1.4	1.2	-3.3	7	-2.3	0	-10.4	-2.2	-12.6	-13.3	0.942	10	70	511
91282CKA8	4.125	Feb 15, 2027	2.2	3	4.214	-4.4	0.5	2.07	209	0.5	92	1.9	0.3	22.3	-0.7	38	-0.6	25.2	-2.3	12	-1.8	0	-7.0	-2.2	-9.2	-8.7	0.999	58	7	0
912828V98	2.250	Feb 15, 2027	2.2	10	4.204	-4.1	0.3	2.11	204	-0.5	12	-1.2	-0.4	21.4	-1.4	18	-1.1	24.2	-3.1	3	-2.0	0	-6.9	-2.2	-9.1	-9.6	0.994	65	31	198
912828ZB9	1.125	Feb 28, 2027	2.3	7	4.200	-4.4	0.1	2.18	204	0.0	47	0.0	1.9	21.4	-0.8	28	-0.7	24.3	-2.4	5	-1.8	0	-6.0	-2.9	-8.9	-8.9	0.994	37	63	0
91282CEC1	1.875	Feb 28, 2027	2.3	5	4.207	-4.5	0.2	2.16	206	0.6	92	1.5	2.5	22.1	-0.7	33	-0.6	25.0	-2.3	12	-1.8	0	-6.0	-2.9	-8.9	-8.3	0.997	62	15	0
91282CKE0	4.250	Mar 15, 2027	2.3	3	4.198	-4.3	0.0	2.15	217	1.2	92	1.6	0.6	21.8	-0.3	47	-0.3	24.7	-2.0	12	-1.5	0	-6.1	-2.7	-8.8	-7.6	0.998	56	0	0
91282ZE3	0.625	Mar 31, 2027	2.3	7	4.182	-4.6	0.0	2.27	210	-1.1	9	-1.5	-0.5	20.7	-1.3	25	-1.0	23.7	-2.9	7	-2.0	0	-6.2	-2.4	-8.6	-9.7	0.992	36	38	0
91282CEF4	2.500	Mar 31, 2027	2.3	5	4.181	-4.7	0.0	2.23	215	0.5	85	1.2	-0.9	20.6	-0.6	25	-0.5	23.6	-2.2	7	-1.7	0	-6.4	-2.3	-8.7	-8.2	0.993	60	16	0
91282CKJ9	4.500	Apr 15, 2027	2.4	3	4.195	-4.8	0.0	2.22	225	0.5	91	1.2	0.7	22.6	-0.6	37	-0.5	25.6	-2.2	15	-1.7	0	-6.2	-2.2	-8.4	-7.9	1.000	59	2	0
91282ZN3	0.500	Apr 30, 2027	2.4	7	4.193	-4.8	0.0	2.36	216	0.4	79	0.8	1.7	22.9	-0.7	25	-0.6	26.0	-2.4	10	-1.7	0	-5.6	-2.3	-7.9	-7.5	0.999	38	16	0
91282CEN7	2.750	Apr 30, 2027	2.4	5	4.182	-4.8	0.0	2.30	223	-0.2	17	-0.9	0.3	21.8	-1.1	20	-0.9	24.8	-2.7	7	-2.0	0	-5.9	-2.3	-8.2	-8.4	0.998	56	12	0
91282CKR1	4.500	May 15, 2027	2.5	3	4.190	-5.2	1.0	2.31	233	0.2	65	0.6	0.3	23.1	-0.9	28	-0.7	26.2	-2.5	10	-1.9	0	-5.8	-2.2	-8.0	-7.8	1.002	65	11	0
91282X88	2.375	May 15, 2027	2.5	10	4.184	-5.0	0.5	2.35	226	-1.0	5	-1.8	0.0	22.6	-1.4	22	-1.1	25.7	-3.1	5	-2.1	0	-5.7	-2.2	-7.9	-8.9	1.000	70	22	209
91282ZS2	0.500	May 31, 2027	2.5	7	4.198	-5.2	0.1	2.43	223	0.9	91	1.5	3.7	24.3	-0.6	23	-0.5	27.4	-2.2	8	-1.6	0	-5.6	-1.9	-7.5	-6.6	1.003	42	26	0
91282CET4	2.625	May 31, 2027	2.5	5	4.186	-4.9	0.3	2.36	230	0.4	88	1.4	2.2	23.0	-0.7	28	-0.6	26.2	-2.3	10	-1.8	0	-5.9	-1.9	-7.8	-7.4	1.003	55	13	0
91282CKV2	4.625	Jun 15, 2027	2.5	3	4.174	-4.9	0.0	2.33	241	0.9	92	1.4	-0.5	22.4	-0.6	25	-0.5	25.5	-2.3	8	-1.7	0	-6.1	-1.7	-7.8	-6.9	1.004	60	3	0
91282ZV5	0.500	Jun 30, 2027	2.6	7	4.179	-5.3	0.0	2.51	230	-0.1	47	-0.3	1.1	23.3	-1.4	13	-1.1	26.5	-3.0	3	-2.1	0	-5.6	-1.5	-7.1	-7.2	1.004	46	21	0
91282CEW7	3.250	Jun 30, 2027	2.6	5	4.167	-5.1	0.0	2.42	240	0.2	70	0.6	-0.4	22.2	-1.0	18	-0.9	25.3	-2.7	5	-2.0	0	-5.9	-1.5	-7.4	-7.2	1.004	51	7	0
91282CKZ3	4.375	Jul 15, 2027	2.6	3	4.174	-5.5	0.0	2.42	247	0.2	53	0.4	0.2	23.3	-1.2	15	-1.0	26.5	-2.8	3	-2.1	0	-6.0	-1.3	-7.3	-7.1	1.009	67	14	0
91282CAD3	0.375	Jul 31, 2027	2.7	7	4.177	-5.5	0.1	2.60	236	0.2	67	0.6	1.5	23.9	-1.1	15	-0.9	27.1	-2.7	3	-1.9	0	-5.7	-1.0	-6.7	-6.5	1.008	49	11	0
91282CFB2	2.750	Jul 31, 2027	2.7	5	4.179	-5.5	0.6	2.52	245	0.4	92	1.4	1.4	24.1	-0.8	27	-0.7	27.4	-2.5	8	-1.8	0	-5.8	-1.0	-6.8	-6.4	1.011	50	8	0
912810FA1	6.375	Aug 15, 2027	2.7	30	4.110	-5.3	0.6	2.45	263	1.1	79	1.2	-6.8	17.6	-0.7	35	-0.5	20.8	-2.3	10	-1.5	0	-6.9	-0.7	-7.6	-6.5	0.997	9	60	1329
91282CLG4	3.750	Aug 15, 2027	2.7	3	4.169	-5.6	0.4	2.52	252	0.1	59	0.3	-0.5	23.5	-1.2	15	-1.0	26.8	-2.8	3	-2.1	0	-6.0	-0.8	-6.8	-6.7	1.011	69	16	0
91282R0	2.250	Aug 15, 2027	2.7	10	4.161	-5.6	0.2	2.57	247	-1.3	2	-2.4	-1.1	22.7	-2.2	5	-1.7	26.0	-3.8	3	-2.4	0	-6.0	-0.8	-6.8	-8.1	1.008	70	38	16
91282CFH9	3.125	Aug 31, 2027	2.8	5	4.173	-5.5	0.0	2.58	253	0.1	64	0.5	0.0	24.3	-0.8	23	-0.7	27.5	-2.4	5	-1.8	0	-5.3	-1.4	-6.7	-6.6	1.011	51	12	0
91282CAH4	0.500	Aug 31, 2027	2.8	7	4.172	-5.7	0.0	2.68	243	-0.2	23	-0.7	0.2	24.2	-1.3	8	-1.1	27.5	-2.9	3	-2.1	0	-5.1	-1.4	-6.5	-6.7	1.010	51	27	0
91282CLL3	3.375	Sep 15, 2027	2.8	3	4.156	-6.0	0.0	2.62	258	0.2	69	0.5	-1.7	22.9	-0.9	20	-0.8	26.2	-2.5	4	-1.9	4	-4.9	-1.3	-6.2	-6.0	1.009	59	1	0
91282CFM8	4.125	Sep 30, 2027	2.8	5	4.159	-5.6	0.0	2.63	265	1.0	94	2.1	-1.1	23.6	-0.5	37	-0.4	26.9	-2.1	8	-1.6	0	-5.5	-1.0	-6.5	-5.5	1.011	44	0	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				
91282CAL5	0.375	Sep 30, 2027	2.8	7	4.170	-5.9	0.0	2.76	249	0.0	58	0.1	0.5	24.7	-1.4	13	-1.0	28.0	-2.9	3	-2.0	0	-5.1	-1.0	-6.1	-6.1	1.013	57	16	0
91282CLQ2	3.875	Oct 15, 2027	2.9	3	4.162	-5.9	0.0	2.68	267	0.2	69	0.7	-0.7	24.1	-1.0	17	-0.8	27.5	-2.6	6	-1.7	4	-5.0	-0.9	-5.9	-5.7	1.013	59	1	0
91282CFU0	4.125	Oct 31, 2027	2.9	5	4.148	-5.7	0.4	2.72	272	-1.2	0	-2.8	-1.3	23.0	-2.1	7	-1.6	26.4	-3.7	3	-2.4	0	-5.2	-1.1	-6.3	-7.5	1.011	43	0	0
91282CAU5	0.500	Oct 31, 2027	2.9	7	4.165	-6.1	0.0	2.84	256	-0.5	0	-2.3	0.9	24.8	-1.7	10	-1.4	28.2	-3.3	3	-2.3	0	-4.8	-1.0	-5.8	-6.3	1.014	58	20	0
912810FB9	6.125	Nov 15, 2027	3.0	30	4.113	-6.0	0.0	2.70	285	-0.4	24	-0.6	-5.6	19.9	-1.7	8	-1.1	23.3	-3.3	3	-2.0	0	-5.6	-1.0	-6.6	-7.0	1.004	22	65	1216
9128283F5	2.250	Nov 15, 2027	3.0	10	4.167	-5.9	0.0	2.82	267	-0.3	12	-1.2	0.2	25.2	-1.6	12	-1.2	28.6	-3.2	3	-2.1	0	-4.8	-1.0	-5.8	-6.1	1.016	66	33	9
91282CLX7	4.125	Nov 15, 2027	3.0	3	4.155	-5.8	0.0	2.76	276	0.0	29	-0.3	-1.2	24.0	-1.6	11	-1.4	27.4	-3.1	11	-2.0	5	-4.6	-1.0	-5.6	-5.6	1.014	72	20	0
91282CFZ9	3.875	Nov 30, 2027	3.0	5	4.160	-5.8	0.0	2.75	278	-0.1	38	-0.4	-0.5	24.8	-1.6	12	-1.3	28.3	-3.2	3	-2.2	0	-5.1	-0.7	-5.8	-5.9	1.019	48	10	0
91282CAY7	0.625	Nov 30, 2027	3.0	7	4.165	-6.2	0.0	2.91	263	-0.4	15	-1.1	0.3	25.3	-2.3	5	-1.7	28.7	-3.8	3	-2.5	0	-4.9	-0.7	-5.6	-6.0	1.018	63	22	0
91282CGC9	3.875	Dec 31, 2027	3.1	5	4.152	-6.4	0.0	2.83	286	0.5	86	1.3	-1.3	25.0	-1.6	15	-1.3	28.4	-3.1	3	-2.2	0	-5.1	-0.6	-5.7	-5.2	1.018	43	0	0
91282CBB6	0.625	Dec 31, 2027	3.1	7	4.166	-6.0	0.0	2.99	269	0.1	67	0.2	0.5	26.4	-1.9	7	-1.6	29.9	-3.5	3	-2.5	0	-4.7	-0.6	-5.3	-5.2	1.020	68	18	0
91282CGH8	3.500	Jan 31, 2028	3.2	5	4.162	-6.1	0.0	2.93	291	0.7	98	2.6	-0.1	26.9	-1.1	23	-1.0	30.4	-2.7	7	-2.0	0	-5.1	-0.3	-5.4	-4.7	1.021	43	0	0
91282CBJ9	0.750	Jan 31, 2028	3.2	7	4.175	-6.1	0.0	3.07	276	0.8	98	2.4	1.4	28.2	-1.3	12	-1.2	31.7	-2.8	3	-2.2	0	-4.7	-0.3	-5.0	-4.2	1.023	70	13	1
9128283W8	2.750	Feb 15, 2028	3.2	10	4.160	-5.9	0.0	3.01	290	-0.8	14	-1.4	-0.3	27.2	-2.1	5	-1.7	30.7	-3.7	3	-2.4	0	-5.1	-0.2	-5.3	-6.1	1.021	70	14	544
91282CGP0	4.000	Feb 29, 2028	3.3	5	4.159	-6.2	0.0	2.99	300	0.2	85	1.1	-0.3	27.3	-1.4	15	-1.3	30.9	-2.9	3	-2.3	0	-4.6	-0.7	-5.3	-5.1	1.022	53	19	0
91282CBP5	1.125	Feb 29, 2028	3.3	7	4.169	-6.1	0.0	3.12	285	0.1	62	0.4	1.0	28.3	-1.6	12	-1.4	31.9	-3.1	3	-2.3	0	-4.3	-0.7	-5.0	-4.9	1.024	75	18	2
91282CGT2	3.625	Mar 31, 2028	3.3	5	4.156	-6.1	0.0	3.09	306	0.6	97	2.2	-0.7	27.7	-1.2	20	-1.2	31.3	-2.7	5	-2.3	0	-4.7	-0.5	-5.2	-4.6	1.020	43	0	0
91282CBS9	1.250	Mar 31, 2028	3.3	7	4.170	-6.3	0.0	3.20	292	0.3	82	1.0	1.1	29.2	-1.5	12	-1.3	32.8	-3.0	3	-2.3	0	-4.4	-0.5	-4.9	-4.6	1.024	73	23	0
91282CHA2	3.500	Apr 30, 2028	3.4	5	4.157	-5.9	0.3	3.18	312	0.4	95	1.7	0.6	28.5	-1.5	12	-1.3	32.2	-3.0	3	-2.2	0	-4.3	-0.6	-4.9	-4.5	1.021	47	9	0
91282CBZ3	1.250	Apr 30, 2028	3.4	7	4.166	-6.3	0.1	3.28	298	0.0	47	0.0	1.7	29.4	-1.6	7	-1.6	33.0	-3.2	3	-2.5	0	-4.1	-0.6	-4.7	-4.7	1.024	74	16	0
9128284N7	2.875	May 15, 2028	3.5	10	4.162	-6.2	0.0	3.24	311	-0.1	42	-0.4	0.5	29.3	-1.7	7	-1.5	33.0	-3.2	3	-2.4	0	-4.2	-0.6	-4.8	-4.9	1.023	75	15	52
91282CHE4	3.625	May 31, 2028	3.5	5	4.154	-6.7	0.0	3.19	320	-0.1	29	-0.5	-0.6	28.8	-1.9	7	-1.7	32.5	-3.4	3	-2.5	0	-4.4	-0.4	-4.8	-4.9	1.023	51	16	0
91282CCE9	1.250	May 31, 2028	3.5	7	4.158	-6.1	0.0	3.34	305	-0.4	30	-0.8	0.1	29.2	-1.9	7	-1.7	32.9	-3.4	3	-2.4	0	-4.2	-0.4	-4.6	-5.0	1.022	74	16	0
91282CHK0	4.000	Jun 30, 2028	3.6	5	4.152	-6.1	0.0	3.25	329	0.6	98	2.5	-0.4	29.2	-1.4	13	-1.3	32.9	-2.9	3	-2.2	0	-4.4	-0.4	-4.8	-4.2	1.022	43	0	0
91282CCH2	1.250	Jun 30, 2028	3.6	7	4.161	-6.5	0.0	3.42	311	0.1	62	0.5	0.8	30.1	-1.7	7	-1.5	33.8	-3.2	3	-2.4	0	-4.1	-0.4	-4.5	-4.4	1.023	71	20	0
91282CHQ7	4.125	Jul 31, 2028	3.7	5	4.156	-6.5	0.0	3.33	337	0.4	86	1.4	0.0	30.1	-1.6	7	-1.5	33.8	-3.1	3	-2.3	0	-4.5	-0.2	-4.7	-4.3	1.021	43	0	525
91282CCR0	1.000	Jul 31, 2028	3.7	7	4.162	-6.8	0.0	3.52	316	0.1	62	0.3	0.9	30.6	-1.8	5	-1.7	34.4	-3.3	3	-2.6	0	-4.2	-0.2	-4.4	-4.3	1.021	68	10	1
912810FE3	5.500	Aug 15, 2028	3.7	30	4.047	-6.2	0.0	3.30	352	0.1	64	0.3	-11.1	19.4	-1.5	7	-1.3	23.2	-3.0	3	-2.3	0	-5.5	-0.1	-5.6	-5.5	0.994	12	61	571
9128284V9	2.875	Aug 15, 2028	3.7	10	4.157	-6.3	0.0	3.44	332	-0.4	18	-1.0	0.1	30.3	-2.1	5	-1.7	34.1	-3.6	3	-2.5	0	-4.4	-0.1	-4.5	-4.9	1.020	75	14	7

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					
91282CHX2	4.375	Aug 31, 2028	3.8	5	4.165	-6.1	0.0	3.39	346	0.6	95	1.7	0.5	31.4	-1.4	5	-1.3	35.2	-2.9	3	-2.2	0	-4.0	-0.6	-4.6	-4.0	1.021	51	9	0
91282CCV1	1.125	Aug 31, 2028	3.8	7	4.163	-6.5	0.0	3.59	323	0.1	58	0.3	0.6	31.2	-1.8	5	-1.6	35.0	-3.3	3	-2.5	0	-3.7	-0.6	-4.3	-4.2	1.020	70	13	2
91282CJA0	4.625	Sep 30, 2028	3.8	5	4.159	-6.5	0.6	3.46	355	0.4	77	1.0	0.4	31.1	-1.7	5	-1.5	35.0	-3.2	3	-2.4	0	-4.1	-0.5	-4.6	-4.2	1.018	49	0	0
91282CCY5	1.250	Sep 30, 2028	3.8	7	4.161	-6.5	0.2	3.67	330	0.0	53	0.0	1.0	31.4	-1.9	3	-1.7	35.2	-3.4	3	-2.6	0	-3.8	-0.5	-4.3	-4.3	1.017	69	12	0
91282CJF9	4.875	Oct 31, 2028	3.9	5	4.154	-6.5	0.0	3.53	364	0.1	62	0.4	-0.2	31.0	-2.0	3	-1.7	34.9	-3.4	3	-2.6	0	-3.9	-0.7	-4.6	-4.5	1.014	52	0	0
91282CDF5	1.375	Oct 31, 2028	3.9	7	4.155	-6.6	0.0	3.74	337	-0.3	21	-0.9	0.2	31.1	-2.1	3	-1.8	35.0	-3.5	3	-2.7	0	-3.6	-0.7	-4.3	-4.6	1.014	68	16	2
912810FF0	5.250	Nov 15, 2028	4.0	30	4.123	-6.5	0.0	3.56	371	0.6	88	1.0	-3.2	28.1	-1.5	5	-1.3	32.0	-3.0	3	-2.3	0	-4.1	-0.8	-4.9	-4.3	1.006	11	29	763
9128285M8	3.125	Nov 15, 2028	4.0	10	4.147	-6.6	0.0	3.67	354	-1.0	0	-1.6	-0.6	30.5	-2.6	3	-2.0	34.4	-4.0	3	-2.7	0	-3.8	-0.7	-4.5	-5.5	1.011	81	26	9
91282CJN2	4.375	Nov 30, 2028	4.0	5	4.153	-6.7	0.0	3.56	367	0.3	71	0.6	0.1	31.3	-2.2	3	-1.9	35.2	-3.6	3	-2.7	0	-3.9	-0.6	-4.5	-4.2	1.016	56	1	0
91282CDL2	1.500	Nov 30, 2028	4.0	7	4.152	-6.5	0.0	3.78	344	-0.4	5	-1.5	0.2	31.1	-2.6	3	-2.1	35.1	-4.1	3	-2.8	0	-3.7	-0.6	-4.3	-4.7	1.013	64	10	0
91282CJR3	3.750	Dec 31, 2028	4.1	5	4.155	-6.7	0.5	3.69	369	0.5	73	1.0	0.9	32.0	-2.1	3	-1.9	36.0	-3.6	3	-2.7	0	-3.8	-0.6	-4.4	-3.9	1.013	58	0	0
91282CDP3	1.375	Dec 31, 2028	4.1	7	4.149	-6.7	0.2	3.88	350	0.1	53	0.2	0.6	31.5	-2.4	3	-2.1	35.4	-3.8	3	-2.8	0	-3.7	-0.6	-4.3	-4.2	1.009	64	12	0
91282CDW8	1.750	Jan 31, 2029	4.2	7	4.149	-6.6	0.0	3.93	359	-0.5	6	-1.3	0.2	32.1	-2.7	3	-2.1	36.1	-4.1	3	-2.8	0	-3.8	-0.5	-4.3	-4.8	1.007	61	13	1
91282CJW2	4.000	Jan 31, 2029	4.2	5	4.150	-6.6	0.0	3.75	378	0.5	82	1.0	0.0	32.1	-2.1	3	-1.9	36.1	-3.6	3	-2.7	0	-4.0	-0.5	-4.5	-4.0	1.009	61	0	0
912810FG8	5.250	Feb 15, 2029	4.2	30	4.045	-6.5	0.0	3.72	394	0.7	74	0.9	-10.6	21.9	-1.2	8	-0.9	26.0	-2.6	3	-1.8	0	-4.8	-0.4	-5.2	-4.5	0.983	11	62	334
9128286B1	2.625	Feb 15, 2029	4.2	10	4.145	-6.5	0.0	3.90	370	-0.4	11	-1.2	-0.3	31.9	-2.4	3	-2.1	35.9	-3.9	3	-2.8	0	-3.9	-0.5	-4.4	-4.8	1.005	81	26	9
91282CEB3	1.875	Feb 28, 2029	4.3	7	4.145	-6.6	0.0	3.99	366	-0.5	3	-1.5	0.3	32.2	-2.5	3	-2.1	36.2	-4.0	3	-2.8	0	-3.5	-0.9	-4.4	-4.9	1.004	59	15	0
91282CKD2	4.250	Feb 28, 2029	4.3	5	4.147	-6.6	0.0	3.82	387	0.9	85	1.3	0.2	32.3	-1.8	3	-1.7	36.3	-3.2	3	-2.6	0	-3.6	-0.8	-4.4	-3.5	1.006	67	4	0
91282CEE7	2.375	Mar 31, 2029	4.3	7	4.149	-6.9	0.3	4.04	377	-0.3	11	-1.2	1.3	33.0	-2.5	3	-2.2	37.1	-3.9	3	-2.9	0	-3.5	-0.7	-4.2	-4.5	1.005	56	16	2
91282CKG5	4.125	Mar 31, 2029	4.3	5	4.150	-6.4	0.5	3.91	393	0.8	98	1.6	1.1	33.1	-1.7	3	-1.6	37.1	-3.2	3	-2.5	0	-3.7	-0.7	-4.4	-3.6	1.006	67	0	0
91282CEM9	2.875	Apr 30, 2029	4.4	7	4.145	-6.9	0.0	4.08	388	-0.4	5	-1.7	0.7	33.0	-2.5	3	-2.2	37.0	-3.9	3	-2.9	0	-3.4	-0.8	-4.2	-4.6	1.004	50	12	3
91282CKP5	4.625	Apr 30, 2029	4.4	5	4.143	-6.6	0.0	3.96	405	0.8	98	1.7	0.4	32.8	-1.6	3	-1.6	36.9	-3.0	3	-2.5	0	-3.5	-0.8	-4.3	-3.5	1.004	70	0	0
9128286T2	2.375	May 15, 2029	4.5	10	4.126	-7.2	0.0	4.16	387	-1.1	0	-2.0	-1.0	31.2	-2.9	3	-2.5	35.3	-4.3	3	-3.2	0	-3.4	-0.8	-4.2	-5.3	0.999	84	42	12
91282CES6	2.750	May 31, 2029	4.5	7	4.144	-6.8	0.0	4.11	393	-0.3	3	-1.9	0.7	33.2	-2.6	3	-2.2	37.4	-4.0	3	-2.9	0	-3.5	-0.7	-4.2	-4.5	1.005	48	13	0
91282CKT7	4.500	May 31, 2029	4.5	5	4.131	-6.9	0.0	3.96	411	0.6	88	1.1	-0.8	32.0	-2.0	3	-1.9	36.1	-3.4	3	-2.7	0	-3.7	-0.7	-4.4	-3.8	1.004	74	6	0
91282CEV9	3.250	Jun 30, 2029	4.6	7	4.145	-6.5	0.4	4.15	405	-0.1	39	-0.4	1.2	33.6	-2.4	3	-1.9	37.8	-3.8	3	-2.6	0	-3.4	-0.6	-4.0	-4.1	1.008	43	7	0
91282CKX8	4.250	Jun 30, 2029	4.6	5	4.139	-6.7	0.5	4.06	415	0.7	92	1.5	0.6	33.1	-1.9	3	-1.7	37.3	-3.3	3	-2.6	0	-3.5	-0.6	-4.1	-3.4	1.008	72	3	0
91282CFC0	2.625	Jul 31, 2029	4.7	7	4.136	-6.7	0.0	4.29	405	-0.5	2	-2.0	0.3	33.1	-2.6	3	-2.3	37.3	-4.0	3	-3.0	0	-3.5	-0.4	-3.9	-4.4	1.007	41	8	0
91282CLC3	4.000	Jul 31, 2029	4.7	5	4.134	-6.4	0.0	4.16	420	0.9	98	1.8	-0.1	32.9	-1.7	3	-1.5	37.1	-3.1	3	-2.4	0	-3.6	-0.4	-4.0	-3.1	1.007	74	5	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					
912810FJ2	6.125	Aug 15, 2029	4.7	30	4.117	-6.9	0.0	4.04	446	-0.4	20	-0.8	-2.1	31.3	-2.6	3	-2.0	35.4	-4.0	3	-2.7	0	-4.0	-0.3	-4.3	-4.7	1.005	11	64	727
912828YB0	1.625	Aug 15, 2029	4.7	10	4.105	-6.6	0.0	4.43	398	0.2	68	0.6	-2.7	30.1	-2.0	3	-1.6	34.3	-3.3	3	-2.4	0	-3.7	-0.3	-4.0	-3.8	0.999	93	51	33
91282CFJ5	3.125	Aug 31, 2029	4.8	7	4.146	-6.6	0.0	4.32	416	0.2	89	1.2	1.0	34.4	-2.0	3	-1.8	38.6	-3.4	3	-2.6	0	-3.2	-0.6	-3.8	-3.6	1.011	42	12	1
91282CLK5	3.625	Aug 31, 2029	4.8	5	4.125	-6.7	0.0	4.28	422	1.0	97	1.7	-1.2	32.2	-1.6	3	-1.4	36.4	-2.9	3	-2.4	3	-3.2	-0.6	-3.8	-2.8	1.006	76	7	0
91282CFL0	3.875	Sep 30, 2029	4.8	7	4.141	-6.8	0.2	4.34	431	-0.2	26	-0.8	1.0	34.0	-2.3	3	-1.8	38.2	-3.6	3	-2.6	0	-3.3	-0.4	-3.7	-3.9	1.014	36	0	0
91282CLN9	3.500	Sep 30, 2029	4.8	5	4.131	-6.5	0.2	4.37	427	0.7	98	1.9	0.0	33.0	-1.6	5	-1.3	37.2	-3.0	5	-2.1	3	-3.2	-0.4	-3.6	-2.9	1.011	71	2	0
91282CFT3	4.000	Oct 31, 2029	4.9	7	4.137	-6.4	0.0	4.41	440	-0.4	8	-1.6	0.1	33.8	-1.9	23	-1.3	38.0	-3.3	9	-1.8	0	-3.2	-0.4	-3.6	-4.0	1.017	35	2	0
91282CLR0	4.125	Oct 31, 2029	4.9	5	4.125	-6.6	0.0	4.40	441	0.3	96	1.6	-1.0	32.6	-2.0	23	-1.4	36.9	-3.4	9	-1.9	10	-2.6	-0.4	-3.0	-2.7	1.014	71	2	0
912828YS3	1.750	Nov 15, 2029	5.0	10	4.095	-6.4	0.0	4.66	418	-0.5	52	-0.4	-3.7	29.7	-2.1	3	-1.4	34.0	-3.4	3	-2.2	0	-3.2	-0.3	-3.5	-4.0	1.009	89	62	35
91282CFY2	3.875	Nov 30, 2029	5.0	7	4.138	-6.7	0.0	4.41	445	0.0	32	-0.1	0.4	0.0	-2.4	3	-1.8	38.3	-3.8	3	-2.6	0	-3.2	-0.2	-3.4	-3.4	1.024	39	10	2
91282CGB1	3.875	Dec 31, 2029	5.1	7	4.143	-6.6	0.0	4.50	451	0.1	71	0.6	0.7	34.9	-2.3	3	-1.8	39.2	-3.6	3	-2.6	0	-3.2	0.0	-3.2	-3.1	1.031	35	0	2
91282CGJ4	3.500	Jan 31, 2030	5.2	7	4.145	-6.3	0.0	4.62	453	0.3	88	1.3	0.7	35.4	-2.2	3	-1.7	39.8	-3.5	3	-2.5	0	-3.2	0.2	-3.0	-2.7	1.036	35	0	0
91282Z94	1.500	Feb 15, 2030	5.2	10	4.149	-6.5	0.0	4.89	431	0.5	95	1.2	1.3	36.1	-2.3	3	-1.9	40.4	-3.6	3	-2.6	0	-3.1	0.4	-2.7	-2.2	1.041	88	34	7
91282CGQ8	4.000	Feb 28, 2030	5.3	7	4.143	-6.5	0.0	4.64	466	0.2	79	0.9	0.6	35.5	-2.0	3	-1.6	39.9	-3.3	3	-2.4	0	-3.0	0.1	-2.9	-2.7	1.041	43	19	0
91282CGS4	3.625	Mar 31, 2030	5.3	7	4.145	-6.6	0.2	4.76	468	0.0	48	0.1	1.0	36.0	-2.3	3	-1.8	40.4	-3.6	3	-2.6	0	-3.0	0.3	-2.7	-2.7	1.046	35	0	0
91282CGZ8	3.500	Apr 30, 2030	5.4	7	4.143	-6.6	0.0	4.86	472	0.1	71	0.5	0.5	36.1	-2.1	3	-1.6	40.5	-3.5	3	-2.4	0	-2.8	0.3	-2.5	-2.4	1.050	38	9	0
912810FM5	6.250	May 15, 2030	5.5	31	4.139	-6.5	0.0	4.65	513	0.4	73	0.7	-0.3	35.7	-1.9	3	-1.4	40.1	-3.2	3	-2.2	0	-3.0	0.3	-2.7	-2.3	1.047	17	62	666
912828ZQ6	0.625	May 15, 2030	5.5	10	4.152	-6.5	0.0	5.26	436	0.8	98	1.4	1.6	37.1	-2.0	3	-1.7	41.5	-3.3	3	-2.5	0	-2.6	0.4	-2.2	-1.4	1.059	110	27	1513
91282CHF1	3.750	May 31, 2030	5.5	7	4.149	-6.6	0.0	4.82	482	0.2	82	0.8	0.8	36.8	-2.1	3	-1.7	41.3	-3.4	3	-2.5	0	-2.9	0.5	-2.4	-2.2	1.056	41	16	1
91282CHJ3	3.750	Jun 30, 2030	5.6	7	4.149	-6.5	0.2	4.91	489	0.0	61	0.3	1.1	37.0	-2.2	3	-1.8	41.5	-3.5	3	-2.5	0	-2.9	0.5	-2.4	-2.4	1.058	35	0	0
91282CHR5	4.000	Jul 31, 2030	5.7	7	4.154	-6.7	0.0	4.96	499	0.3	97	2.1	0.8	37.6	-1.8	3	-1.5	42.0	-3.1	3	-2.4	0	-2.9	0.7	-2.2	-1.9	1.060	35	0	0
91282CAE1	0.625	Aug 15, 2030	5.7	10	4.156	-6.5	0.0	5.48	452	0.6	97	1.1	1.1	37.8	-2.1	3	-1.8	42.3	-3.4	3	-2.6	0	-2.7	0.8	-1.9	-1.3	1.067	132	21	526
91282CHW4	4.125	Aug 31, 2030	5.8	7	4.158	-6.8	0.5	5.02	507	0.0	58	0.2	0.9	38.1	-2.0	3	-1.7	42.6	-3.3	3	-2.5	0	-2.6	0.4	-2.2	-2.2	1.061	40	9	0
91282CHZ7	4.625	Sep 30, 2030	5.8	7	4.155	-6.6	0.0	5.05	521	-0.1	26	-0.9	0.3	37.9	-2.0	3	-1.6	42.4	-3.3	3	-2.4	0	-2.8	0.5	-2.3	-2.4	1.059	37	0	3
91282CJG7	4.875	Oct 31, 2030	5.9	7	4.159	-6.5	0.0	5.10	531	0.2	92	1.3	0.6	38.4	-1.7	3	-1.4	42.9	-3.0	3	-2.3	0	-2.6	0.4	-2.2	-2.0	1.059	38	0	2
91282CAV3	0.875	Nov 15, 2030	6.0	10	4.126	-6.6	0.0	5.68	472	-0.5	47	-0.6	-2.6	35.1	-2.2	3	-1.5	39.6	-3.5	3	-2.2	0	-2.5	0.5	-2.0	-2.5	1.058	134	19	13
91282CJM4	4.375	Nov 30, 2030	6.0	7	4.163	-6.6	0.4	5.13	530	0.0	45	-0.1	1.0	38.8	-2.0	3	-1.7	43.3	-3.2	3	-2.5	0	-2.6	0.5	-2.1	-2.1	1.062	39	1	0
91282CJQ5	3.750	Dec 31, 2030	6.1	7	4.160	-6.8	0.0	5.30	526	-0.4	0	-2.3	0.4	38.7	-2.5	3	-2.1	43.3	-3.7	3	-2.8	0	-2.6	0.5	-2.1	-2.5	1.059	40	0	0
91282CJX0	4.000	Jan 31, 2031	6.2	7	4.164	-6.6	0.0	5.34	537	-0.4	0	-2.1	0.6	39.4	-2.3	3	-2.0	44.0	-3.6	3	-2.7	0	-2.7	0.5	-2.2	-2.6	1.057	41	0	0

US Fixed Income Strategy

CUSIP	Coupon	Maturity	Yrs to Orig Mat	Yld Issue	1-D Yld Chg	Spot Bad	Mod Dur	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				
912810FP8	5.375	Feb 15, 2031	6.2	30	4.118	-6.5	0.6	5.21	565	1.2	83	1.5	-4.7	34.9	-1.3	3	-1.0	39.5	-2.5	3	-1.8	0	-3.0	0.5	-2.5	-1.3	1.043	16	51	711
91282CBL4	1.125	Feb 15, 2031	6.2	10	4.108	-6.6	0.1	5.85	492	-1.3	2	-1.8	-5.6	33.9	-3.0	3	-2.3	38.5	-4.2	3	-2.8	0	-2.7	0.6	-2.1	-3.4	1.046	140	25	2
91282CKC4	4.250	Feb 28, 2031	6.3	7	4.167	-6.7	0.0	5.39	547	-0.2	12	-1.0	0.9	39.8	-2.0	3	-1.7	44.4	-3.3	3	-2.4	0	-2.4	0.3	-2.1	-2.3	1.056	43	4	0
91282CKF7	4.125	Mar 31, 2031	6.3	7	4.169	-6.6	0.0	5.49	551	-0.1	18	-0.8	1.0	40.2	-2.0	3	-1.7	44.9	-3.2	3	-2.4	0	-2.5	0.4	-2.1	-2.2	1.056	43	0	2
91282CKN0	4.625	Apr 30, 2031	6.4	7	4.169	-6.7	0.0	5.51	567	-0.3	0	-1.6	0.9	40.3	-2.1	3	-1.7	44.9	-3.3	3	-2.4	0	-2.4	0.2	-2.2	-2.5	1.054	44	0	2
91282CCB5	1.625	May 15, 2031	6.5	10	4.170	-6.6	0.0	6.00	515	-0.2	39	-0.4	1.0	40.4	-2.1	3	-1.5	45.1	-3.3	3	-2.2	0	-2.1	0.3	-1.8	-2.0	1.059	148	30	19
91282CKU4	4.625	May 31, 2031	6.5	7	4.173	-6.8	0.3	5.46	573	-0.3	2	-1.5	1.3	40.9	-2.2	3	-1.8	45.5	-3.4	3	-2.5	0	-2.4	0.3	-2.1	-2.4	1.057	47	6	0
91282CKW0	4.250	Jun 30, 2031	6.6	7	4.172	-6.5	0.0	5.60	572	0.1	61	0.2	0.9	40.8	-2.0	3	-1.6	45.5	-3.2	3	-2.3	0	-2.4	0.4	-2.0	-1.9	1.059	46	3	0
91282CLD1	4.125	Jul 31, 2031	6.7	7	4.172	-6.6	0.0	5.70	576	-0.1	44	-0.4	0.8	40.9	-2.1	3	-1.7	45.6	-3.3	3	-2.4	0	-2.5	0.5	-2.0	-2.1	1.061	46	5	0
91282CCS8	1.250	Aug 15, 2031	6.7	10	4.177	-6.5	0.0	6.27	523	-0.2	33	-0.5	1.1	41.4	-2.1	3	-1.8	46.1	-3.3	3	-2.5	0	-2.3	0.6	-1.7	-1.9	1.068	142	20	10
91282CLJ8	3.750	Aug 31, 2031	6.8	7	4.176	-6.6	0.3	5.84	575	0.0	52	-0.1	1.0	41.3	-1.9	3	-1.6	46.0	-3.1	3	-2.3	3	-2.0	0.3	-1.7	-1.7	1.063	47	7	0
91282CLM1	3.625	Sep 30, 2031	6.8	7	4.173	-6.6	0.0	5.94	578	0.1	49	0.2	0.2	41.0	-1.9	5	-1.4	45.7	-3.1	5	-2.0	3	-2.1	0.5	-1.6	-1.5	1.068	45	2	0
91282CLU3	4.125	Oct 31, 2031	6.9	7	4.171	-6.5	0.0	5.95	595	0.1	44	0.4	-0.2	40.8	-1.3	41	-0.9	45.6	-2.5	14	-1.4	3	-2.0	0.5	-1.5	-1.4	1.071	45	2	0
91282CDJ7	1.375	Nov 15, 2031	7.0	10	4.185	-6.4	0.1	6.49	540	-0.1	41	-0.3	0.7	42.2	-2.2	3	-1.7	46.9	-3.3	3	-2.4	0	-1.9	0.6	-1.3	-1.4	1.085	145	23	14
91282CDY4	1.875	Feb 15, 2032	7.2	10	4.192	-6.5	0.1	6.56	565	0.0	38	0.0	0.4	43.3	-2.3	3	-1.9	48.1	-3.5	3	-2.6	0	-2.1	1.1	-1.0	-1.0	1.104	141	26	2
91282CEP2	2.875	May 15, 2032	7.5	10	4.198	-6.5	0.2	6.58	604	0.4	86	1.1	0.1	44.0	-1.9	3	-1.6	48.9	-3.0	3	-2.3	0	-1.8	1.0	-0.8	-0.4	1.114	133	24	42
91282CFF3	2.750	Aug 15, 2032	7.7	10	4.207	-6.5	0.1	6.75	617	0.8	98	2.0	-0.2	44.9	-1.5	3	-1.2	49.8	-2.6	3	-2.0	0	-2.0	1.2	-0.8	0.0	1.116	121	18	4
91282CFV8	4.125	Nov 15, 2032	8.0	10	4.187	-6.5	0.0	6.71	670	-0.4	12	-1.5	-2.8	42.8	-2.1	3	-1.8	47.7	-3.2	3	-2.5	0	-1.8	0.8	-1.0	-1.4	1.099	111	11	5
91282CGM7	3.500	Feb 15, 2033	8.2	10	4.214	-6.6	0.0	6.96	668	-0.2	23	-0.7	-1.1	45.6	-1.8	3	-1.5	50.6	-2.9	3	-2.3	0	-1.9	0.8	-1.1	-1.3	1.092	115	14	1050
91282CHC8	3.375	May 15, 2033	8.5	10	4.223	-6.4	0.1	7.23	681	-0.1	26	-0.5	-0.3	46.7	-1.4	3	-1.1	51.7	-2.5	3	-1.9	0	-1.6	0.2	-1.4	-1.5	1.069	109	9	14
91282CHT1	3.875	Aug 15, 2033	8.7	10	4.228	-6.4	0.0	7.22	712	-0.8	3	-1.8	0.5	47.1	-1.5	3	-1.3	52.1	-2.6	3	-2.1	0	-1.8	-0.1	-1.9	-2.7	1.038	122	12	11
91282CJJ1	4.500	Nov 15, 2033	9.0	10	4.230	-6.4	0.0	7.32	748	-1.2	2	-1.8	1.2	47.1	-1.5	3	-1.2	52.1	-2.5	3	-2.1	0	-1.5	-0.6	-2.1	-3.3	1.011	115	1	28
91282CJZ5	4.000	Feb 15, 2034	9.2	10	4.240	-6.4	0.0	7.53	748	-1.3	2	-1.5	2.8	48.1	-1.3	3	-1.1	53.2	-2.4	3	-2.0	0	-1.7	-0.7	-2.4	-3.7	0.997	124	3	27
91282CKQ3	4.375	May 15, 2034	9.5	10	4.243	-6.2	0.0	7.68	777	-1.4	3	-1.5	4.2	48.4	-1.0	5	-0.9	53.5	-2.1	3	-1.8	3	-1.3	-0.9	-2.2	-3.6	0.990	133	10	50
91282CLF6	3.875	Aug 15, 2034	9.7	10	4.243	-6.3	0.0	7.90	776	-1.7	0	-1.8	4.8	48.2	-1.1	5	-1.0	53.3	-2.2	3	-1.9	7	-1.3	-0.7	-2.0	-3.7	0.991	129	7	7
91282CLW9	4.250	Nov 15, 2034	10.0	10	4.240	-6.1	0.0	8.04	806	-0.5	5	-1.4	5.2	47.7	-0.8	33	-0.7	52.8	-1.6	17	-1.1	28	-0.5	-0.7	-1.2	-1.7	1.002	52	20	0
912810FT0	4.500	Feb 15, 2036	11.2	30	4.156	-6.0	0.0	8.68	905	-1.6	3	-1.7	-3.7	38.3	-1.2	5	-1.2	43.5	-2.2	3	-2.1	0	-1.7	0.6	-1.1	-2.7	1.074	26	68	1710
912810PT9	4.750	Feb 15, 2037	12.2	30	4.232	-6.0	0.2	9.17	974	-0.9	3	-2.1	0.2	45.0	-1.2	5	-1.3	50.2	-2.2	3	-2.2	0	-1.4	1.1	-0.3	-1.2	1.142	17	70	368
912810PU6	5.000	May 15, 2037	12.5	30	4.249	-6.1	0.0	9.33	1002	-0.5	15	-1.0	1.2	46.4	-0.8	5	-0.9	51.7	-1.9	5	-1.9	0	-1.1	1.0	-0.1	-0.6	1.150	21	70	378

US Fixed Income Strategy

CUSIP	Coupon	Maturity	Yrs to Orig Mat	Yld Issue	1-D Yld Chg	Spot Bad	Mod Dur	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				
912810PW2	4.375	Feb 15, 2038	13.2	30	4.285	-6.0	0.1	9.85	1007	0.4	94	1.8	0.7	49.3	-0.9	5	-1.0	54.6	-1.9	5	-1.9	0	-1.1	1.4	0.3	0.7	1.193	23	70	548
912810PX0	4.500	May 15, 2038	13.5	30	4.302	-6.1	0.1	10.04	1026	0.5	95	2.0	1.1	50.8	-0.8	5	-1.0	56.1	-1.8	5	-2.0	0	-0.9	1.3	0.4	0.9	1.200	26	70	479
912810QA9	3.500	Feb 15, 2039	14.2	30	4.328	-6.0	0.0	10.80	997	0.8	98	2.0	-1.1	52.8	-1.2	5	-1.3	58.2	-2.2	5	-2.1	0	-0.9	1.5	0.6	1.4	1.227	26	70	97
912810QB7	4.250	May 15, 2039	14.5	30	4.359	-6.0	0.1	10.67	1057	0.9	98	1.6	1.3	55.8	-1.2	5	-1.3	61.2	-2.2	5	-2.1	0	-0.7	1.3	0.6	1.5	1.226	39	70	984
912810QC5	4.500	Aug 15, 2039	14.7	30	4.371	-6.0	0.0	10.58	1086	1.1	98	2.0	1.4	56.9	-1.0	5	-1.1	62.3	-2.0	5	-1.9	0	-0.9	1.4	0.5	1.6	1.224	41	70	747
912810QD3	4.375	Nov 15, 2039	15.0	30	4.378	-6.1	0.0	10.88	1089	1.0	95	1.3	0.6	57.4	-1.3	5	-1.4	62.8	-2.3	5	-2.2	0	-0.7	1.2	0.5	1.5	1.226	45	70	2180
912810QE1	4.625	Feb 15, 2040	15.2	30	4.383	-6.0	0.0	10.77	1120	1.1	94	1.0	0.0	57.9	-1.4	5	-1.5	63.3	-2.4	5	-2.3	0	-0.8	1.3	0.5	1.6	1.221	45	70	2513
912810QH4	4.375	May 15, 2040	15.5	30	4.388	-6.0	0.0	11.13	1113	1.4	95	1.2	-0.8	58.5	-1.2	7	-1.3	63.9	-2.2	5	-2.1	0	-0.6	1.1	0.5	1.9	1.224	43	70	2413
912810SR0	1.125	May 15, 2040	15.5	20	4.450	-5.9	0.0	13.50	853	-0.7	8	-1.6	0.9	64.6	-3.2	5	-2.7	70.0	-4.2	3	-3.2	0	-0.4	1.4	1.0	0.3	1.306	60	33	354
912810QK7	3.875	Aug 15, 2040	15.7	30	4.398	-6.1	0.0	11.39	1084	0.9	86	0.9	-1.7	59.4	-1.7	5	-1.7	64.8	-2.7	5	-2.4	0	-0.7	1.3	0.6	1.5	1.229	43	70	258
912810SQ2	1.125	Aug 15, 2040	15.7	20	4.467	-5.9	0.0	13.62	857	-0.7	9	-1.6	1.1	66.3	-3.2	5	-2.7	71.7	-4.3	3	-3.2	0	-0.5	1.5	1.0	0.3	1.306	76	36	130
912810QL5	4.250	Nov 15, 2040	16.0	30	4.401	-6.0	0.0	11.44	1126	1.2	94	1.1	-2.1	59.6	-1.5	5	-1.4	65.0	-2.5	5	-2.2	0	-0.6	1.1	0.5	1.7	1.222	43	70	990
912810ST6	1.375	Nov 15, 2040	16.0	20	4.481	-5.5	0.0	13.57	881	-0.9	17	-1.0	1.5	67.6	-3.1	5	-2.5	73.0	-4.1	3	-3.0	0	-0.4	1.3	0.9	0.0	1.297	86	36	28
912810QN1	4.750	Feb 15, 2041	16.2	30	4.397	-5.9	0.0	11.20	1180	1.1	86	0.9	-3.2	59.2	-1.5	5	-1.6	64.6	-2.5	5	-2.3	0	-0.8	1.1	0.3	1.4	1.211	43	68	777
912810SW9	1.875	Feb 15, 2041	16.2	20	4.484	-5.8	0.0	13.12	928	-1.3	6	-1.5	1.4	67.9	-3.4	5	-2.7	73.4	-4.4	3	-3.2	0	-0.5	1.3	0.8	-0.5	1.279	90	26	342
912810QQ4	4.375	May 15, 2041	16.5	30	4.411	-6.0	0.0	11.61	1159	1.1	88	1.3	-3.1	60.6	-1.4	13	-1.1	66.1	-2.3	5	-1.8	0	-0.6	1.0	0.4	1.5	1.216	42	70	277
912810SY5	2.250	May 15, 2041	16.5	20	4.476	-5.9	0.0	13.01	968	-2.0	2	-1.5	0.2	67.1	-3.7	5	-2.7	72.6	-4.7	2	-3.2	0	-0.4	1.1	0.7	-1.3	1.265	85	34	530
912810QS0	3.750	Aug 15, 2041	16.7	30	4.438	-5.8	0.0	11.95	1112	0.9	92	1.3	-2.4	63.3	-1.4	20	-1.0	68.7	-2.4	10	-1.7	0	-0.6	1.1	0.5	1.4	1.226	42	70	436
912810TA6	1.750	Aug 15, 2041	16.7	20	4.509	-5.9	0.0	13.56	927	-1.5	5	-1.5	1.3	70.4	-3.5	5	-2.7	75.9	-4.5	2	-3.2	0	-0.4	1.2	0.8	-0.7	1.280	83	11	97
912810QT8	3.125	Nov 15, 2041	17.0	30	4.459	-5.7	0.0	12.60	1063	0.7	83	1.1	-2.3	65.3	-1.6	38	-1.1	70.8	-2.5	13	-1.7	0	-0.4	1.0	0.6	1.3	1.237	45	70	375
912810TC2	2.000	Nov 15, 2041	17.0	20	4.523	-5.8	0.0	13.53	953	-1.0	8	-1.3	2.0	71.7	-3.2	5	-2.7	77.2	-4.2	2	-3.2	0	-0.3	1.1	0.8	-0.2	1.273	70	11	19
912810QU5	3.125	Feb 15, 2042	17.2	30	4.482	-5.6	0.1	12.60	1068	0.4	71	0.6	-1.3	67.7	-1.8	33	-1.1	73.2	-2.7	12	-1.6	0	-0.5	1.1	0.6	1.0	1.237	47	70	571
912810TF5	2.375	Feb 15, 2042	17.2	20	4.525	-5.7	0.1	13.21	993	-1.1	6	-1.6	1.7	72.1	-3.2	5	-2.5	77.5	-4.2	2	-3.0	0	-0.4	1.1	0.7	-0.4	1.260	59	14	741
912810QW1	3.000	May 15, 2042	17.5	30	4.508	-5.7	0.0	12.93	1061	0.1	42	0.1	0.5	70.4	-2.0	23	-1.1	75.9	-3.0	5	-1.6	0	-0.3	0.9	0.6	0.7	1.242	44	70	1049
912810TH1	3.250	May 15, 2042	17.5	20	4.498	-5.7	0.0	12.75	1086	-1.4	0	-1.6	0.0	69.4	-3.0	5	-1.9	74.9	-4.0	2	-2.4	0	-0.3	0.9	0.6	-0.8	1.236	49	10	102
912810TK4	3.375	Aug 15, 2042	17.7	20	4.507	-5.7	0.0	12.66	1105	-1.1	5	-1.7	0.1	70.4	-2.8	5	-1.9	75.9	-3.8	3	-2.4	0	-0.5	1.0	0.5	-0.6	1.231	41	5	4
912810QX9	2.750	Aug 15, 2042	17.7	30	4.527	-5.6	0.0	13.14	1042	0.3	67	0.5	1.0	72.4	-1.8	10	-1.1	77.9	-2.8	7	-1.7	0	-0.4	1.0	0.6	0.9	1.245	42	64	1208
912810TM0	4.000	Nov 15, 2042	18.0	20	4.489	-5.7	0.1	12.50	1177	-0.6	0	-1.0	-1.6	68.6	-2.2	27	-1.4	74.1	-3.2	5	-1.9	0	-0.4	0.8	0.4	-0.2	1.218	41	4	0
912810QY7	2.750	Nov 15, 2042	18.0	30	4.541	-5.6	0.1	13.38	1047	0.4	89	1.2	1.3	73.8	-1.7	13	-1.2	79.3	-2.7	5	-1.9	0	-0.2	0.8	0.6	1.0	1.246	42	47	2956

US Fixed Income Strategy

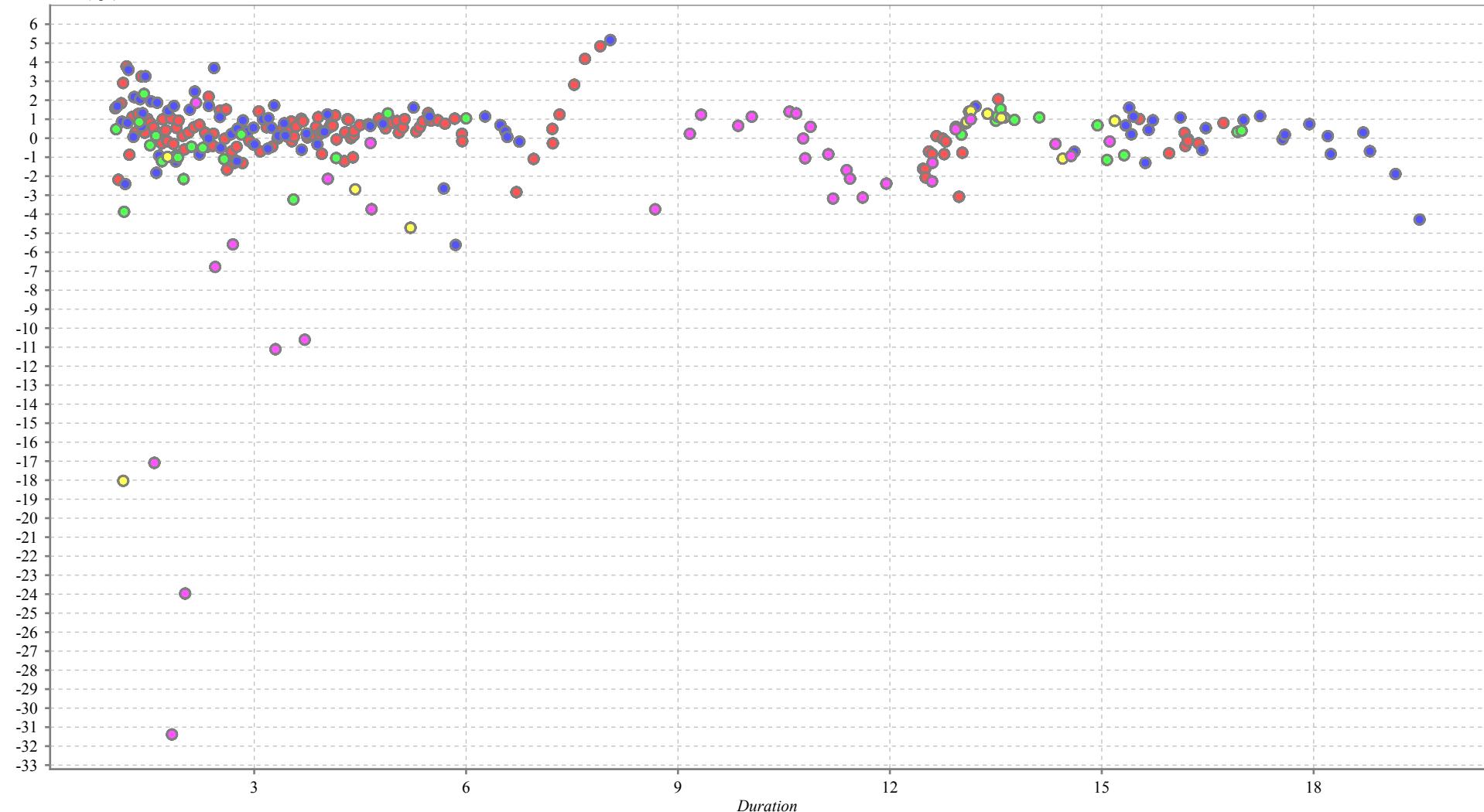
CUSIP	Coupon	Maturity	Yrs to Orig Mat	Yld Issue	1-D Chg	Yld Bad	Spot Dur	Par Curve Model				Matched-maturity SOFR				Match-maturity OIS				3 Months					Issue (\$bn)	SOMA %	Stripped (\$mn)			
								R/C	Pctl	Zs	YE	Spot	R/C	Pctl	Zs	Spot	R/C	Pctl	Zs	Special	Carry	Roll	C+R	C+R+R/C	Ret					
912810QZ4	3.125	Feb 15, 2043	18.2	30	4.538	-5.6	0.1	13.08	1092	-0.1	42	-0.2	0.8	73.6	-1.9	17	-1.3	79.1	-2.9	2	-1.9	0	-0.4	0.9	0.5	0.4	1.232	42	54	5030
912810TQ1	3.875	Feb 15, 2043	18.2	20	4.509	-5.6	0.1	12.55	1171	-0.5	17	-0.9	-0.7	70.8	-2.1	18	-1.4	76.3	-3.1	3	-2.0	0	-0.5	0.8	0.3	-0.2	1.217	44	11	5
912810TS7	3.875	May 15, 2043	18.5	20	4.519	-5.6	0.0	12.79	1179	-0.7	8	-1.3	-0.2	71.9	-2.2	17	-1.4	77.4	-3.2	3	-1.9	0	-0.3	0.7	0.4	-0.3	1.213	42	7	2
912810RB6	2.875	May 15, 2043	18.5	30	4.551	-5.7	0.0	13.53	1073	-0.2	35	-0.6	1.1	75.1	-2.2	12	-1.4	80.6	-3.2	2	-2.0	0	-0.2	0.7	0.5	0.3	1.231	42	28	4135
912810RC4	3.625	Aug 15, 2043	18.7	30	4.540	-5.6	0.1	12.93	1159	-0.8	2	-1.7	0.6	74.1	-2.3	8	-1.7	79.6	-3.3	3	-2.3	0	-0.4	0.8	0.4	-0.4	1.216	42	48	3290
912810TU2	4.375	Aug 15, 2043	18.7	20	4.505	-5.8	0.1	12.47	1242	-1.1	3	-2.1	-1.6	70.6	-2.5	12	-1.6	76.1	-3.4	2	-2.2	0	-0.5	0.7	0.2	-0.9	1.202	44	4	1
912810RD2	3.750	Nov 15, 2043	19.0	30	4.547	-5.4	0.0	13.09	1179	-0.5	6	-1.3	0.9	74.8	-2.0	13	-1.5	80.4	-3.0	5	-2.1	0	-0.2	0.6	0.4	-0.1	1.213	42	47	2871
912810TW8	4.750	Nov 15, 2043	19.0	20	4.501	-5.7	0.0	12.51	1292	-0.7	3	-1.7	-2.1	70.2	-2.1	25	-1.3	75.8	-3.0	5	-1.9	0	-0.3	0.6	0.3	-0.4	1.195	42	0	0
912810RE0	3.625	Feb 15, 2044	19.2	30	4.562	-5.6	0.0	13.15	1172	0.2	80	0.9	1.4	76.6	-1.5	20	-1.1	82.2	-2.5	7	-1.8	0	-0.3	0.7	0.4	0.6	1.211	42	44	5364
912810TZ1	4.500	Feb 15, 2044	19.2	20	4.524	-5.6	0.0	12.60	1272	-0.4	15	-1.0	-0.8	72.8	-1.8	22	-1.2	78.4	-2.8	8	-1.8	0	-0.4	0.6	0.2	-0.2	1.196	43	2	17
912810RG5	3.375	May 15, 2044	19.5	30	4.568	-5.5	0.0	13.58	1152	0.6	97	2.5	1.1	77.5	-1.1	28	-0.8	83.0	-2.1	13	-1.4	0	-0.2	0.5	0.3	0.9	1.210	42	48	3693
912810UB2	4.625	May 15, 2044	19.5	20	4.526	-5.6	0.0	12.77	1295	-0.4	26	-0.9	-0.8	73.3	-1.6	25	-1.1	78.9	-2.6	8	-1.7	3	-0.2	0.5	0.3	-0.1	1.192	44	5	0
912810RH3	3.125	Aug 15, 2044	19.7	30	4.577	-5.6	0.0	13.76	1131	0.5	85	0.9	1.0	78.6	-1.5	18	-1.1	84.2	-2.4	8	-1.7	0	-0.3	0.6	0.3	0.8	1.207	42	33	3613
912810UD8	4.125	Aug 15, 2044	19.7	20	4.541	-5.7	0.0	13.03	1248	0.7	94	1.3	-0.8	75.0	-1.1	17	-0.8	80.5	-2.1	7	-1.5	8	-0.2	0.6	0.4	1.1	1.192	44	4	2
912810UF3	4.625	Nov 15, 2044	20.0	20	4.514	-5.5	0.0	12.98	1319	0.4	80	1.1	-3.1	72.5	-0.1	38	-0.2	78.0	-0.4	25	-0.6	0	-0.3	0.4	0.1	0.5	1.140	17	0	0
912810RJ9	3.000	Nov 15, 2044	20.0	30	4.586	-5.4	0.0	14.12	1122	1.1	98	1.7	1.1	79.7	-1.0	25	-0.7	85.3	-1.9	15	-1.4	0	-0.2	0.4	0.2	1.3	1.204	41	42	6864
912810RK6	2.500	Feb 15, 2045	20.2	30	4.585	-5.5	0.0	14.61	1073	0.7	74	0.8	-0.7	79.9	-1.5	20	-1.2	85.5	-2.5	8	-1.8	0	-0.3	0.5	0.2	0.9	1.200	42	22	5173
912810RM2	3.000	May 15, 2045	20.5	30	4.580	-5.4	0.0	14.35	1137	0.6	88	0.9	-0.3	79.8	-1.3	23	-1.0	85.3	-2.3	15	-1.7	0	-0.2	0.3	0.1	0.7	1.190	42	63	2546
912810RN0	2.875	Aug 15, 2045	20.7	30	4.579	-5.5	0.0	14.45	1130	0.5	86	0.9	-1.1	79.9	-1.3	25	-1.0	85.5	-2.3	13	-1.7	0	-0.3	0.4	0.1	0.6	1.183	42	49	3701
912810RP5	3.000	Nov 15, 2045	21.0	30	4.580	-5.4	0.0	14.57	1150	0.8	98	1.3	-0.9	80.3	-1.0	40	-0.8	85.9	-2.0	20	-1.5	0	-0.2	0.2	0.0	0.8	1.176	42	69	3174
912810RQ3	2.500	Feb 15, 2046	21.2	30	4.593	-5.4	0.0	15.07	1094	0.8	98	1.2	-1.1	82.0	-1.1	28	-0.9	87.6	-2.1	18	-1.6	0	-0.2	0.3	0.1	0.9	1.172	40	34	5516
912810RS9	2.500	May 15, 2046	21.5	30	4.596	-5.5	0.0	15.32	1098	0.6	89	1.0	-0.9	82.7	-1.1	30	-1.0	88.3	-2.1	17	-1.7	0	-0.1	0.1	0.0	0.6	1.166	43	38	5435
912810RT7	2.250	Aug 15, 2046	21.7	30	4.600	-5.3	0.0	15.62	1071	0.7	94	1.1	-1.3	83.4	-1.1	35	-0.9	89.0	-2.0	22	-1.6	0	-0.2	0.2	0.0	0.7	1.158	41	18	4738
912810RU4	2.875	Nov 15, 2046	22.0	30	4.597	-5.4	0.0	15.11	1156	0.6	92	1.2	-0.2	83.4	-0.9	33	-0.8	89.0	-1.9	22	-1.5	0	-0.1	0.0	-0.1	0.5	1.150	43	65	2966
912810RV2	3.000	Feb 15, 2047	22.2	30	4.603	-5.4	0.0	14.94	1176	0.7	91	1.3	0.7	84.5	-0.8	37	-0.6	90.2	-1.8	25	-1.3	0	-0.2	0.1	-0.1	0.6	1.144	41	28	4329
912810RX8	3.000	May 15, 2047	22.5	30	4.604	-5.4	0.0	15.18	1181	0.6	95	1.7	0.9	85.1	-0.7	35	-0.6	90.7	-1.7	20	-1.4	0	-0.1	-0.1	-0.2	0.4	1.137	44	49	5343
912810RY6	2.750	Aug 15, 2047	22.7	30	4.602	-5.4	0.0	15.42	1154	0.2	83	0.9	0.2	85.2	-1.0	27	-0.9	90.9	-2.0	18	-1.6	0	-0.2	0.0	-0.2	0.0	1.127	44	26	9322
912810RZ3	2.750	Nov 15, 2047	23.0	30	4.603	-5.3	0.0	15.66	1159	0.3	80	0.9	0.4	85.7	-0.8	32	-0.7	91.3	-1.8	20	-1.4	0	-0.1	-0.2	-0.3	0.0	1.119	41	21	9611
912810SA7	3.000	Feb 15, 2048	23.2	30	4.600	-5.9	0.1	15.34	1199	-0.3	9	-1.2	0.7	85.8	-1.3	22	-1.2	91.5	-2.3	8	-1.9	0	-0.2	-0.1	-0.3	-0.6	1.111	45	17	9182

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					
912810SC3	3.125	May 15, 2048	23.5	30	4.598	-5.8	0.0	15.45	1222	-0.5	3	-1.5	1.1	86.1	-1.3	27	-1.2	91.7	-2.3	12	-2.0	0	-0.1	-0.3	-0.4	-0.9	1.106	49	19	5934
912810SD1	3.000	Aug 15, 2048	23.7	30	4.598	-5.7	0.0	15.53	1210	-0.5	0	-1.4	1.0	86.4	-1.4	22	-1.3	92.1	-2.4	12	-2.1	0	-0.2	-0.2	-0.4	-0.9	1.095	50	13	12155
912810SE9	3.375	Nov 15, 2048	24.0	30	4.593	-5.7	0.0	15.39	1270	-0.7	0	-1.9	1.6	86.3	-1.5	17	-1.4	92.0	-2.5	10	-2.1	0	-0.1	-0.4	-0.5	-1.2	1.090	55	18	9663
912810SF6	3.000	Feb 15, 2049	24.2	30	4.590	-5.5	0.0	15.72	1223	-0.8	2	-2.2	0.9	86.5	-1.7	13	-1.6	92.1	-2.7	7	-2.4	0	-0.2	-0.4	-0.6	-1.4	1.075	56	15	14264
912810SH2	2.875	May 15, 2049	24.5	30	4.588	-5.6	0.0	16.11	1210	-0.6	2	-1.5	1.1	86.8	-1.5	18	-1.4	92.4	-2.5	8	-2.1	0	-0.1	-0.5	-0.6	-1.2	1.064	57	20	16920
912810SJ8	2.250	Aug 15, 2049	24.7	30	4.587	-5.5	0.0	16.92	1122	-0.2	35	-0.6	0.3	87.1	-1.4	15	-1.3	92.8	-2.3	8	-2.1	0	-0.2	-0.5	-0.7	-0.9	1.046	63	31	7773
912810SK5	2.375	Nov 15, 2049	25.0	30	4.579	-5.7	0.0	16.98	1146	-0.5	5	-1.1	0.4	86.6	-1.6	8	-1.5	92.3	-2.6	7	-2.2	0	-0.1	-0.7	-0.8	-1.3	1.034	60	32	8593
912810SL3	2.000	Feb 15, 2050	25.2	30	4.575	-5.5	0.0	17.56	1094	0.2	70	0.4	-0.1	86.7	-1.1	17	-1.0	92.4	-2.1	7	-1.7	0	-0.2	-0.7	-0.9	-0.7	1.012	60	15	11679
912810SN9	1.250	May 15, 2050	25.5	30	4.540	-5.5	0.0	19.50	988	-0.4	30	-0.8	-4.3	83.6	-2.0	8	-1.5	89.3	-3.0	7	-2.1	0	-0.2	-0.9	-1.1	-1.5	0.960	74	19	11829
912810SP4	1.375	Aug 15, 2050	25.7	30	4.552	-5.5	0.0	19.16	1007	-0.1	29	-0.6	-1.9	85.3	-1.9	8	-1.6	91.0	-2.9	5	-2.2	0	-0.2	-0.8	-1.0	-1.1	0.961	89	24	16267
912810SS8	1.625	Nov 15, 2050	26.0	30	4.551	-5.3	0.0	18.80	1048	0.0	67	0.2	-0.7	85.5	-1.9	12	-1.5	91.2	-2.9	3	-2.1	0	-0.2	-0.9	-1.1	-1.1	0.962	86	22	22260
912810SU3	1.875	Feb 15, 2051	26.2	30	4.537	-5.4	0.0	18.24	1094	-0.3	9	-1.6	-0.8	84.6	-2.3	5	-1.9	90.3	-3.2	3	-2.5	0	-0.3	-0.8	-1.1	-1.4	0.965	90	17	20785
912810SX7	2.375	May 15, 2051	26.5	30	4.531	-5.4	0.0	17.59	1180	-0.2	29	-0.6	0.2	84.5	-1.9	5	-1.6	90.2	-2.9	3	-2.3	0	-0.2	-0.9	-1.1	-1.3	0.977	95	22	14581
912810SZ2	2.000	Aug 15, 2051	26.7	30	4.526	-5.4	0.0	18.20	1122	0.0	55	0.1	0.1	84.4	-2.1	5	-1.8	90.1	-3.1	3	-2.4	0	-0.3	-0.9	-1.2	-1.2	0.959	91	19	20597
912810TB4	1.875	Nov 15, 2051	27.0	30	4.520	-5.2	0.0	18.70	1105	0.4	89	1.1	0.3	84.2	-2.0	5	-1.7	89.9	-3.0	3	-2.3	0	-0.2	-1.0	-1.2	-0.8	0.948	90	24	21604
912810TD0	2.250	Feb 15, 2052	27.2	30	4.513	-5.4	0.0	17.94	1173	0.2	62	0.5	0.7	83.9	-2.2	5	-1.8	89.7	-3.2	3	-2.4	0	-0.3	-0.8	-1.1	-0.9	0.962	85	26	23168
912810TG3	2.875	May 15, 2052	27.5	30	4.504	-5.7	0.0	17.24	1286	0.0	32	-0.1	1.2	83.5	-2.1	3	-1.8	89.3	-3.1	2	-2.4	0	-0.2	-0.9	-1.1	-1.1	0.980	79	24	16520
912810TJ7	3.000	Aug 15, 2052	27.7	30	4.494	-5.4	0.0	17.01	1315	0.0	32	-0.1	1.0	83.0	-2.2	5	-1.8	88.7	-3.2	2	-2.5	0	-0.4	-0.7	-1.1	-1.1	0.984	70	19	13199
912810TL2	4.000	Nov 15, 2052	28.0	30	4.474	-5.4	0.0	16.22	1503	0.4	95	1.6	-0.1	81.3	-1.4	5	-1.3	87.1	-2.4	3	-2.0	0	-0.3	-0.7	-1.0	-0.6	1.001	64	11	9867
912810TN8	3.625	Feb 15, 2053	28.2	30	4.475	-5.5	0.1	16.47	1441	0.2	68	0.7	0.5	81.9	-1.8	3	-1.7	87.7	-2.8	3	-2.4	0	-0.4	-0.6	-1.0	-0.8	0.998	66	14	16641
912810TR9	3.625	May 15, 2053	28.5	30	4.470	-5.4	0.0	16.72	1448	0.5	97	1.6	0.8	81.9	-1.5	5	-1.4	87.7	-2.5	3	-2.1	0	-0.3	-0.7	-1.0	-0.5	0.999	63	9	22261
912810TT5	4.125	Aug 15, 2053	28.7	30	4.459	-5.4	0.0	16.17	1549	0.3	97	2.1	0.3	81.2	-1.4	5	-1.3	87.0	-2.4	3	-2.1	0	-0.4	-0.5	-0.9	-0.6	1.011	72	12	11410
912810TV0	4.750	Nov 15, 2053	29.0	30	4.443	-5.6	0.0	15.95	1678	0.1	71	0.7	-0.8	80.0	-1.5	3	-1.3	85.8	-2.5	2	-2.1	0	-0.4	-0.6	-1.0	-0.9	1.017	66	1	11007
912810TX6	4.250	Feb 15, 2054	29.2	30	4.444	-5.3	0.0	16.22	1591	-0.2	36	-0.7	-0.2	80.7	-1.6	5	-1.6	86.5	-2.6	3	-2.4	0	-0.4	-0.5	-0.9	-1.1	1.020	71	3	15801
912810UA4	4.625	May 15, 2054	29.5	30	4.437	-5.4	0.0	16.18	1671	-0.3	8	-1.2	-0.4	80.4	-1.6	5	-1.5	86.3	-2.6	3	-2.3	0	-0.4	-0.5	-0.9	-1.2	1.030	76	10	10091
912810UC0	4.250	Aug 15, 2054	29.7	30	4.434	-5.3	0.0	16.37	1607	-0.5	6	-1.4	-0.3	80.7	-1.7	5	-1.7	86.5	-2.7	3	-2.6	6	-0.4	-0.4	-0.8	-1.3	1.032	74	7	10806
912810UE6	4.500	Nov 15, 2054	30.0	30	4.427	-5.2	0.0	16.42	1665	-0.3	29	-0.6	-0.6	80.4	-1.0	22	-0.8	86.2	-1.7	17	-1.2	5	-0.3	-0.4	-0.7	-1.0	1.039	31	20	0

Yield Errors in Duration Space Using the Par Curve Model

Yield Error (bps)

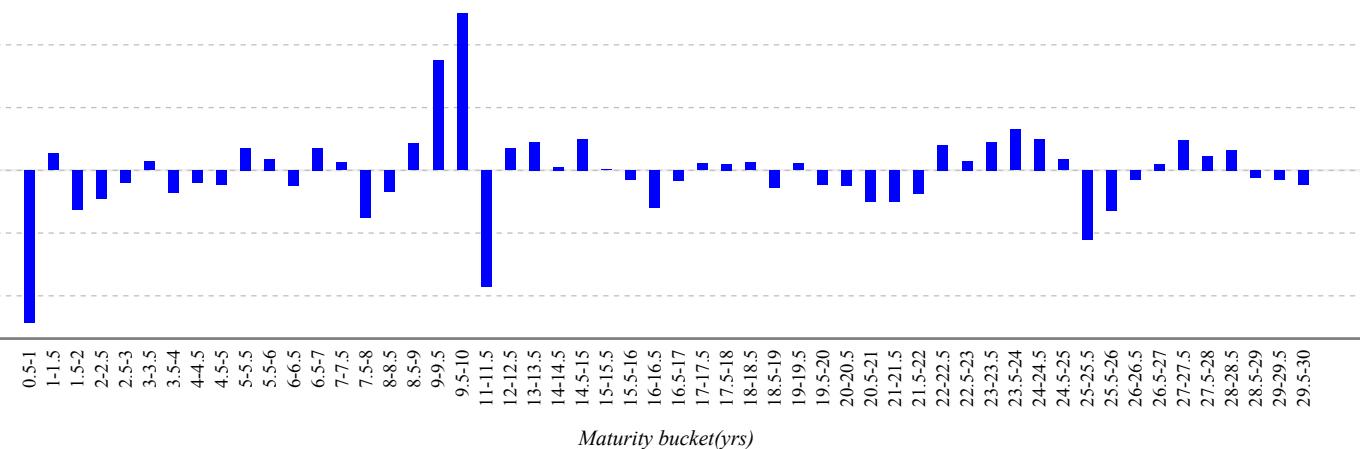


Note:

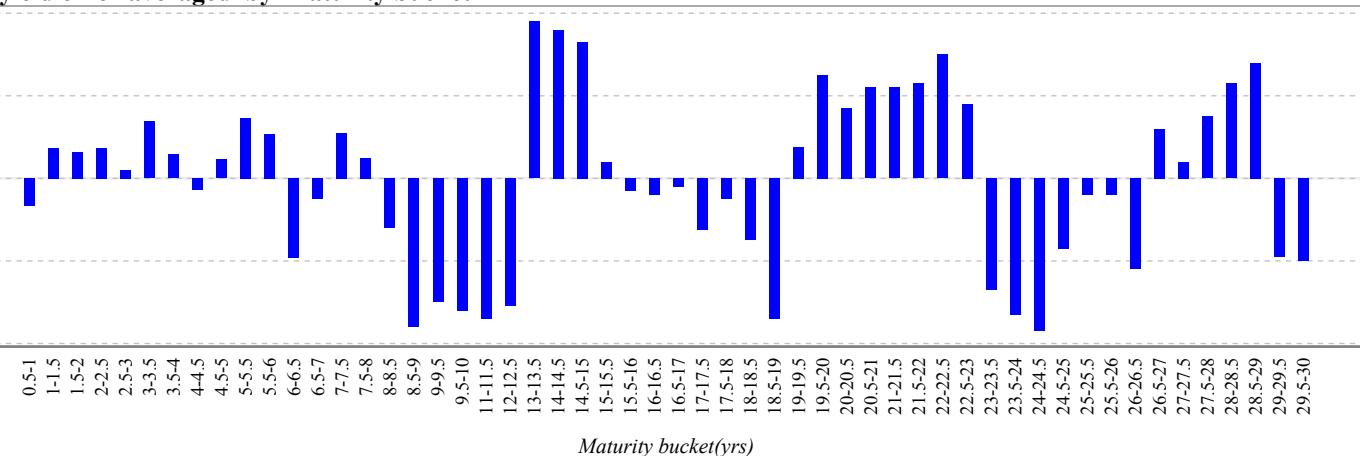
The size of dots is proportional to the percentage of outstanding amount *NOT* in the hands of the Fed.

Yield Error Summary Report

Average yield error by maturity bucket (bp)



Zscore of yield error averaged by maturity bucket



US Fixed Income Strategy

Potential Treasury Buyback Candidates - Nominal Coupon Securities

Securities with highest yield errors* (bp) and rich/cheap measures** (bp) in SOMA purchase buckets, bucketed by SOMA ownership buckets

<25%					25-50%					50-70%				
Year to Maturity	Coupon	Maturity	YE	R/C	Coupon	Maturity	YE	R/C	Coupon	Maturity	YE	R/C		
0.00 - 2.00	4.875	Nov-2025	4.2	1.3	2.875	Nov-2025	1.8	-1.0	2.625	Mar-2025	-19.2	-5.3		
	4.625	Feb-2026	3.8	1.5	2.375	Apr-2026	1.6	0.4						
	0.375	Nov-2025	3.6	0.1	0.875	Jun-2026	1.5	1.0						
2.00 - 3.00	2.625	May-2027	2.6	1.0	0.500	May-2027	2.9	0.8	1.125	Feb-2027	1.9	0.0		
	1.875	Feb-2027	1.9	0.1	2.250	Feb-2027	0.5	0.6						
	1.500	Jan-2027	1.5	0.5	2.250	Aug-2027	0.5	0.2						
3.00 - 5.00	1.250	Apr-2028	2.1	0.3	2.250	Nov-2027	0.3	-0.2	1.625	Aug-2029	-3.1	-0.9		
	3.250	Jun-2029	1.7	0.5	3.125	Nov-2028	0.2	-0.6						
	2.375	Mar-2029	1.6	-0.2	2.375	May-2029	-0.2	-0.7						
5.00 - 7.00	1.250	Aug-2031	1.4	-0.6	0.625	May-2030	1.5	0.6	1.750	Nov-2029	-3.9	-1.4		
	4.375	Nov-2030	1.2	0.1	1.500	Feb-2030	1.1	0.3						
	0.625	Aug-2030	1.1	0.8	1.625	May-2031	0.9	-0.6						
7.00 - 10.0	4.000	Feb-2034	4.0	-0.7	1.875	Feb-2032	0.6	0.2						
	4.500	Nov-2033	2.4	-0.6										
	3.875	Aug-2033	1.2	-0.6										
10.0 - 20.0	2.000	Nov-2041	3.0	-0.2	1.875	Feb-2041	2.0	-1.3	4.250	May-2039	1.0	0.9		
	2.375	Feb-2042	2.6	-0.4	1.375	Nov-2040	1.6	-1.4	4.500	Aug-2039	0.8	0.9		
	1.750	Aug-2041	2.3	-0.8	3.625	Feb-2044	1.5	0.4	4.375	Nov-2039	0.3	1.5		
20.0 - 30.0	3.375	Nov-2048	2.1	-0.5	2.250	Feb-2052	0.9	0.7	2.875	Nov-2046	-0.3	0.8		
	3.000	Feb-2049	1.7	-0.2	2.250	Aug-2049	0.5	-0.1	3.000	May-2045	-0.3	1.0		
	2.875	May-2049	1.7	-0.1	2.375	Nov-2049	0.5	-0.4						

*Yield error = Actual yield - par fitted yield for each securities

**Rich/Cheap = Yield error - 3-month moving average of yield error

This list excludes the following securities not eligible for buybacks:

1. Nominal securities with free float below \$10bn and TIPS with free float below \$5bn. Free float is defined as the amount outstanding less the sum of SOMA holdings and the stripped amount.
2. Securities with SOMA ownership of more than 70% of the outstanding par amount after the buyback settlement.
3. Recently issued securities, defined as those that have not paid their first coupon at the date of the report.
4. CTDs for all front and back contracts.
5. Repo specials, defined as securities that are trading more than 75bp below GC in 1-month repo.

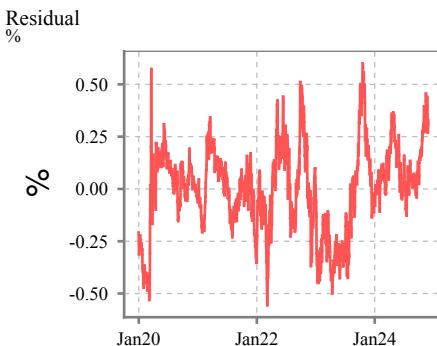
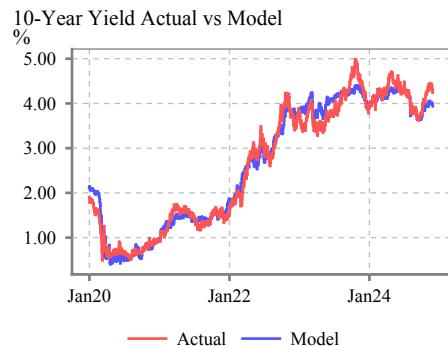
This list might include near CTD securities that are not eligible for buybacks

Source: J.P. Morgan

US Fixed Income Strategy

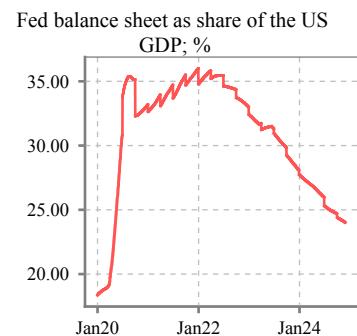
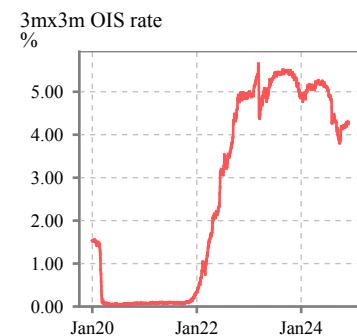
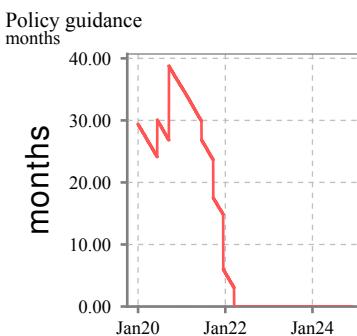
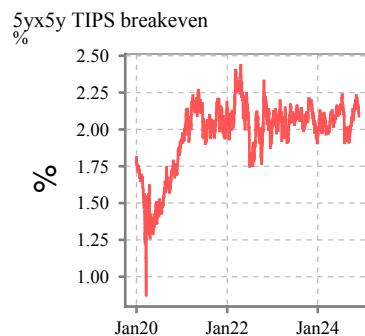
jpmorganmarkets.com

10-Year Treasury Fair Value Model



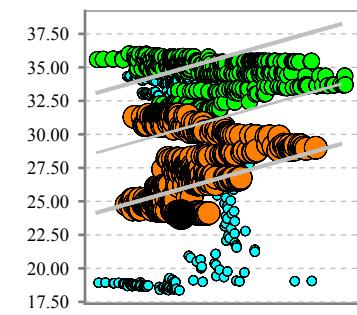
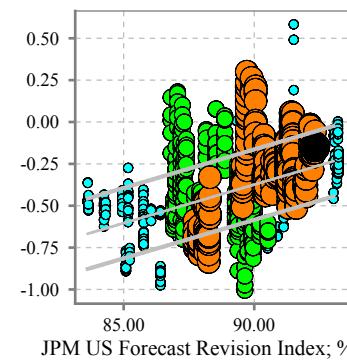
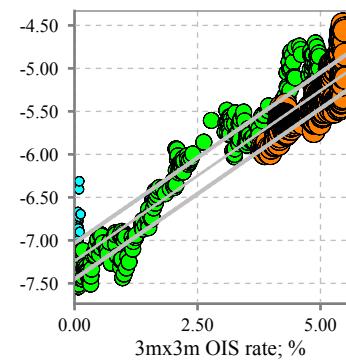
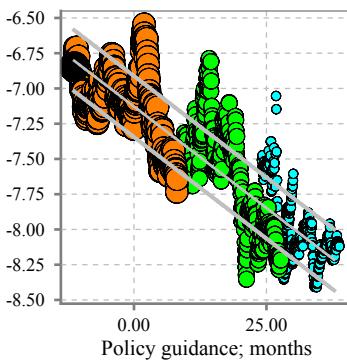
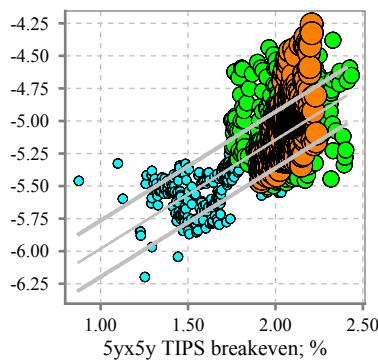
Yield Model

	Coeff	T-stat	Current Value
Intercept	-5.24	-13.2	
3m3m OIS rate; %	0.46	78.4	4.25
Policy guidance; months	-0.01	-15.0	0.00
5yx5y TIPS breakeven; %	0.9154	17.9	2.09
JPM US Forecast Revision Index; % pts	0.0601	13.1	92.33
Fed balance sheet as share of the US GDP; %	-0.01	-4.6	24.01
R-squared	98		
Standard Error; %	0.21		
Fair Value(Positions index=0)	4.19		
Fair Value(Positions)	3.94		
Current 10Y Yield	4.24		
Residual:bp	30.49		



Partial regressions

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



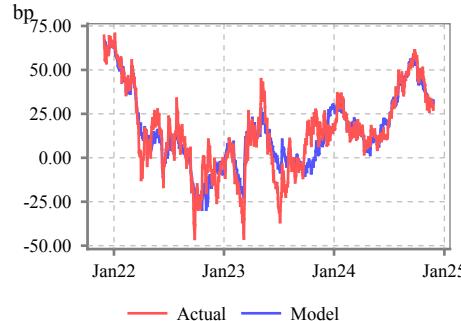
Note:

Model is fitted using a 5-year history.

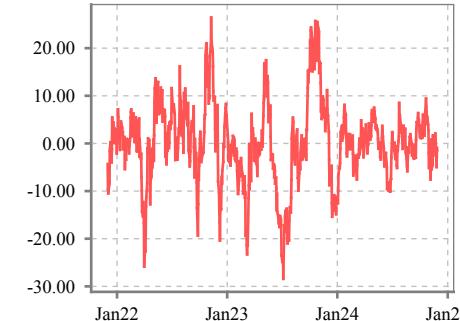
US Fixed Income Strategy

5s/30s Treasury Benchmark Yield Curve Model

5s/30s Curve Actual vs Model



Residual



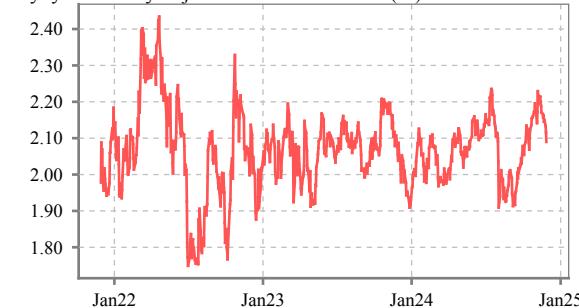
5s/30s Yield Curve (bp) Model

	Coeff	T-stat	Current Value
Intercept	175.1	27.0	
1y1y OIS rates (%)	-28.5	-67.2	3.75
5y5y seasonally-adjusted TIPS breakevens (%)	17.2	6.1	2.09
Fed balance sheet as share of the US GDP (%)	-4.6	-43.6	15.45
R-squared	86.3		8.55
Standard Error; bp	8.6		31.34
Current 10s/30s curve; bp	31.3		-1.45
Residual	-1.5		

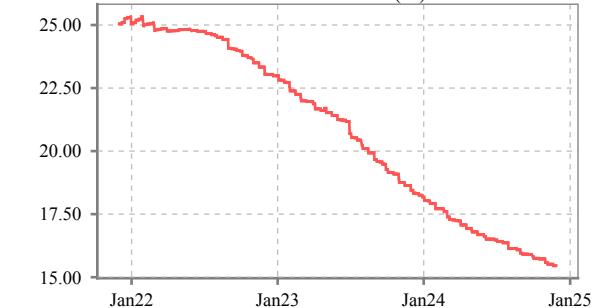
1y1y OIS rates (%)



5y5y seasonally-adjusted TIPS breakevens (%)

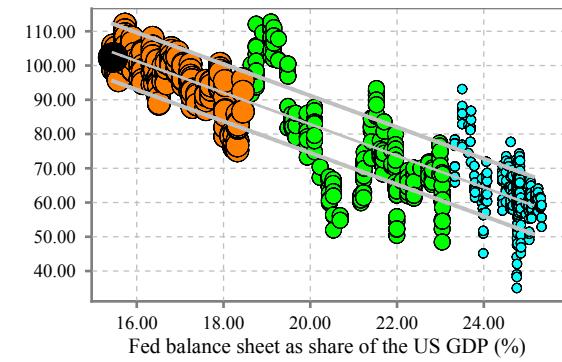
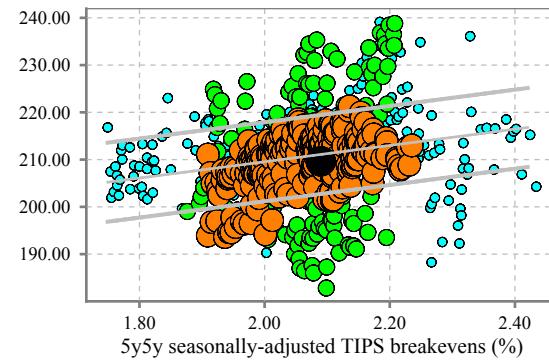
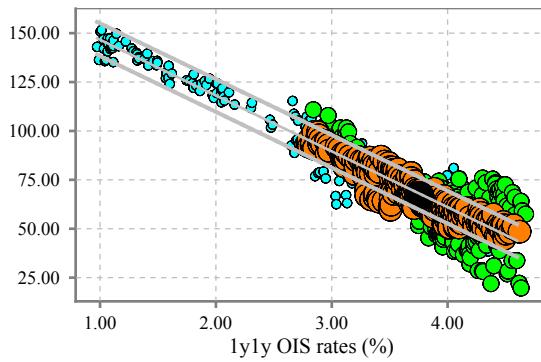


Fed balance sheet as share of the US GDP (%)



Partial regressions

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



Note:

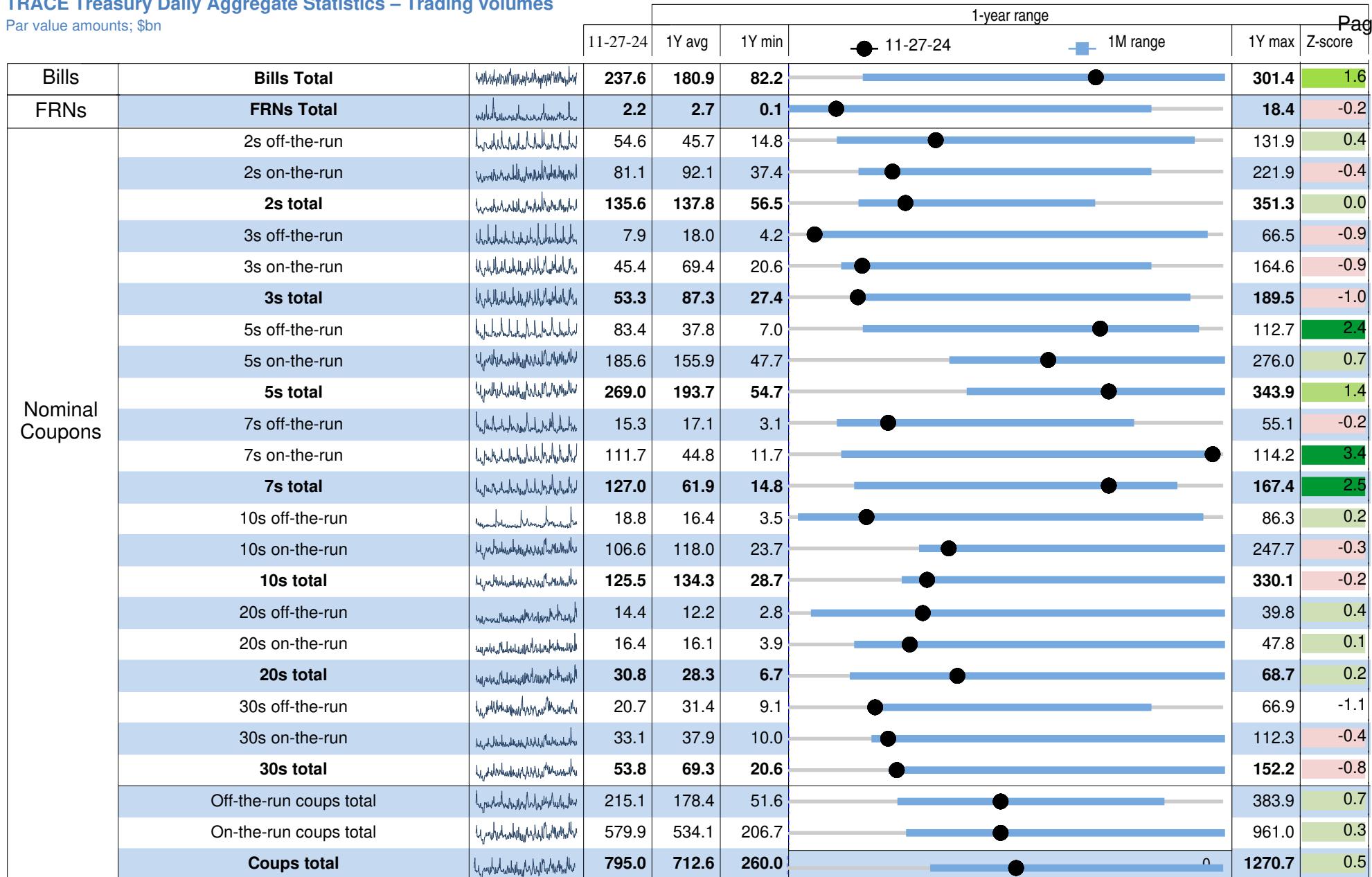
Model is fitted using 3-year history.

US Fixed Income Strategy

TRACE Treasury Daily Aggregate Statistics – Trading volumes

Par value amounts; \$bn

Page 20

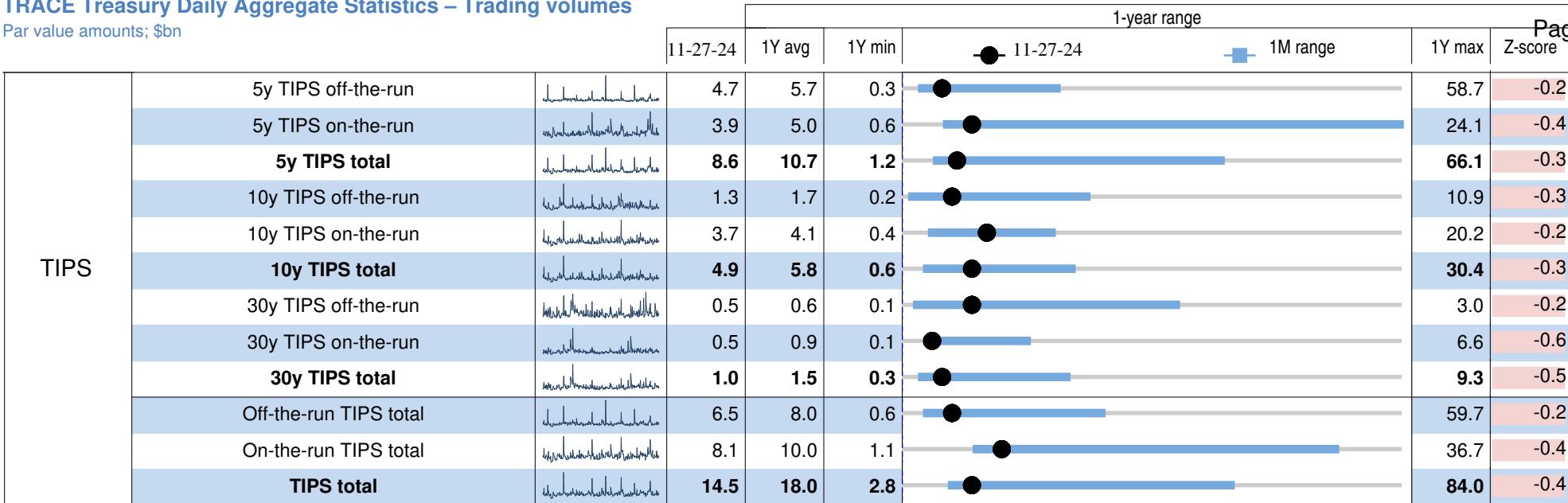


US Fixed Income Strategy

TRACE Treasury Daily Aggregate Statistics – Trading volumes

Par value amounts; \$bn

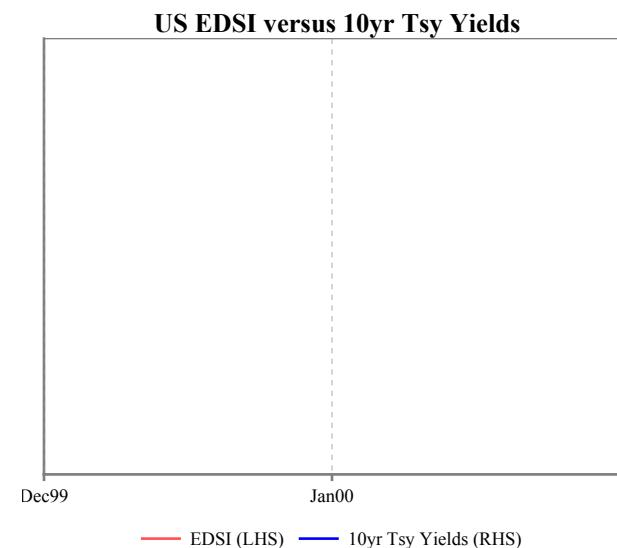
Page 21



US Fixed Income Strategy

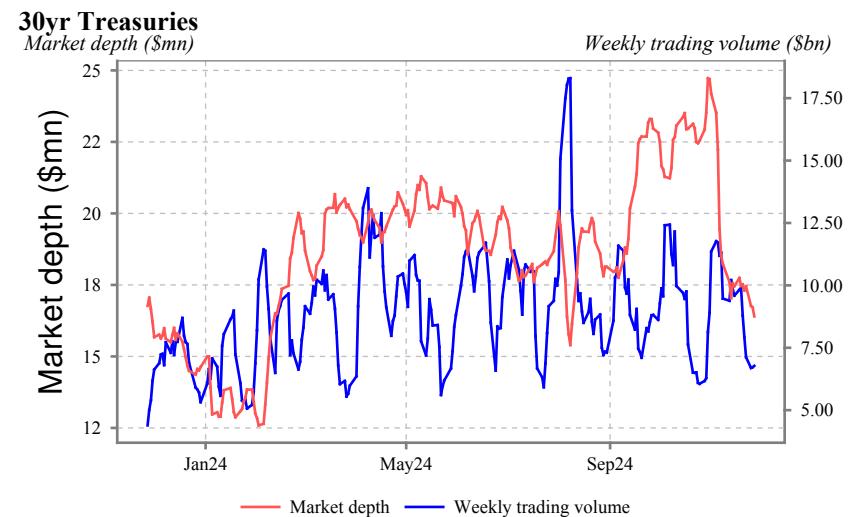
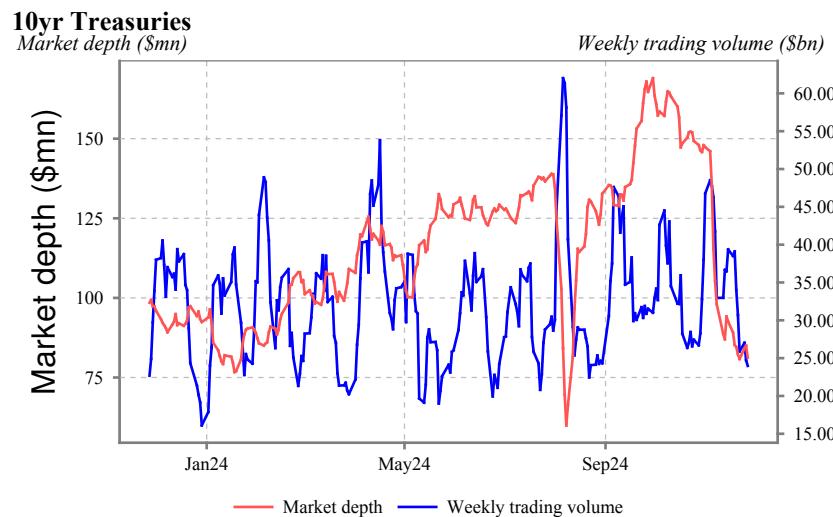
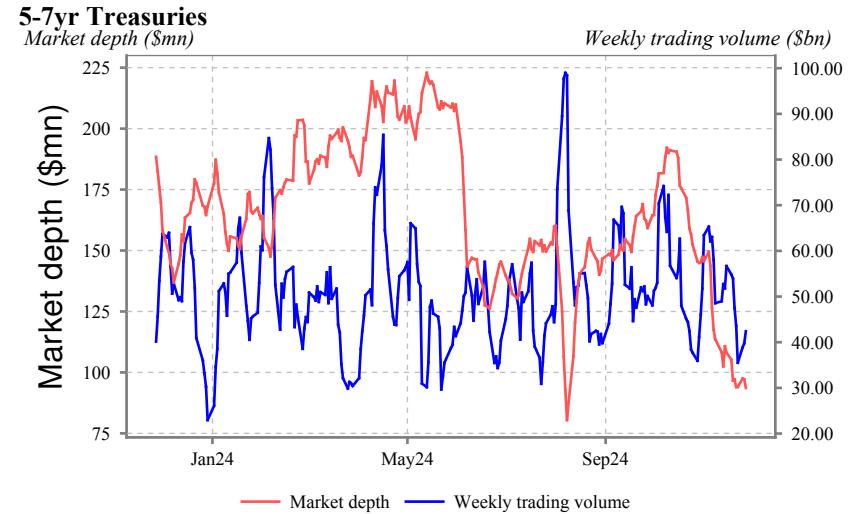
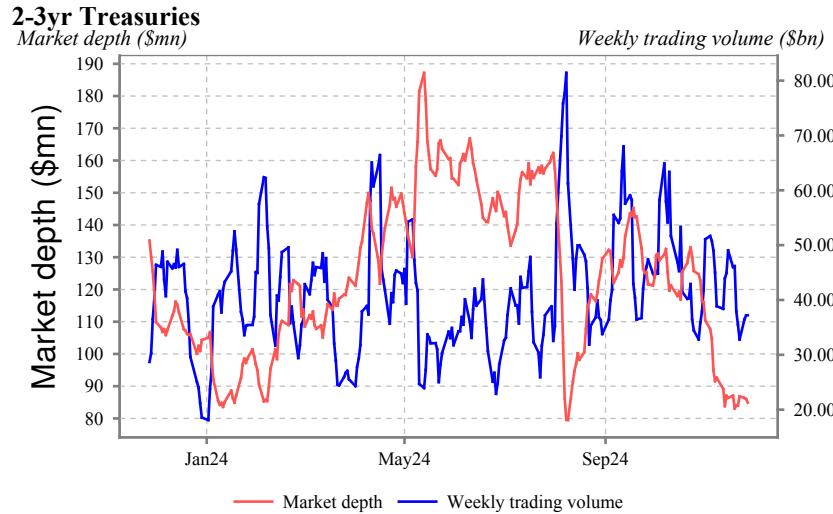
Economic Data Surprise Report

Name	Bloomberg Ticker	Last Release Date	Next Release Date	Last Release	Last Survey	Surprise	Z-Score	Weight
Initial Claims (SA '000s)	INJCJC	11/27/2024	11/27/2024	213.0	215.0	2.00	0.13	1.21
Real GDP Growth (SAAR QoQ % chg)	GDPCQOQ	11/27/2024	11/27/2024	2.8	2.8	0.00	0.00	0.98
Personal Income (SA MoM % chg)	PITLCHNG	11/27/2024	11/27/2024	0.6	0.3	0.30	1.48	0.94
Durable Goods New Orders (SA MoM % chg)	DGNOCHNG	11/27/2024	11/27/2024	0.2	0.5	-0.30	-0.25	1.07
Consumer Confidence (UMich)	CONSENT	11/22/2024	12/06/2024	71.8	73.9	-2.10	-0.65	0.90
Manufacturing New Orders (SA MoM)	TMNOCHNG	11/04/2024	12/04/2024	-0.5	-0.5	0.00	0.00	1.29
Nonfarm Payrolls (SA '000s)	NFPTCH	11/01/2024	12/06/2024	12.0	100.0	-88.00	-0.66	1.65
ISM Manufacturing PMI (SA)	NAPMPMI	11/01/2024	12/02/2024	46.5	47.6	-1.10	-1.03	1.58
Construction spending (SA MoM % chg)	CNSTTMOM	11/01/2024	12/02/2024	0.1	0.0	0.10	0.19	1.65
Average Weekly Hours (SA)	AWHTOTL	11/01/2024	12/06/2024	34.3	34.2	0.10	0.88	1.65
Existing home sales (SAAR # of units)	ETSLTOTL	10/23/2024	12/19/2024	3.8	3.9	-0.04	-0.29	0.96
Conf. Board US Leading Ind. (SA MoM % chg)	LEICHNG	10/21/2024	12/19/2024	-0.5	-0.3	-0.20	-1.01	1.21
New home starts (SAAR # of units)	NHSPSTOT	10/18/2024	12/18/2024	1354.0	1350.0	4.00	0.05	0.93
New home sales (SAAR # of units)	NHSLTOT	09/25/2024	12/24/2024	716.0	700.0	16.00	0.25	1.07
ISM Non-Manufacturing PMI (SA)	NAPMNMI	08/05/2024	12/04/2024	51.4	51.0	0.40	0.15	1.33
Industrial production (SA MoM % chg)	IPCHNG	07/17/2024	12/17/2024	0.6	0.3	0.30	0.65	0.97
Retail Sales (SA MoM % chg)	RSTAMOM	05/15/2024	12/17/2024	0.0	0.4	-0.40	-0.59	1.25
Core PCE (SA MoM)	PCECMOM	02/29/2024	11/27/2024	0.3	0.4	0.00	0.00	0.77
Consumer Confidence (Conference Board)	CONCCONF	12/20/2023	12/23/2024	110.7	104.5	6.20	1.20	0.90
Philadelphia Fed business Outlook Survey (SA)	OUTFGAF	11/16/2023	12/19/2024	-5.9	-8.0	2.10	0.19	1.15
Chicago Business Barometer	CHPMINDX	01/31/2018	01/31/2018	65.7	64.0	1.70	0.35	



Fixed Income Strategy

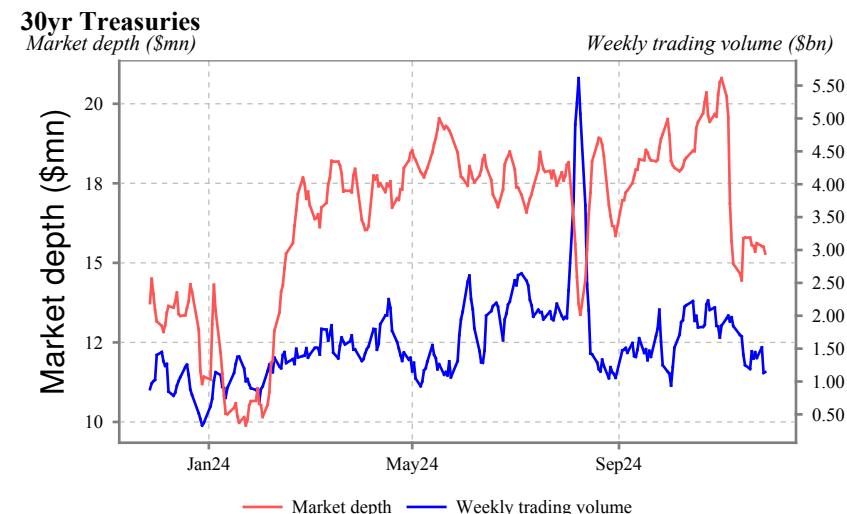
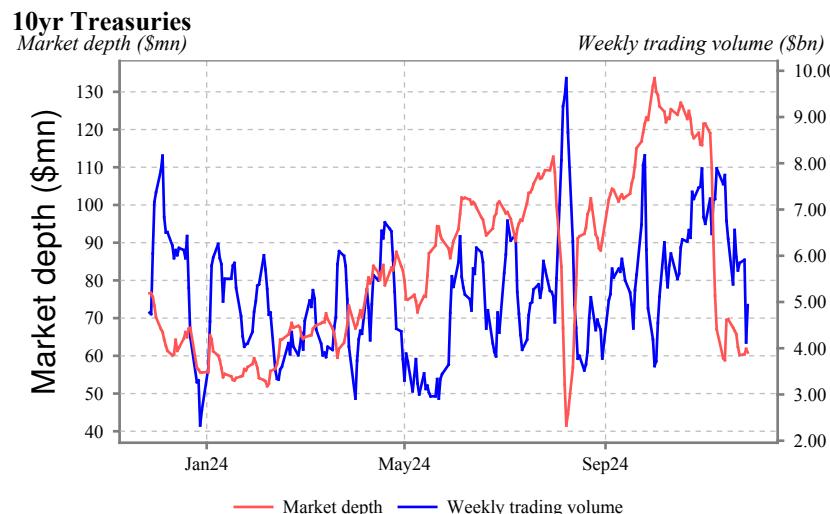
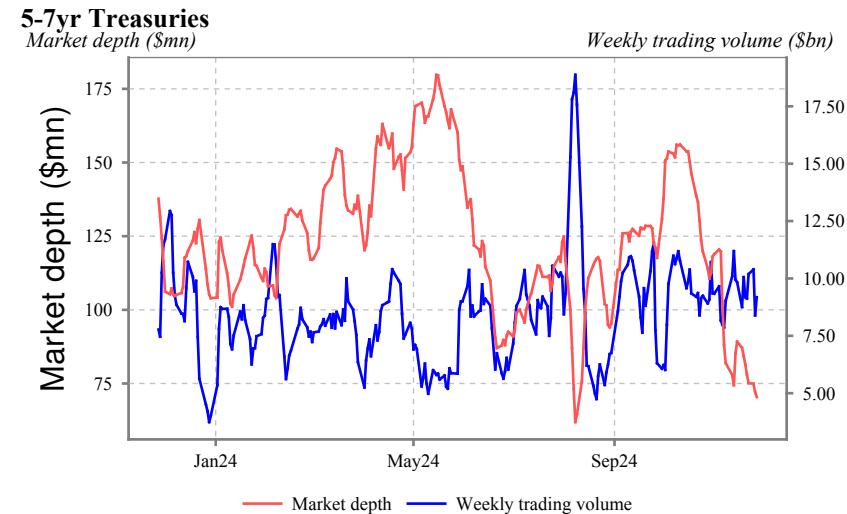
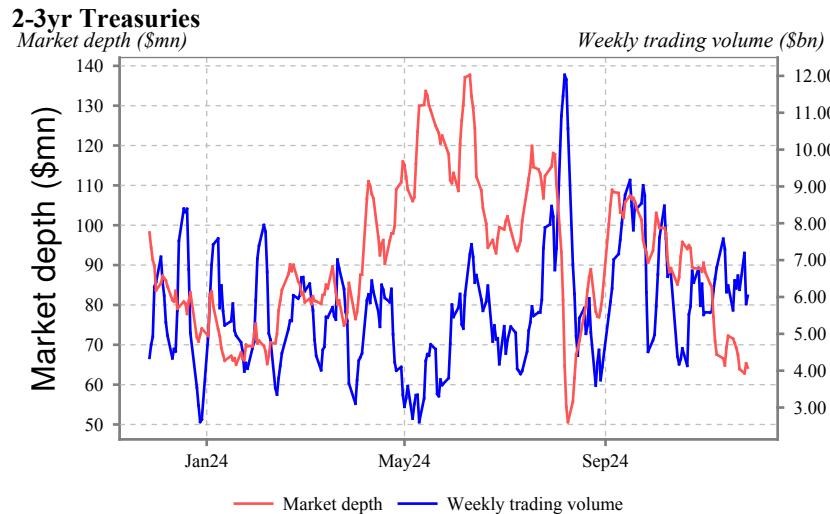
Cash Treasury Market Liquidity Summary



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



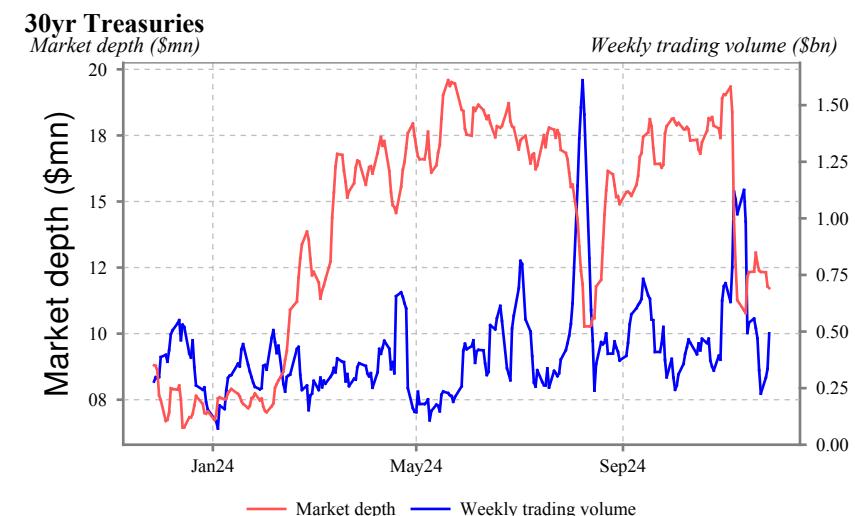
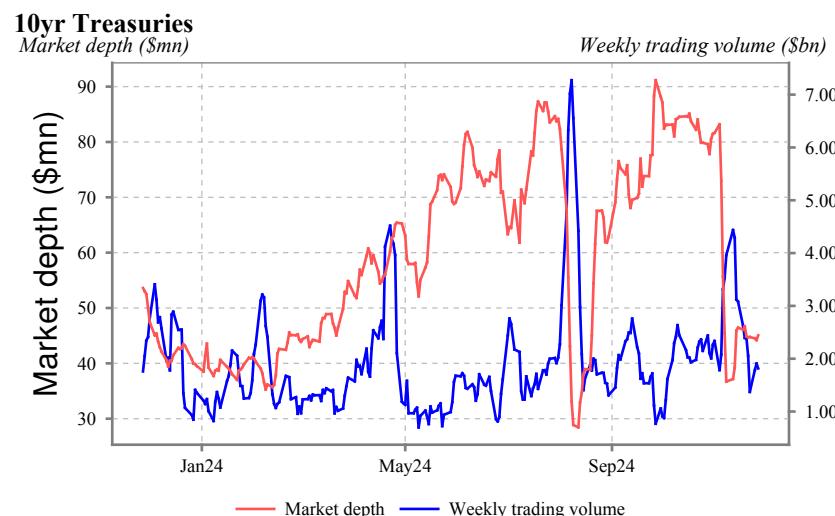
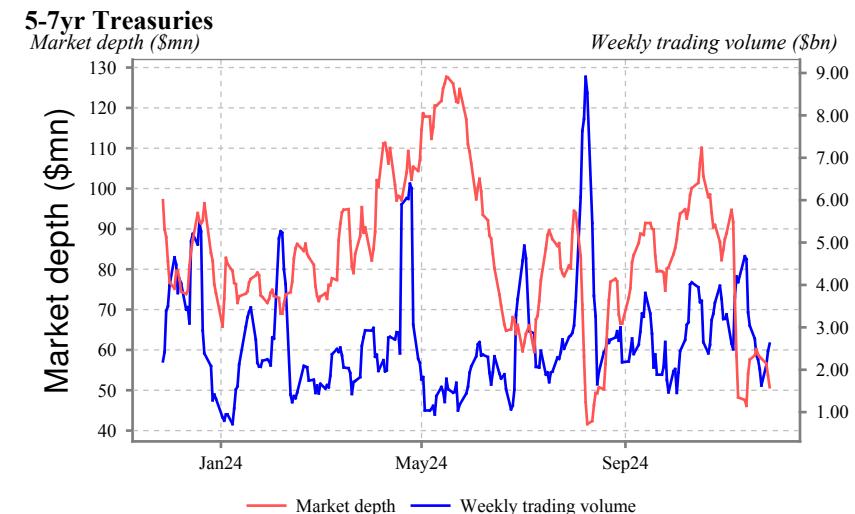
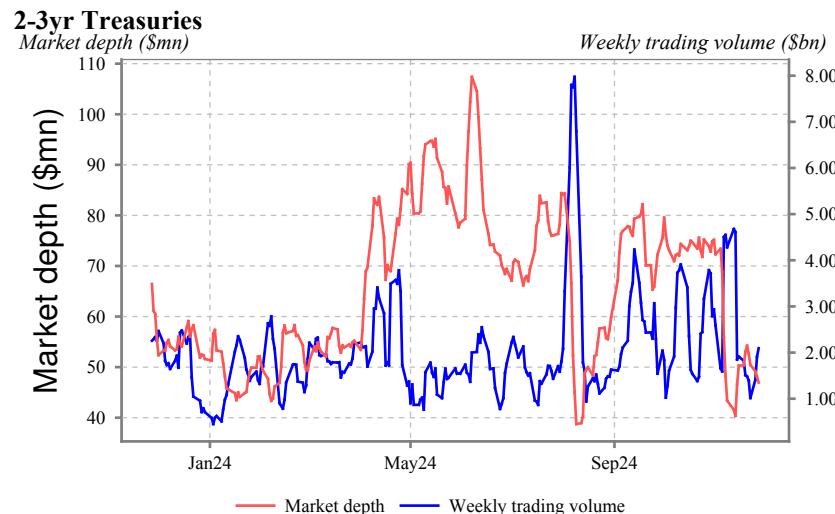
Market depth is defined as the weekly moving average of the top 3 bid/ask sizes in OTR Treasuries, averaged between 8:30am and 10:30am daily. Both market depth and volume data are taken from BrokerTec, an interdealer electronic trading platform.

Source: J.P. Morgan, BrokerTec

This document is being provided for the exclusive use of CHRISTOPHER Lee at JPMorgan Chase & Co. and clients of J.P. Morgan.

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

This document is being provided for the exclusive use of CHRISTOPHER Lee at JPMorgan Chase & Co. and clients of J.P. Morgan.

US Fixed Income Strategy

Hot-Run vs Off-the-Run Spreads

		11/27/2024	11/26/2024	11/25/2024	11/22/2024	11/21/2024	11/20/2024	11/19/2024	11/18/2024	11/15/2024	11/14/2024
2 year	Current-Olds	-2.6	-2.4	-2.0	-1.0	-1.3	-1.5	-1.6	-1.4	-1.3	-1.5
	Current-Double Olds	-3.5	-3.3	-3.3	-2.1	-2.4	-3.0	-2.9	-3.1	-2.8	-2.8
	Current-Triple Olds	-4.7	-4.8	-5.1	-2.3	-2.9	-3.1	-3.3	-3.0	-2.6	-2.7
3 year	Current-Olds	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.6	-0.4	-0.5	-0.4
	Current-Double Olds	-0.1	-0.3	-0.3	-0.1	0.1	0.5	0.5	0.5	0.6	0.7
	Current-Double Olds	-1.4	-1.2	-1.4	-0.8	-0.8	-0.7	-0.6	-0.7	-0.5	-0.5
5 year	Current-Olds	-1.2	-1.3	-0.4	-0.5	-0.5	-0.5	-0.7	-0.7	-0.7	-0.6
	Current-Double Olds	-1.7	-1.8	-0.1	0.3	0.2	0.6	0.6	0.5	0.2	0.2
	Current-Triple Olds	-1.1	-1.3	-0.7	-0.5	-0.4	-0.4	-0.5	-0.4	-0.6	-0.6
7 year	Current-Olds	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2
	Current-Double Olds	-0.3	-0.5	-0.7	-0.6	-0.5	-0.6	-0.7	-0.5	-0.5	-0.6
	Current-Triple Olds	-0.6	-0.2	-0.5	-0.2	-0.2	-0.2	-0.3	-0.2	-0.4	-0.3
10 year	Current-Olds	-0.3	-0.4	-0.3	-0.5	-0.6	-0.6	-0.6	-0.7	-0.6	-0.6
	Current-Double Olds	-0.3	-0.3	-0.2	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.6
	Current-Triple Olds	0.0	-0.3	-0.3	-0.3	-0.4	-0.3	-0.4	-0.3	-0.4	-0.6
30 year	Current-Olds	-0.7	-0.8	-1.1	-1.1	-1.2	-1.1	-1.1	-0.9	-0.8	-0.7
	Current-Double Olds	-0.9	-1.1	-1.3	-1.4	-1.4	-1.4	-1.3	-1.2	-1.0	-1.0
	Current-Triple Olds	-1.7	-1.8	-2.0	-2.2	-2.2	-2.0	-2.1	-1.8	-1.8	-1.7

Hot-Run	Current	Olds	Double Olds	Triple Olds
2Y	4.250	Nov 30, 2026	4.125	Oct 31, 2026
3Y	4.125	Nov 15, 2027	3.875	Oct 15, 2027
5Y	4.125	Nov 30, 2029	4.125	Oct 31, 2029
7Y	4.125	Nov 30, 2031	4.125	Oct 31, 2031
10Y	4.250	Nov 15, 2034	3.875	Aug 15, 2034
30Y	4.500	Nov 15, 2054	4.250	Aug 15, 2054
			3.500	Sep 30, 2026
			3.750	Aug 31, 2026
			3.375	Sep 15, 2027
			3.750	Aug 15, 2027
			3.500	Sep 30, 2029
			3.625	Aug 31, 2029
			3.750	Aug 31, 2031
			4.000	Feb 15, 2034
			4.250	Feb 15, 2054

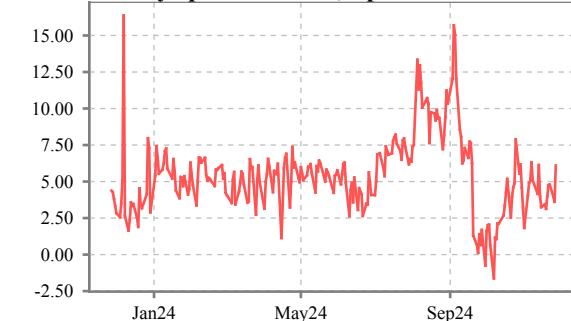
T-bill issuance report

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

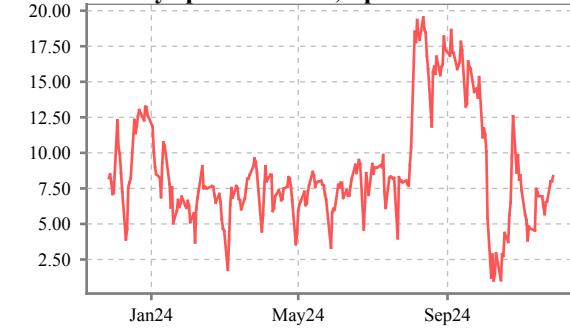
Projected gross issuance of bills

Settle date	4Wk	6Wk	8Wk	3m	17w	6m	12m	CMB	Bill net issuance
29-Nov		80		81		72	48	50	11
3-Dec	90		85		64				-6
5-Dec		70		81		72			-3
10-Dec	80		80		62				-23
12-Dec		70		79		72			-5
17-Dec	70		75		62				-38
19-Dec		70		76		70			-10
24-Dec	70		70		60				-45

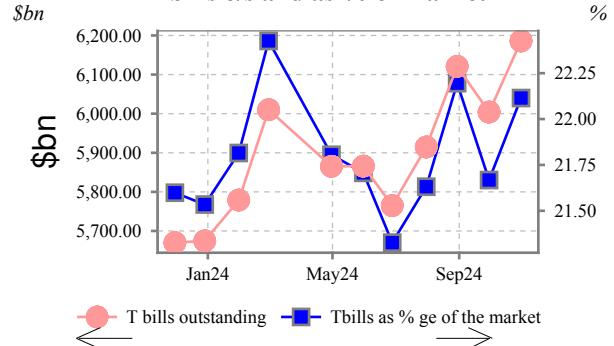
3M Treasury spread to OIS; bp



6M Treasury spread to OIS; bp



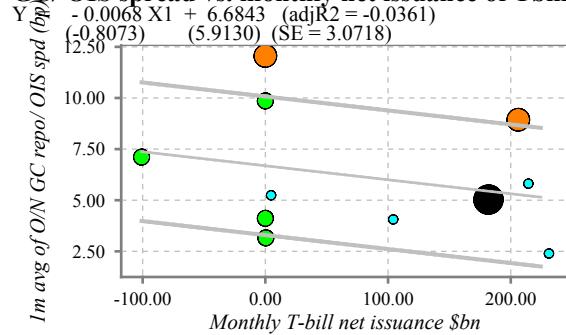
T-bills o/s and as % of market



2Y and 5Y Treasury spread to OIS; bp

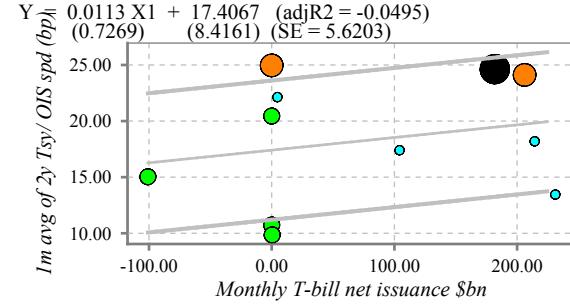


GC/OIS spread vs. monthly net issuance of Tbills



Regression on last 1-year of data

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



1Y Treasury spread to OIS; bp



Fixed Income Strategy

Treasury Issuance Forecast

Gross Issuance

Auction Month	2yr FRNs	2s	3s	5s	7s	10s	20s	30s	5yr TIPS	10yr TIPS	30yr TIPS	Total
Jan-23	24	42	40	43	35	32	12	18		17		263
Feb-23	22	42	40	43	35	35	15	21			9	262
Mar-23	22	42	40	43	35	32	12	18		15		259
Apr-23	24	42	40	43	35	32	12	18	21			267
May-23	22	42	40	43	35	35	15	21		15		268
Jun-23	22	42	40	43	35	32	12	18	19			263
Jul-23	24	42	40	43	35	32	12	18		17		263
Aug-23	24	45	42	46	36	38	16	23			8	278
Sep-23	24	48	44	49	37	35	13	20		15		285
Oct-23	26	51	46	52	38	35	13	20	22			303
Nov-23	24	54	48	55	39	41	17	25		15		318
Dec-23	24	57	50	58	40	38	14	22	20			323
Total	350	873	726	885	543	525	199	314	88	103	19	4625
2022	274	555	531	567	492	409	182	241	78	91	17	3434
Diff.	68	324	216	324	108	108	36	72	6	9	2	1273
Jan-24	28	60	52	61	41	38	14	22		18		334
Feb-24	26	63	54	64	42	44	18	27			10	348
Mar-24	26	66	56	67	43	41	15	24		16		354
Apr-24	30	69	58	70	44	41	15	24	23			374
May-24	28	72	60	73	45	47	19	29		16		389
Jun-24	28	75	62	76	46	44	16	26	21			394
Jul-24	32	78	64	79	47	44	16	26		19		405
Aug-24	30	78	64	79	47	47	19	29			9	402
Sep-24	30	78	64	79	47	44	16	26		17		401
Oct-24	32	78	64	79	47	44	16	26	23			409
Nov-24	30	78	64	79	47	47	19	29		17		410
Dec-24	30	78	64	79	47	44	16	26	21			405
Total	350	873	726	885	543	525	199	314	88	103	19	4625
2023	282	549	510	561	435	417	163	242	82	94	17	3352
Diff.	68	324	216	324	108	108	36	72	6	9	2	1273

Net Issuance to the Public

Year	Net privately-held borrowing		Fed secondary market purchases		Net change in privately held debt	
	Bills	Coupons	Bills	Coupons	Bills	Coupons
CY 2018	387	989	0	0	387	989
CY 2019	77	1133	169	77	-92	1056
CY 2020	2547	1752	160	2180	2387	-428
CY 2021	-1195	2906	0	957	-1195	1949
CY 2022	-72	1638	0	75	-72	1563
CY 2023	1919	1073	0	0	1919	1073
CY 2024	211	2221	0	0	211	2221

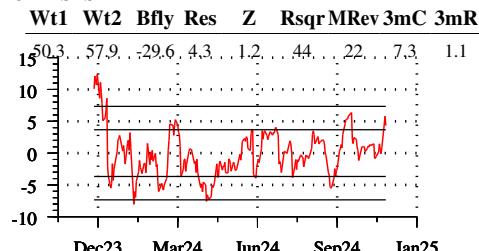
*JPM forecast

†TIPS net issuance through 2017 includes inflation accrual

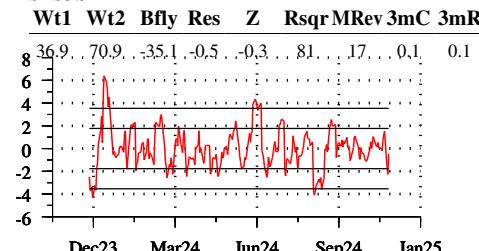
US Treasury Butterfly Report

Benchmark Butterflies (Level and Curve Neutral)

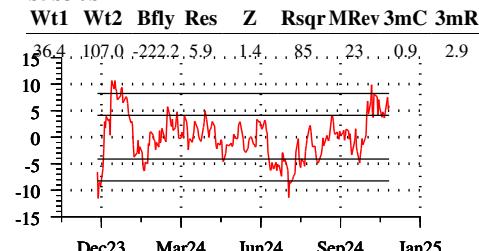
6m1s2s



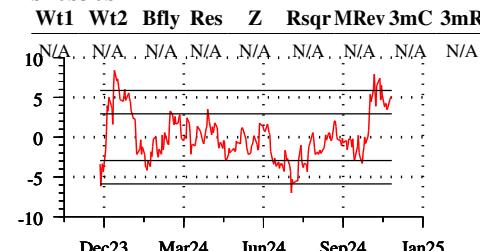
1s2s3s



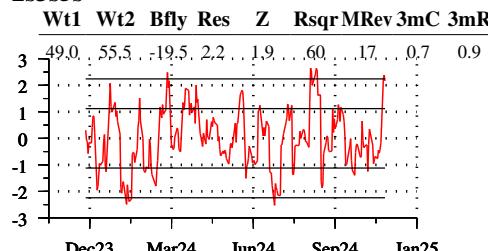
1s5s30s



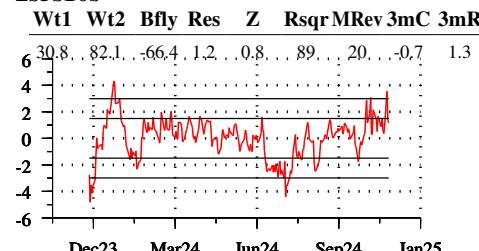
1s10s30s



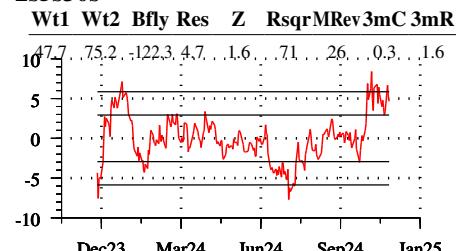
2s3s5s



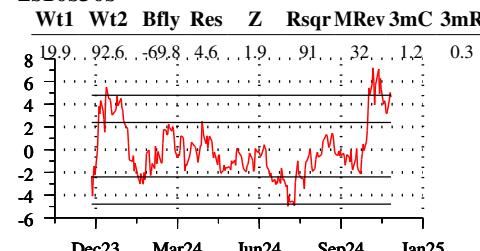
2s5s10s



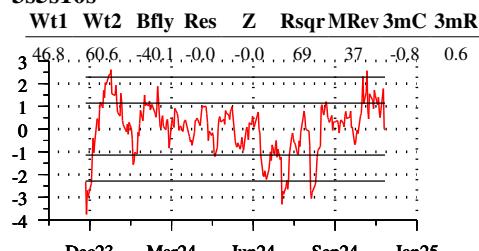
2s5s30s



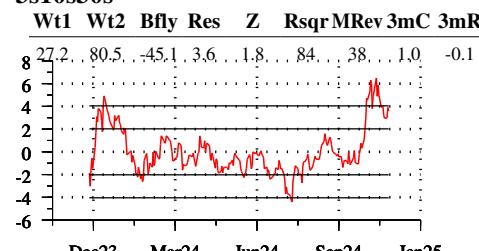
2s10s30s



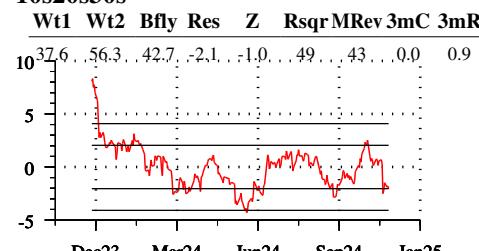
3s5s10s



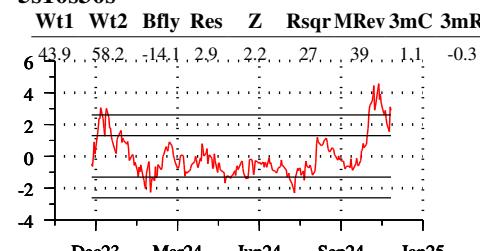
3s10s30s



10s20s30s



5s10s30s

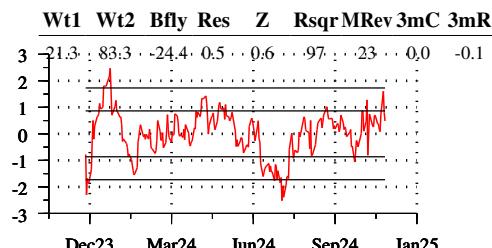


Note:

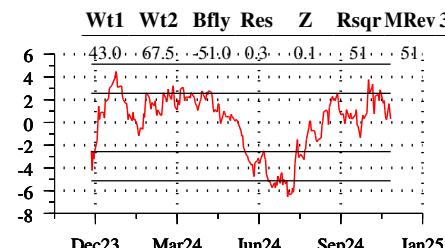
1. Wt1 and Wt2 are risk weights. Bfly: Current value of the butterfly spread. Res: residual. Z: ZScore. Rsqr: R-Squared. MRev: number of business days in which the residual is expected to revert to zero from a peak or trough. 3m C and 3m R: Weighted butterfly 3m carry and 3m roll, respectively. Calculated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

Par Rate Butterflies (Level and Curve Neutral)

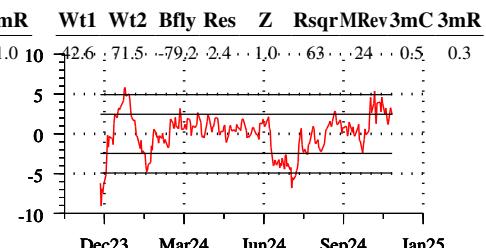
2Y/5Y/7Y



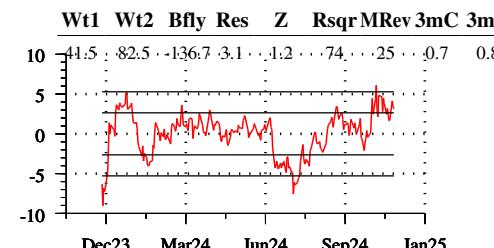
2Y/5Y/11Y



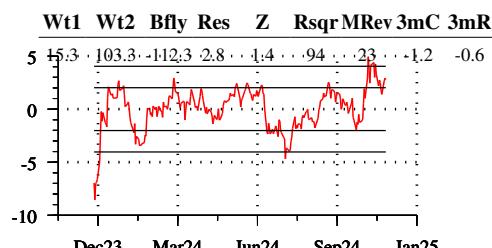
2Y/5Y/15Y



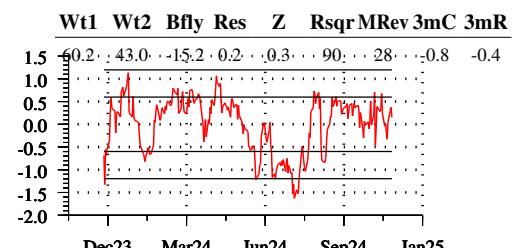
2Y/5Y/20Y



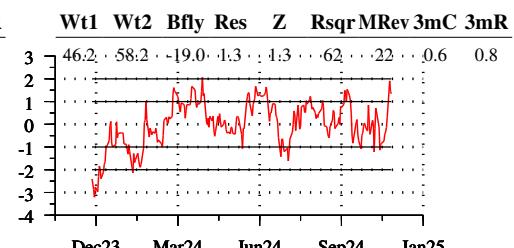
2Y/9Y/20Y



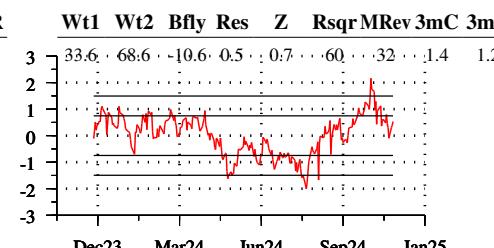
3Y/4Y/7Y



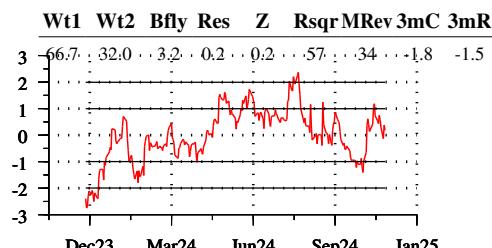
2Y/3Y/5Y



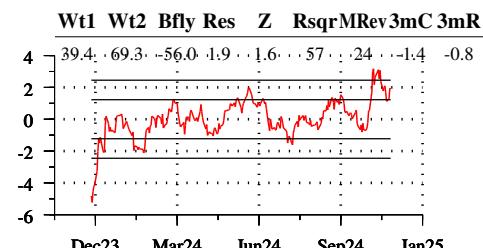
5Y/7Y/9Y



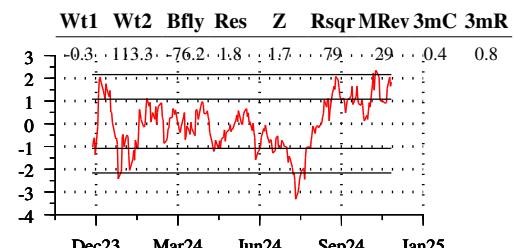
7Y/9Y/15Y



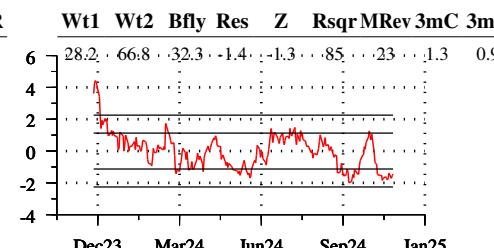
5Y/9Y/20Y



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. Rsqqr: 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	90.9	41.0	-163.4	5.2	1.5	65	81.9	43.4	-126.7	4.6	1.2	60	64.2	51.2	-66.8	2.8	0.5	45	17.4	18.6	26
1s2s3s	41.1	66.7	-38.0	-0.1	-0.0	67	39.0	68.3	-34.5	-0.6	-0.3	63	36.0	70.2	-28.7	-1.7	-0.6	53	1.6	3.3	19
1s5s30s	54.9	72.3	-170.6	0.8	0.2	72	51.1	73.6	-157.3	0.3	0.1	67	45.3	75.3	-135.6	-0.3	-0.1	54	10.6	14.3	27
1s10s30s	24.0	88.3	-84.9	0.5	0.2	85	22.5	88.4	-77.2	0.3	0.1	85	20.0	88.7	-65.6	-0.1	-0.1	88	5.3	5.8	22
2s3s5s	51.1	51.4	-16.9	-2.7	-1.9	26	50.2	51.8	-14.7	-2.4	-1.7	19	48.6	53.3	-13.1	-2.2	-1.4	12	1.4	1.8	20
2s5s10s	40.8	67.3	-49.8	1.4	0.9	69	39.6	68.1	-47.9	1.3	0.8	66	38.1	68.8	-43.4	1.7	1.0	61	2.7	4.2	26
2s5s30s	58.5	53.7	-81.4	2.4	1.1	74	57.0	54.5	-77.8	2.3	1.0	72	54.8	55.3	-70.5	2.6	1.1	64	4.6	5.6	23
2s10s30s	25.5	81.0	-48.6	1.4	0.8	88	24.8	81.1	-45.4	1.4	0.8	89	23.6	81.4	-41.1	1.4	0.8	91	2.7	2.0	21
3s5s10s	56.1	48.5	-26.7	2.5	2.5	75	55.5	49.0	-26.8	2.3	2.3	75	54.9	49.3	-24.6	2.4	2.2	70	1.1	1.9	20
3s10s30s	31.3	72.6	-31.1	2.0	1.4	81	31.0	72.7	-29.4	1.9	1.3	82	30.2	72.9	-26.9	1.7	1.1	84	1.5	0.5	20
3s5s30s	71.6	34.6	-40.8	3.5	2.5	91	71.0	35.1	-40.2	3.2	2.3	92	70.0	35.5	-37.0	3.2	2.3	91	1.9	2.2	19
5s10s30s	44.2	56.9	-12.5	0.5	0.5	28	44.0	56.8	-11.1	0.6	0.5	29	43.5	57.1	-10.4	0.4	0.3	32	0.7	-0.4	22
10s20s30s	22.2	84.5	-12.1	0.7	0.2	20	26.6	79.0	-5.8	1.0	0.3	15	27.0	78.5	-5.0	0.9	0.3	14	0.9	1.5	77
Par Butterflies																					
2y/5y/7y	28.0	75.5	-21.3	1.3	1.4	86	27.7	75.6	-19.9	1.4	1.5	87	27.1	76.4	-18.5	1.5	1.4	84	2.8	2.0	29
2y/5y/11y	53.2	53.6	-37.6	3.1	1.3	46	52.5	53.3	-31.5	3.0	1.3	39	51.5	53.0	-22.5	2.8	1.2	27	7.4	4.4	44
2y/5y/15y	57.1	47.9	-43.1	3.1	1.4	45	55.9	48.1	-37.3	3.0	1.4	41	54.2	48.6	-29.4	2.8	1.5	34	7.0	4.1	30
2y/5y/20y	58.4	50.6	-70.6	3.5	1.4	62	57.2	50.9	-64.9	3.4	1.5	62	55.6	51.6	-57.2	3.2	1.6	62	7.6	4.8	31
2y/9y/20y	25.9	78.4	-51.9	0.8	0.3	65	25.0	78.6	-49.0	0.8	0.3	69	23.9	78.8	-44.6	0.9	0.3	75	1.9	1.0	45
3y/4y/7y	66.5	35.4	-10.6	0.8	1.2	86	65.9	35.9	-9.8	0.9	1.4	88	64.9	36.8	-9.1	1.1	1.8	89	0.8	0.8	29
2y/3y/5y	55.9	45.0	-10.7	-0.8	-0.5	12	56.6	43.9	-8.4	-0.7	-0.4	12	58.5	41.2	-4.0	-0.4	-0.3	17	2.5	2.2	70
5y/7y/9y	42.2	59.2	-6.4	1.2	2.1	34	42.6	58.4	-4.5	1.1	1.9	33	43.3	57.1	-0.9	0.8	1.3	32	1.9	1.1	25
7y/9y/15y	67.5	28.6	12.7	-1.3	-0.9	52	66.8	29.4	11.9	-1.1	-0.8	49	65.3	30.8	10.0	-0.8	-0.5	43	-2.2	-1.7	53
5y/9y/20y	47.5	52.0	-15.5	-0.4	-0.2	3	46.4	52.9	-16.0	-0.4	-0.2	5	44.3	54.9	-17.7	-0.3	-0.1	10	-1.2	-1.1	47
9y/15y/20y	16.7	91.0	-47.9	1.6	1.4	79	16.8	91.1	-48.0	1.6	1.3	79	16.8	91.3	-48.4	1.5	1.2	78	1.2	1.4	25
9y/20y/25y	13.6	88.0	0.3	0.0	0.0	76	13.4	88.2	0.4	-0.0	-0.0	75	12.9	88.9	0.3	-0.2	-0.1	73	1.1	0.9	37
Most Mispriced Par Butterflies																					
2y/9y/19y	25.2	77.9	-45.2	0.6	0.2	67	24.4	78.1	-42.6	0.6	0.2	70	23.2	78.5	-39.0	0.8	0.3	76	1.6	0.7	46
3y/14y/24y	10.6	98.3	-62.1	1.9	1.4	95	10.4	98.5	-61.7	1.9	1.4	95	10.2	98.9	-61.1	1.8	1.4	96	2.3	2.3	25
5y/14y/20y	7.2	100.3	-57.8	1.3	0.8	89	7.1	100.6	-58.5	1.3	0.8	89	7.1	101.1	-59.8	1.3	0.9	90	0.7	1.2	31
5y/17y/23y	10.0	95.8	-30.8	1.0	1.0	95	10.1	95.5	-29.2	1.0	1.0	95	10.3	94.8	-26.1	1.0	1.0	96	1.7	1.5	27
8y/15y/24y	22.6	85.8	-48.2	1.6	1.4	83	22.6	85.9	-48.1	1.5	1.4	82	22.5	86.1	-47.9	1.5	1.3	81	1.6	1.7	25
13y/19y/24y	25.9	75.4	1.4	-0.7	-0.6	28	26.8	74.3	3.0	-0.8	-0.7	28	28.4	72.2	6.0	-0.8	-0.7	28	0.7	0.6	33
2y/18y/24y	6.6	98.0	-23.4	1.2	1.3	99	6.5	97.9	-21.3	1.2	1.2	99	6.3	97.6	-17.9	1.1	1.1	99	2.6	2.0	24
7y/19y/24y	12.9	88.8	-3.3	0.4	0.5	93	12.8	88.8	-2.7	0.4	0.4	93	12.6	88.9	-1.5	0.3	0.3	92	1.2	1.0	29
7y/16y/21y	11.0	96.4	-43.1	1.2	1.0	86	11.2	96.1	-42.3	1.2	1.0	86	11.6	95.6	-40.9	1.2	1.0	87	1.1	1.3	28
2y/15y/19y	1.3	105.7	-49.4	0.7	0.6	98	1.4	105.8	-49.9	0.7	0.6	98	1.5	106.0	-50.7	0.8	0.6	98	0.6	1.0	31
4y/15y/22y	8.4	100.5	-57.0	1.5	1.1	94	8.4	100.4	-56.3	1.5	1.1	94	8.5	100.2	-54.9	1.5	1.1	94	1.7	1.8	26
6y/14y/23y	15.3	92.1	-54.6	1.5	1.0	83	15.6	92.0	-54.4	1.5	1.0	83	16.1	91.7	-54.0	1.6	1.1	84	1.6	1.9	29
4y/18y/21y	4.0	100.1	-22.1	0.7	0.9	99	4.0	99.8	-20.9	0.7	0.9	99	4.2	99.3	-18.7	0.6	1.0	99	1.0	0.9	31

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: $YM-0.5^2(YS+YL) = Beta1^1(YL-YS)+Beta2^2(YM)$

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

This document is being provided for the exclusive use of CHRISTOPHER Lee at JPMorgan Chase & Co. and clients of J.P. Morgan.

Most Mispriced Par Butterflies	Spot						1m Forward						3m Forward						3m Carry	3m Roll	Mrev
	Wt1	Wt2	Bfly	Res	Z	R sqr	Wt1	Wt2	Bfly	Res	Z	R sqr	Wt1	Wt2	Bfly	Res	Z	R sqr			
6y/13y/18y	7.1	95.9	-40.6	0.9	0.4	75	7.1	96.3	-42.1	1.0	0.5	76	7.3	96.8	-44.8	1.1	0.6	78	-0.2	0.5	59
9y/17y/23y	18.3	87.8	-29.4	1.0	1.0	80	18.2	87.8	-28.5	0.9	0.9	80	18.0	87.9	-26.8	0.8	0.7	78	1.8	1.7	32
2y/5y/20y	58.4	50.6	-70.6	3.5	1.4	62	57.2	50.9	-64.9	3.4	1.5	62	55.6	51.6	-57.2	3.2	1.6	62	7.6	4.8	31
3y/9y/21y	34.0	68.8	-38.6	1.1	0.5	50	33.1	69.3	-37.2	1.1	0.5	54	31.7	70.1	-35.3	1.1	0.5	60	0.6	-0.1	36
2y/8y/16y	31.6	68.9	-22.5	0.9	0.3	58	30.8	68.7	-18.0	0.7	0.3	63	29.9	68.3	-10.7	0.4	0.2	71	4.4	2.9	41
4y/7y/13y	54.3	46.0	-3.9	1.2	1.2	23	53.9	45.7	-1.1	1.0	1.0	18	53.4	45.2	3.9	0.6	0.6	18	2.0	0.3	26
2y/4y/9y	55.3	50.7	-37.1	2.0	1.1	59	55.0	50.2	-32.2	2.0	1.2	57	54.9	49.2	-24.4	2.2	1.5	55	5.9	4.5	41
6y/9y/15y	51.1	43.9	14.0	-1.4	-0.7	31	50.4	44.5	13.4	-1.3	-0.6	31	49.1	45.6	12.2	-1.2	-0.5	31	-1.8	-1.8	71
1y/2y/4y	54.8	57.1	-59.7	0.2	0.1	74	51.7	57.6	-47.0	-0.3	-0.1	65	47.4	58.1	-29.5	-1.1	-0.5	38	6.4	5.4	29
6y/7y/9y	55.1	45.1	-2.5	0.7	1.5	30	55.7	44.3	-1.5	0.6	1.2	31	57.4	42.3	0.8	0.3	0.6	31	1.5	0.8	20
2y/5y/14y	56.6	48.5	-40.2	3.0	1.4	45	55.5	48.6	-34.2	2.9	1.4	40	53.9	49.0	-25.8	2.7	1.5	31	7.0	4.1	32
4y/5y/7y	59.3	42.3	-7.8	0.9	1.2	57	59.1	42.6	-8.2	0.8	1.0	56	59.1	43.0	-9.2	0.8	0.8	54	0.7	0.2	44
4y/9y/17y	38.3	59.2	-5.7	-0.1	-0.0	44	37.4	59.9	-5.6	-0.1	-0.0	47	35.9	61.1	-6.1	-0.1	-0.0	51	-0.9	-1.3	43
3y/9y/14y	29.2	67.9	4.4	-0.2	-0.1	80	28.4	68.2	6.1	-0.2	-0.1	82	26.9	68.8	8.4	-0.2	-0.1	84	-0.4	-1.2	36
5y/6y/15y	82.8	19.1	-9.3	0.1	0.1	94	82.4	19.0	-7.7	0.1	0.2	96	81.8	18.8	-4.9	0.1	0.2	97	0.0	0.1	49
2y/3y/6y	66.0	34.9	-13.3	-0.1	-0.1	36	65.9	34.5	-10.5	-0.1	-0.1	40	66.3	33.5	-5.9	-0.0	-0.0	51	3.8	2.9	68

Derivatives Strategy

morganmarkets.jpmorgan.com

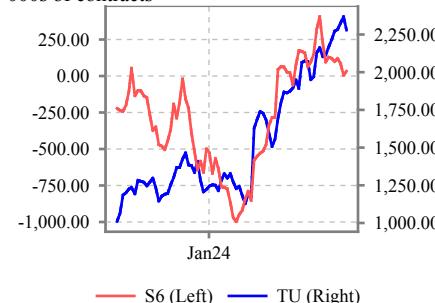
CFTC Positions Report

Asset Managers

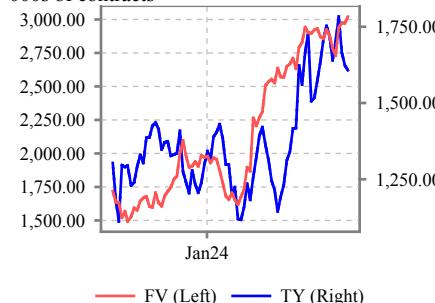
Net longs in all interest rate contracts*
000s of TY contracts



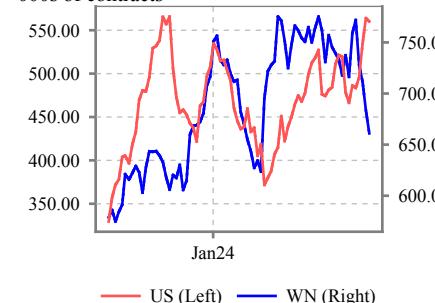
Net longs in S6 and TU contracts
000s of contracts



Net longs in FV and TY contracts
000s of contracts



Net longs in US and WN contracts
000s of contracts

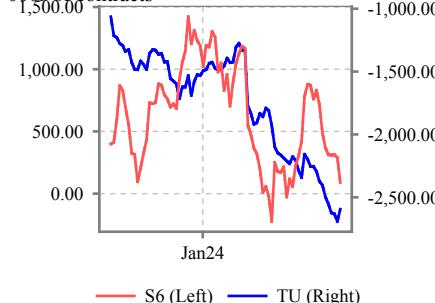


Leveraged Funds

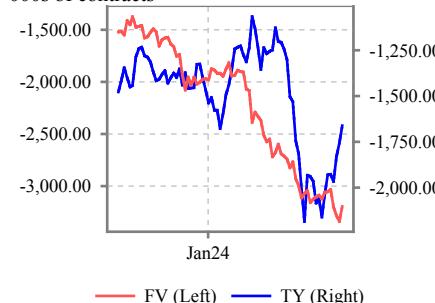
Net longs in all interest rate contracts*
000s of TY contracts



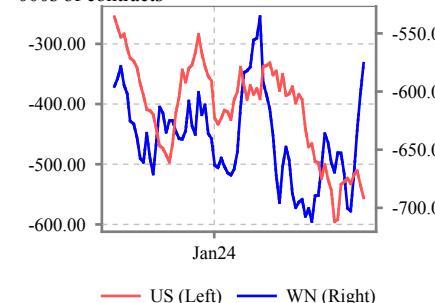
Net longs in S6 and TU contracts
000s of contracts



Net longs in FV and TY contracts
000s of contracts

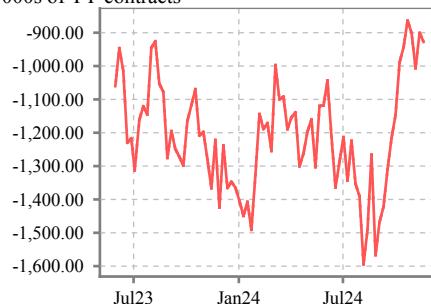


Net longs in US and WN contracts
000s of contracts

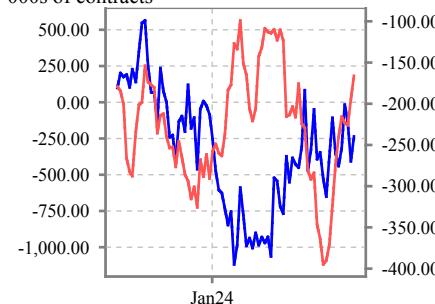


Dealers

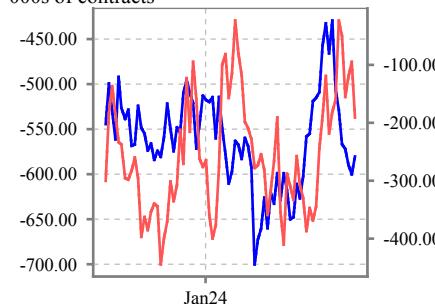
Net longs in all interest rate contracts*
000s of TY contracts



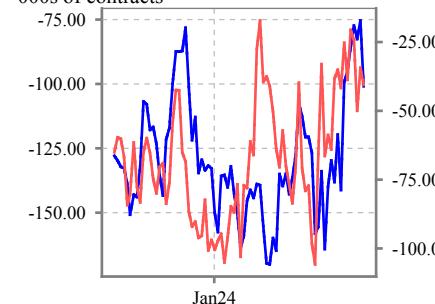
Net longs in S6 and TU contracts
000s of contracts



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)



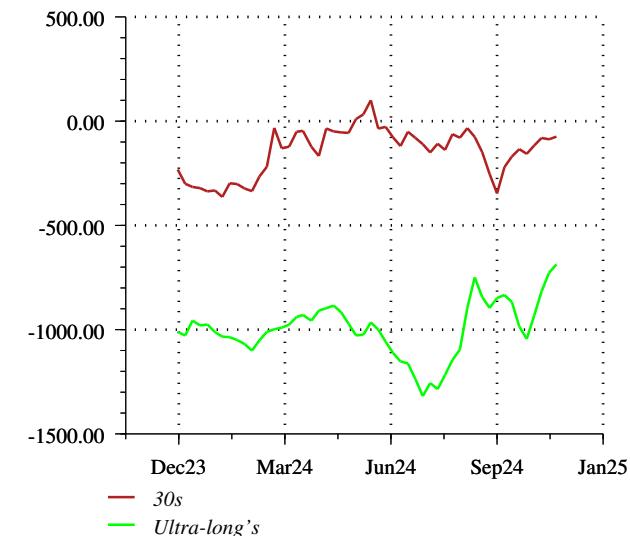
Net position in 5s (1000's of 10y equivalents)



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



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



Notes:

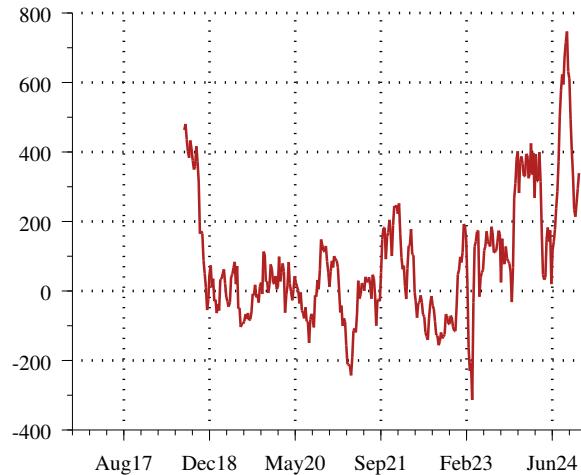
1) Data is compiled from the Commitments of Traders (COT) Report. The COT report is updated every Friday, and provides a breakdown of open interest in futures contracts as of the previous Tuesday.

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.

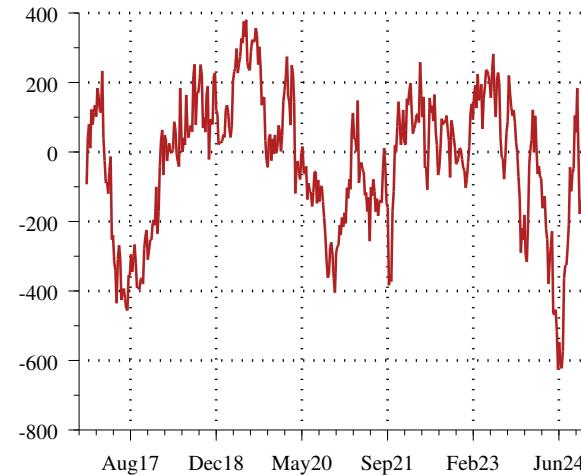
3) Data for ultra-long bond futures contracts is available only from May 4, 2010.

Speculative Futures Traders' Positions

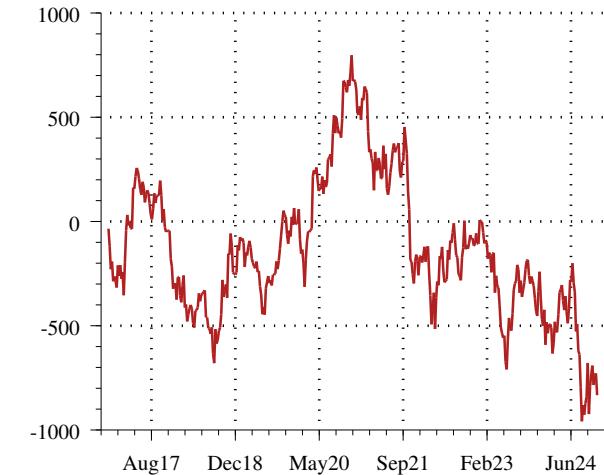
Number of (S6+2s) /5s steepening positions (1000's of 10y equiv)



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

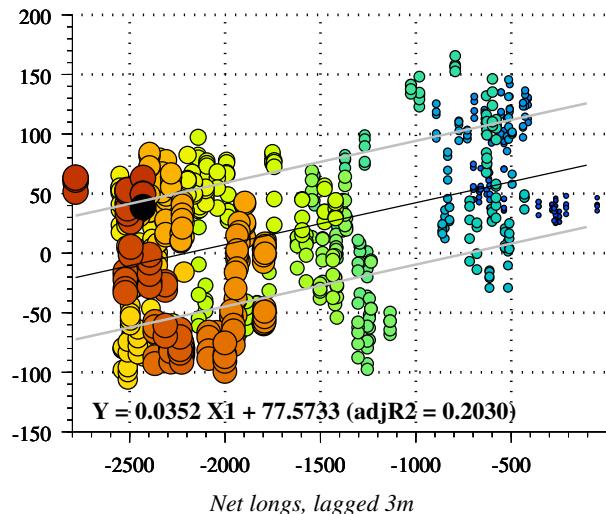


Number of 10s/30s steepening positions (1000's of 10y equiv)



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

3m chg in 5y ylds



Treasury Dealer Positions and Transactions Report

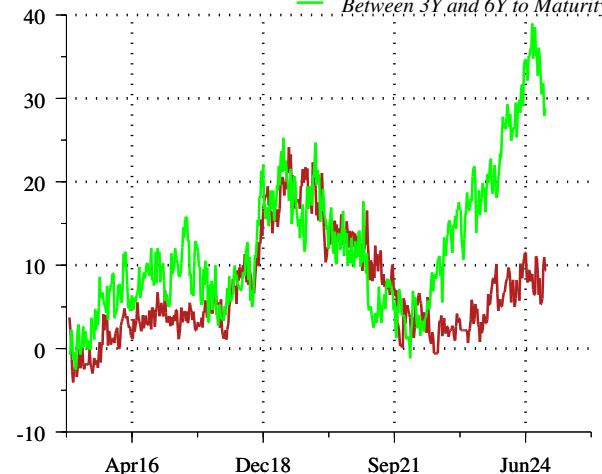
Total UST positions (ex TIPS)

\$bn of 10Y UST equivalents



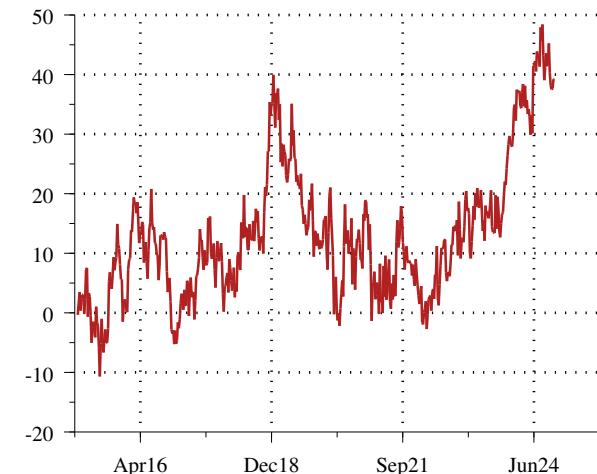
UST positions, Cdns less than 6Y

\$bn of 10Y UST equivalents



UST positions, Cdns between 6Y and 11Y

\$bn of 10Y UST equivalents



UST positions, Cdns greater than 11Y

\$bn of 10Y UST equivalents



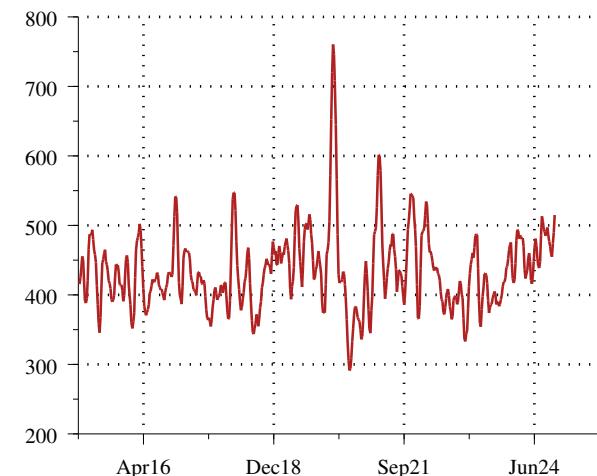
TIPS positions

\$bn of 10Y UST equivalents



4-wk avg UST total transactions (incl. TIPS)

Daily avg. figures; \$bn of notional



Notes:

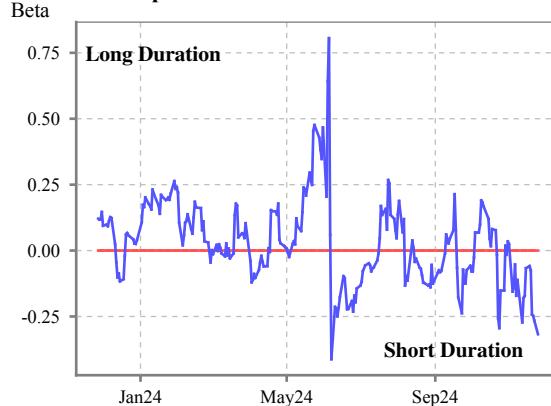
1) Source: Federal Reserve Bank of New York. The data is updated every Thursday at 4:15pm with the previous week's transactions.

US Fixed Income Strategy

jpmorganmarkets.com

Macro hedge fund exposure report

Macro HF Exposure to 10Y US Treasuries



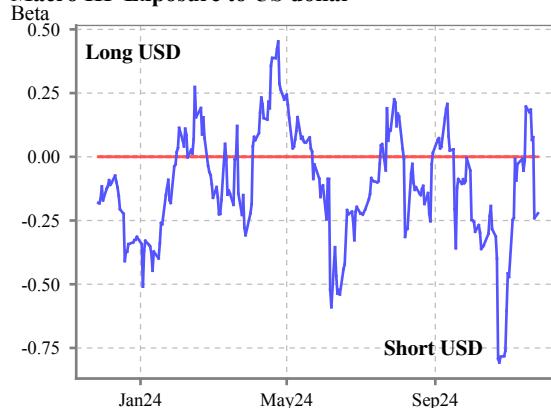
Macro HF exposure to global fixed income ex-US



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
US 10Y Treasuries	-0.32	-2.19	-2.30	-1.17	3.81
Global fixed income ex-US	0.57	1.27	2.23	3.28	-2.15
US equities	0.12	1.65	-1.05	1.58	-2.00
USD Dollar	-0.22	-0.51	-3.44	-0.60	-0.27
Commodities	-0.07	-0.76	-0.17	-0.59	0.54
Global equities ex-US	-0.09	-0.89	-0.07	0.13	-0.52

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

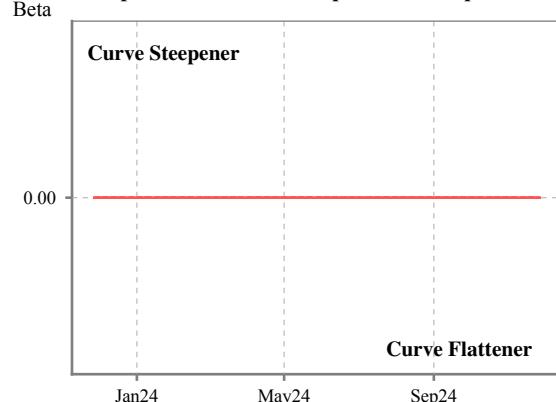
2) We regress daily excess returns on the HFRX Macro/CTA Index against daily excess returns in the six variables over the past 6 weeks to determine HF exposures. Excess returns are over 1-month USD cash.

US Fixed Income Strategy

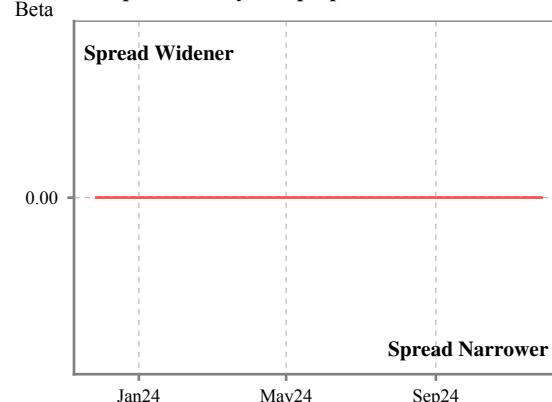
jpmorganmarkets.com

Relative value hedge fund exposure and leverage report

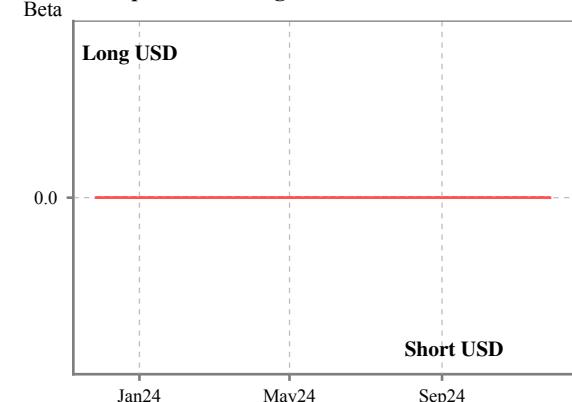
RV HF Exposure to 2s/10s Swap Curve Steepeners



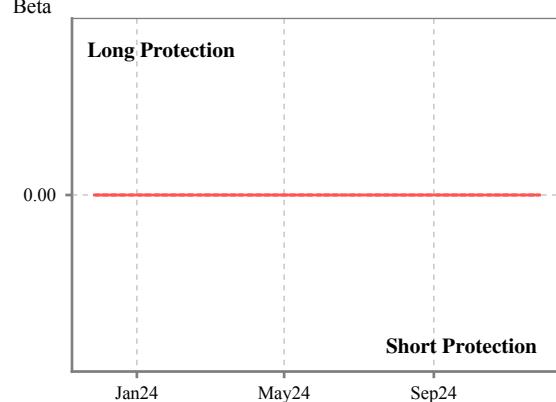
RV HF Exposure to 5y Swap Spread Wideners



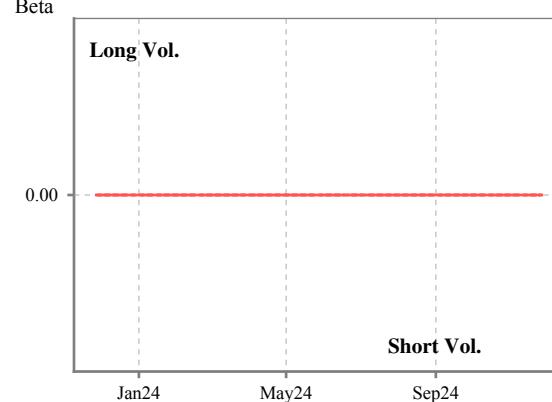
RV HF Exposure to Long USD



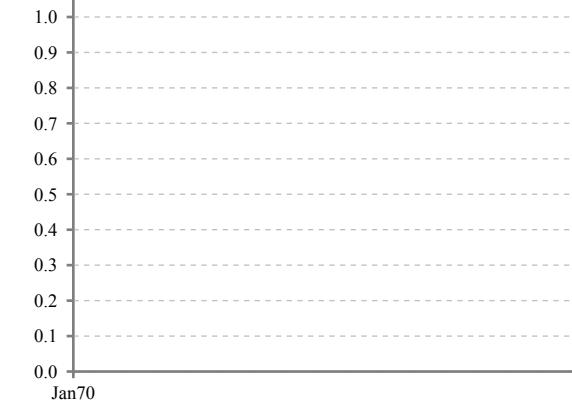
RV HF Exposure to Long 5Y CDX.IG Protection



RV HF Exposure to Long 6mx10y Vol.



Index of RV Hedge Fund Leverage



	Current Beta	Current	1m Back	3m Back	6m Back	1y Z-score
2s/10s Swap Curve Steepner						
5y Swap Spread Wideners						
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.

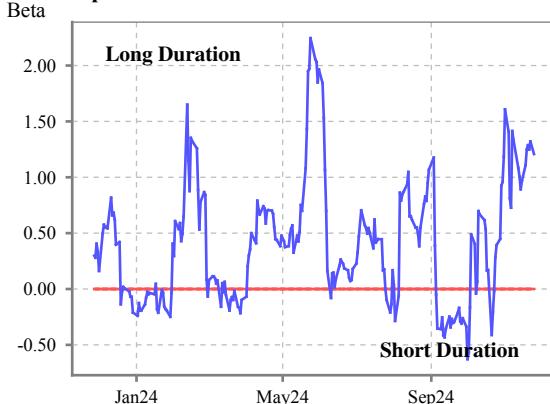
Hedge fund leverage defined as the average of the absolute values of the 1-year z-scores for each of the five beta coefficients in the multiple regression above. Higher value implies more leverage.

US Fixed Income Strategy

jpmorganmarkets.com

CTA Exposure and Leverage Report

CTA Exposure to 10Y US Treasuries



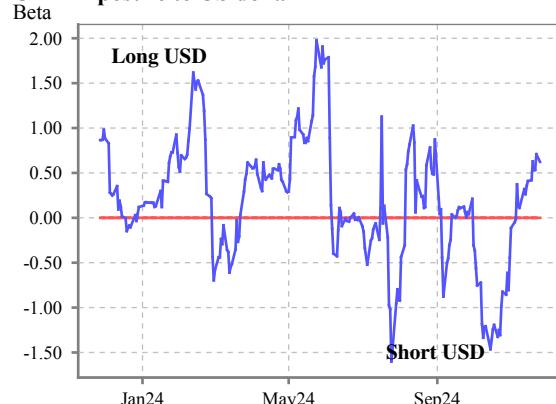
CTA exposure to global fixed income ex-US



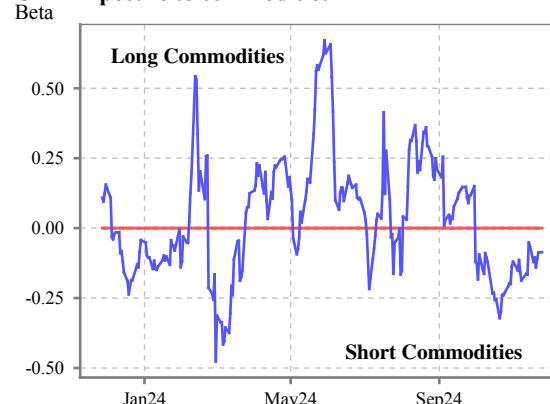
CTA Exposure to US equities



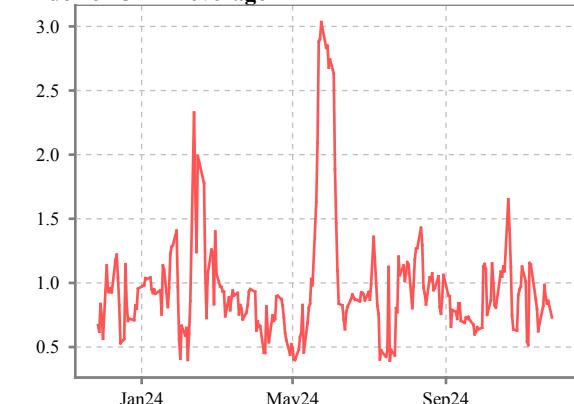
CTA Exposure to US dollar



CTA Exposure to commodities



Index of CTA Leverage



	Current Beta	Current	1m Back	3m Back	6m Back
US 10Y Treasuries	1.21	1.5	-0.1	0.3	4.8
Global fixed income ex-US	-0.78	-0.6	0.1	2.7	-1.2
Global equities	-0.00	0.4	-0.4	0.3	-3.1
USD Dollar	0.62	0.6	-1.7	0.4	3.4
Commodities	-0.09	-0.6	-1.4	1.1	2.7
Leverage		0.7	0.7	1.0	3.0

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.

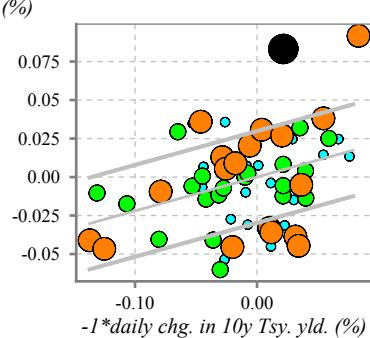
U.S. Fixed Income Strategy

Excess Exposure of Active Core Bond Fund Managers**Excess Exposure of Actively-Managed Core Bond Fund Index***

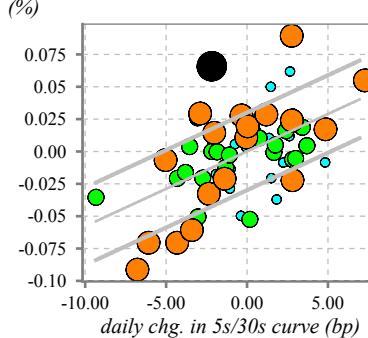
	3M Beta**	3M T-Stat
10Y Yields	0.220	2.2
5s/30s Curve	0.006	4.5
JULI	-0.002	-0.7
MBS	0.003	2.0
3Mx10Y Vol	-0.002	-2.1

Index vs. 10Y Yields

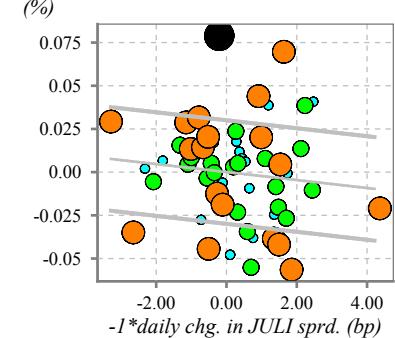
$Y = 0.2199 X_1 + 0.0058 X_2 - 0.0023 X_3 + 0.0026 X_4 - 0.0016 X_5 + 0.0000$
(adjR2 = 0.4607)

**Index vs. 5s/30s Curve**

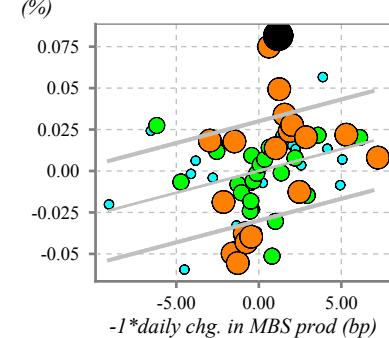
$Y = 0.0058 X_1 + 0.2199 X_2 - 0.0023 X_3 + 0.0026 X_4 - 0.0016 X_5 + 0.0000$
(adjR2 = 0.4607)

**Index vs. JULI**

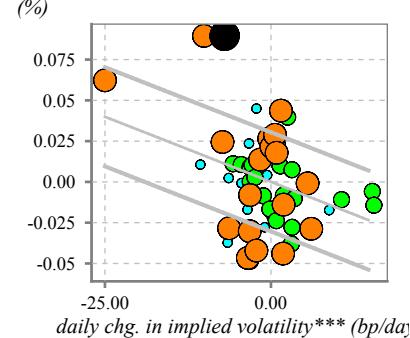
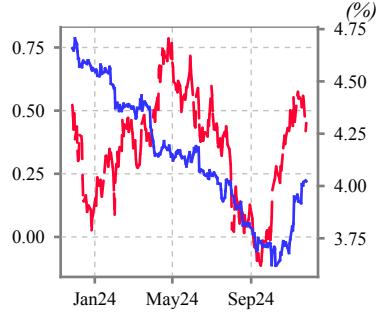
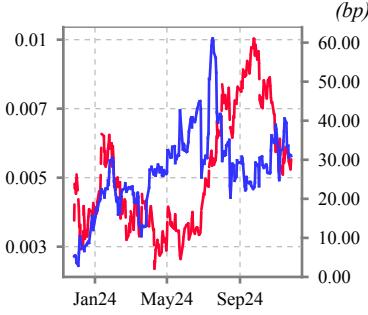
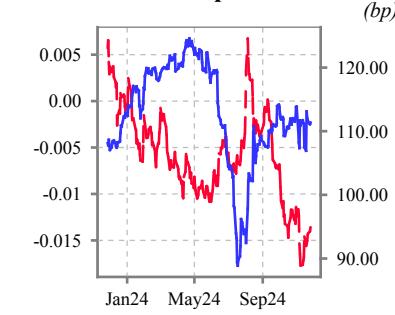
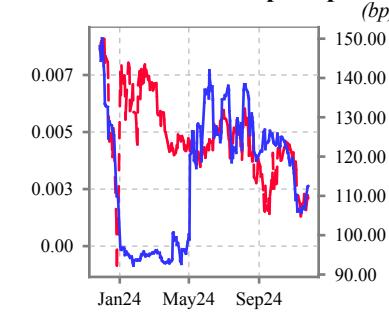
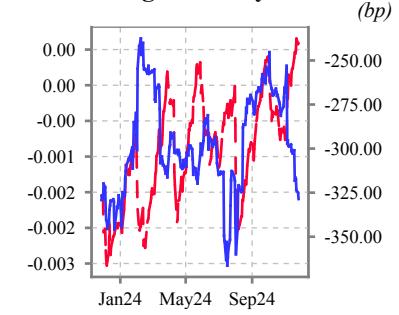
$Y = -0.0023 X_1 + 0.2199 X_2 + 0.0058 X_3 + 0.0026 X_4 - 0.0016 X_5 + 0.0000$
(adjR2 = 0.4607)

**Index vs. MBS**

$Y = 0.0026 X_1 + 0.2199 X_2 + 0.0058 X_3 - 0.0023 X_4 - 0.0016 X_5 + 0.0000$
(adjR2 = 0.4607)

**Index vs. 3Mx10Y Volatility**

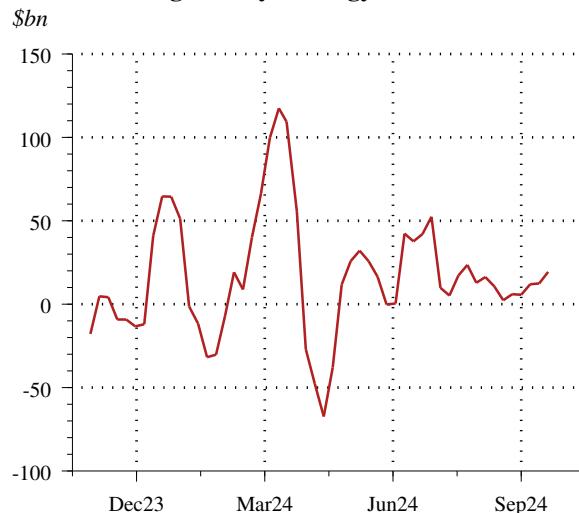
$Y = -0.0016 X_1 + 0.2199 X_2 + 0.0058 X_3 - 0.0023 X_4 + 0.0026 X_5 + 0.0000$
(adjR2 = 0.4607)

**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 Long 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. *** 3Mx10Y implied volatility, bp/day. **** Source: Bloomberg

Large Domestic Commercial Bank Flows Report

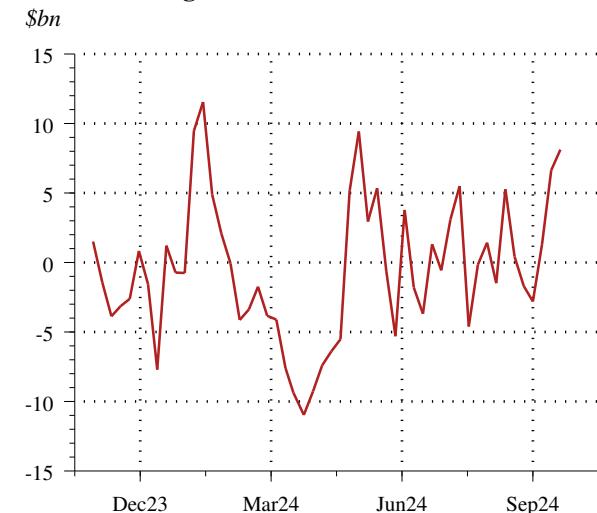
1-month change in Tsy and Agy Debt



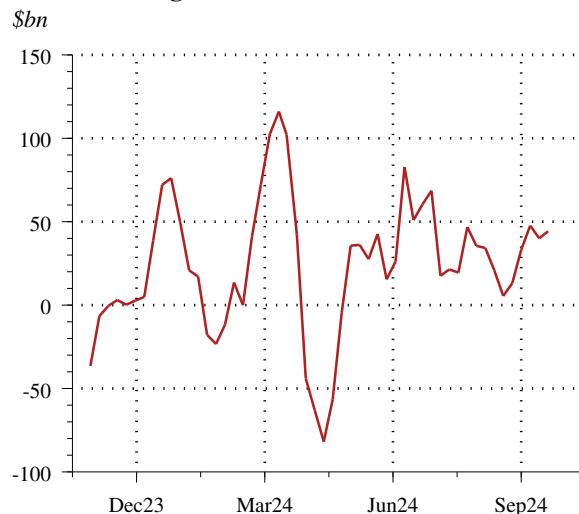
1-month change in Agency MBS Securities



1-month change in Other Non-MBS Securities¹



1-month change in Total securities



Total Securities/Assets



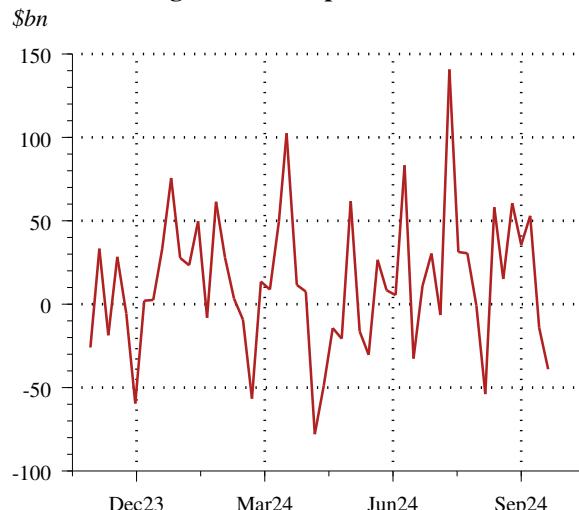
Notes:

Source: Federal Reserve H.8 Release for Large Domestically Chartered Commercial Banks. The data is generally released each Friday at 4:15p.m. and is for the week ending on the previous Wednesday (9-day lag). Note that all holdings are seasonally adjusted.

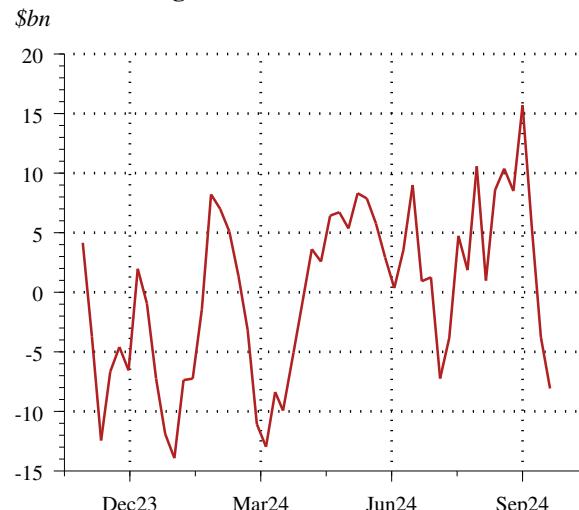
1) Other securities includes corporate debt and securities issued by states and political subdivisions in the U.S.

Large Domestic Commercial Bank Flows Report

1-month change in Total deposits



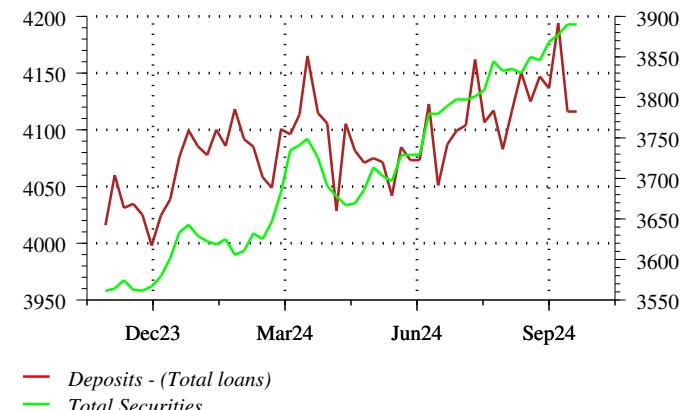
1-month change in Commercial and Industrial loans



Securities (\$bn)

(Deposits - Loans) vs Total Securities

Dep - Loans (\$bn)



Total deposits, oya growth



Commercial and Industrial loans, oya growth



Notes:

Source: Federal Reserve H.8 Release for Large Domestically Chartered Commercial Banks. The data is generally released each Friday at 4:15p.m. and is for the week ending on the previous Wednesday (9-day lag). Note that all holdings are seasonally adjusted.

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	-0.228/1.000/-1.000/0.220	1.400	1.919	-1.697	0.000	0.679	2.063	49969432.000	-0.002
-5Y/+8Y/-9Y/+11Y	-0.136/1.000/-1.000/0.126	1.600	2.179	-1.747	0.100	1.084	1.477	57855568.000	0.001
+8Y/-9Y/-10Y/+12Y	1.000/-0.856/-1.000/0.846	2.900	3.765	-1.852	0.400	1.969	1.473	48383288.000	-0.027
-6Y/+8Y/-9Y/+11Y	-0.156/1.000/-1.000/0.144	1.500	1.997	-1.732	0.100	1.049	1.430	48812952.000	0.000
-5Y/+8Y/-9Y/+15Y	-0.141/1.000/-1.000/0.139	1.900	2.517	-1.766	0.500	1.442	1.318	49909792.000	-0.012
-4Y/+8Y/-9Y/+12Y	-0.104/1.000/-1.000/0.094	1.700	2.387	-1.767	0.200	1.302	1.306	56744432.000	0.001
-6Y/+8Y/-9Y/+15Y	-0.162/1.000/-1.000/0.160	1.700	2.374	-1.761	0.500	1.312	1.295	46030256.000	-0.014
-4Y/+8Y/-9Y/+30Y	-0.098/1.000/-1.000/0.099	1.700	2.337	-1.741	0.800	1.458	1.166	54505544.000	-0.008
-7Y/+8Y/-9Y/+15Y	-0.242/1.000/-1.000/0.250	1.800	2.503	-1.745	0.700	1.644	1.095	49537048.000	-0.025
-5Y/+8Y/-9Y/+25Y	-0.121/1.000/-1.000/0.133	1.600	2.243	-1.768	0.700	1.461	1.095	46151248.000	-0.014
+8Y/-9Y/+15Y/-SFR4	1.000/-1.000/0.053/-0.052	2.000	2.542	-1.366	0.600	1.835	1.090	48160296.000	45079872.000
-4Y/+8Y/-9Y/+22Y	-0.108/1.000/-1.000/0.120	1.800	2.457	-1.753	0.600	1.683	1.069	49117936.000	-0.008
-6Y/+8Y/-9Y/+25Y	-0.137/1.000/-1.000/0.150	1.500	2.092	-1.761	0.700	1.409	1.065	55543488.000	-0.017
-3Y/+8Y/-9Y/+15Y	-0.083/1.000/-1.000/0.072	1.800	2.602	-1.776	0.400	1.714	1.050	54507344.000	-0.004
-3Y/+8Y/-9Y/+11Y	-0.082/1.000/-1.000/0.067	1.700	2.428	-1.772	0.200	1.648	1.032	45776688.000	0.003
-3Y/+8Y/-9Y/+21Y	-0.084/1.000/-1.000/0.084	1.800	2.563	-1.760	0.500	1.757	1.025	52533256.000	-0.005
-4Y/+8Y/-9Y/+20Y	-0.115/1.000/-1.000/0.128	1.800	2.557	-1.743	0.700	1.780	1.011	46184776.000	-0.008
-5Y/+8Y/-9Y/+21Y	-0.143/1.000/-1.000/0.163	1.800	2.431	-1.731	0.700	1.782	1.010	45144216.000	-0.013
-6Y/+8Y/-9Y/+21Y	-0.165/1.000/-1.000/0.187	1.700	2.275	-1.721	0.700	1.707	0.996	48046320.000	-0.017
-5Y/+7Y/+8Y/-9Y	-0.318/0.305/1.000/-1.000	1.900	2.529	-1.759	0.300	1.919	0.990	57210504.000	0.006
+8Y/-9Y/+21Y/-SFR4	1.000/-1.000/0.061/-0.053	1.900	2.523	-1.352	0.700	1.925	0.987	48109304.000	47946712.000
+7Y/-10Y/-11Y/+12Y	0.337/-1.000/-0.342/1.000	1.800	2.102	-2.000	0.300	1.827	0.985	48331936.000	-0.027
+8Y/-9Y/+20Y/-SFR4	1.000/-1.000/0.062/-0.053	1.900	2.534	-1.352	0.700	1.935	0.982	48891088.000	58101200.000
-4Y/+7Y/+8Y/-9Y	-0.194/0.182/1.000/-1.000	1.900	2.625	-1.772	0.300	2.006	0.947	48355280.000	0.007
+8Y/-9Y/+22Y/-SFR3	1.000/-1.000/0.032/-0.040	1.900	2.714	-1.934	0.500	2.007	0.946	56244968.000	45532744.000
+8Y/-9Y/+12Y/-SFR3	1.000/-1.000/0.026/-0.040	1.900	2.703	-1.940	0.400	2.031	0.935	55624472.000	53224424.000
-2Y/+8Y/-9Y/+22Y	-0.058/1.000/-1.000/0.042	1.900	2.754	-1.897	0.300	2.066	0.920	49615384.000	-0.002
-2Y/+8Y/-9Y/+20Y	-0.059/1.000/-1.000/0.043	1.900	2.789	-1.893	0.300	2.076	0.915	48130152.000	-0.002
-2Y/+8Y/-9Y/+12Y	-0.057/1.000/-1.000/0.034	1.800	2.720	-1.904	0.100	2.081	0.865	49999704.000	0.001
+8Y/-9Y/+21Y/-SFR2	1.000/-1.000/0.012/-0.035	2.000	2.967	-1.871	0.100	2.340	0.855	53892888.000	48217304.000
+8Y/-9Y/+15Y/-SFR2	1.000/-1.000/0.010/-0.035	2.000	2.975	-1.873	0.100	2.362	0.847	55487968.000	53234992.000
+8Y/-9Y/+20Y/-SFR2	1.000/-1.000/0.012/-0.036	2.000	3.009	-1.866	0.100	2.366	0.845	46312376.000	46836656.000

Note:

1. Risk adjusted carry is expected return (assuming mean reversion of residual as well as carry/slide) divided by standart deviation.
2. 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.
3. A "+" indicates long position in yield curve trades, and a spread widening position in spread trades.
4. 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					
+7Y/+8Y/-9Y/-SFR3	0.031/1.000/-1.000/-0.046	1.900	2.793	-1.948	0.400	2.260	0.841	49504328.000	54585856.000
-5Y/+7Y/-10Y/+12Y	-0.426/1.000/-1.000/0.412	2.000	2.360	-1.838	0.400	2.387	0.838	49337192.000	-0.004
+5Y/+8Y/-9Y/-SFR4	0.086/1.000/-1.000/-0.084	2.000	2.563	-1.063	0.700	2.395	0.835	54869440.000	53189608.000
-7Y/+8Y/-10Y/+12Y	-0.591/1.000/-1.000/0.604	2.000	2.880	-1.605	1.100	2.409	0.830	45773648.000	-0.024
-5Y/+6Y/-10Y/+12Y	-0.685/1.000/-1.000/0.694	2.200	2.620	-1.830	0.500	2.683	0.820	55543080.000	-0.019
-18M/+8Y/-9Y/+22Y	-0.049/1.000/-1.000/0.023	1.900	2.854	-1.828	0.100	2.385	0.797	54266496.000	-0.003
+5Y/+8Y/-9Y/-SFR2	0.011/1.000/-1.000/-0.038	2.000	3.021	-1.856	0.100	2.514	0.796	46620600.000	53401152.000
-18M/+8Y/-9Y/+20Y	-0.050/1.000/-1.000/0.023	1.900	2.888	-1.824	0.100	2.415	0.787	48129192.000	-0.003
+4Y/+8Y/-9Y/-SFR3	0.040/1.000/-1.000/-0.055	1.900	2.814	-1.972	0.400	2.443	0.778	53083928.000	47954320.000
+8Y/-9Y/-SFR3/+SFR12	1.000/-1.000/-0.041/0.024	1.900	2.770	-1.936	0.400	2.444	0.777	45380560.000	48858744.000
-18M/+8Y/-9Y/+12Y	-0.049/1.000/-1.000/0.018	1.900	2.848	-1.830	0.000	2.447	0.776	47788464.000	-0.002
+8Y/-9Y/-SFR2/+SFR8	1.000/-1.000/-0.036/0.007	2.000	3.003	-1.851	0.100	2.607	0.767	56235040.000	49494424.000
-7Y/+8Y/-9Y/+25Y	-0.188/1.000/-1.000/0.215	1.400	2.069	-1.747	0.900	1.825	0.767	55647520.000	-0.026
-3Y/+5Y/+8Y/-9Y	-0.174/0.153/1.000/-1.000	1.800	2.706	-1.756	0.300	2.355	0.764	49495552.000	0.004
+8Y/-9Y/-SFR2/+SFR4	1.000/-1.000/-0.044/0.013	2.000	3.092	-1.740	0.000	2.632	0.760	46414032.000	53380608.000
-6Y/+8Y/-10Y/+11Y	-0.440/1.000/-1.000/0.440	1.700	2.524	-1.609	1.000	2.269	0.749	49601960.000	-0.004
-18M/+7Y/+8Y/-9Y	-0.053/0.021/1.000/-1.000	1.900	2.898	-1.817	0.000	2.606	0.729	56340280.000	0.000
-4Y/+5Y/-10Y/+12Y	-0.651/1.000/-1.000/0.644	1.500	2.231	-1.968	0.300	2.079	0.722	54701264.000	-0.017
+8Y/-9Y/-SFR4/+SFR8	1.000/-1.000/-0.060/0.042	1.900	2.621	-1.731	0.400	2.656	0.715	55543632.000	54813608.000
-2Y/+4Y/+8Y/-9Y	-0.089/0.058/1.000/-1.000	1.900	2.911	-1.911	0.100	2.661	0.714	48521448.000	0.001
-5Y/+8Y/-10Y/+12Y	-0.364/1.000/-1.000/0.371	2.400	3.354	-1.641	1.300	3.386	0.709	56437472.000	-0.009
-1Y/+8Y/-9Y/+21Y	-0.043/1.000/-1.000/0.003	2.000	3.204	-1.740	-0.200	2.860	0.699	55487968.000	-0.002
+7Y/-9Y/-10Y/+12Y	0.999/-1.000/-1.000/0.967	2.600	2.840	-0.891	-0.700	3.721	0.699	49999704.000	-0.025
-1Y/+18M/+3Y/-SFR6	-1.000/0.897/1.000/-0.851	5.200	7.828	-1.082	-1.100	7.463	0.697	52763144.000	48858264.000
-1Y/+8Y/-9Y/+15Y	-0.043/1.000/-1.000/0.002	2.000	3.206	-1.740	-0.200	2.881	0.694	46279032.000	-0.002
-1Y/+7Y/+8Y/-9Y	-0.044/0.002/1.000/-1.000	2.000	3.236	-1.734	-0.200	2.929	0.683	49033016.000	-0.002
+8Y/-9Y/+12Y/-SFR6	1.000/-1.000/0.140/-0.107	1.900	2.146	-0.425	0.800	2.798	0.679	48231712.000	54827184.000
-1Y/+8Y/-9Y/+SFR8	-0.044/1.000/-1.000/0.002	2.000	3.239	-1.730	-0.200	2.955	0.677	45826040.000	48715608.000
-4Y/+7Y/-10Y/+12Y	-0.342/1.000/-1.000/0.326	2.100	2.712	-1.930	0.600	3.154	0.666	49119016.000	0.002
+7Y/-11Y/+12Y/-25Y	0.072/-1.000/1.000/-0.082	0.800	0.894	-1.755	0.100	1.206	0.663	49034264.000	-0.011
+5Y/-10Y/-11Y/+12Y	0.201/-1.000/-0.203/1.000	1.400	1.717	-1.639	0.100	2.122	0.660	57210504.000	-0.032
-2Y/+8Y/-9Y/+SFR8	-0.064/1.000/-1.000/0.028	1.900	2.866	-1.895	0.000	2.884	0.659	46683760.000	53662296.000

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
-18M/+2Y/+8Y/-9Y	-0.106/0.067/1.000/-1.000	1.900	2.981	-1.710	-0.100	2.901	0.655	52599784.000	-0.005
-5Y/+6Y/-9Y/+12Y	-0.451/1.000/-1.000/0.444	1.500	1.548	-0.267	-0.700	2.293	0.654	55503368.000	-0.011
-5Y/+7Y/-9Y/+15Y	-0.206/1.000/-1.000/0.186	1.500	1.598	-0.571	-0.300	2.294	0.654	57917904.000	-0.010
+8Y/-10Y/+12Y/-30Y	0.295/-1.000/1.000/-0.333	1.900	2.247	-1.766	-1.500	2.910	0.653	46698680.000	0.004
-5Y/+6Y/+7Y/-9Y	-1.000/0.868/1.000/-0.885	2.000	2.154	-0.759	-0.200	3.112	0.643	55776832.000	0.015
-7Y/+8Y/-9Y/+21Y	-0.249/1.000/-1.000/0.295	1.700	2.351	-1.688	1.100	2.653	0.641	58050688.000	-0.029
+9Y/-10Y/-11Y/+12Y	0.506/-1.000/-0.498/1.000	1.300	1.718	-1.832	0.800	2.033	0.639	49398064.000	-0.029
+6Y/-10Y/+12Y/-30Y	0.197/-1.000/1.000/-0.224	1.600	1.874	-1.487	-1.100	2.505	0.639	49149376.000	-0.009
+8Y/-10Y/+15Y/-SFR2	1.000/-1.000/0.064/-0.100	3.200	5.414	-1.671	1.300	5.095	0.628	49528512.000	48188184.000
-6Y/+7Y/-10Y/+11Y	-0.514/1.000/-1.000/0.491	1.200	1.413	-1.551	0.000	1.929	0.622	49479952.000	0.001
+8Y/-10Y/+12Y/-SFR3	1.000/-1.000/0.106/-0.112	2.800	4.531	-1.832	1.900	4.524	0.619	48481592.000	48816216.000
+8Y/-11Y/+12Y/-30Y	0.077/-1.000/1.000/-0.082	0.800	0.993	-1.775	0.000	1.303	0.614	58052416.000	-0.013
-4Y/+6Y/+8Y/-9Y	-0.651/1.000/0.647/-1.000	2.400	3.387	-1.780	0.500	3.916	0.613	56327256.000	0.013
+8Y/-10Y/+21Y/-SFR2	1.000/-1.000/0.074/-0.101	3.100	5.408	-1.664	1.400	5.111	0.607	45380560.000	52571416.000
-4Y/+7Y/-9Y/+15Y	-0.163/1.000/-1.000/0.139	1.500	1.691	-1.359	-0.300	2.480	0.605	49035008.000	-0.004
+8Y/-10Y/+11Y/-SFR2	1.000/-1.000/0.060/-0.100	3.100	5.268	-1.659	1.100	5.137	0.603	55862248.000	48576912.000
-4Y/+6Y/-9Y/+15Y	-0.388/1.000/-1.000/0.401	2.000	2.623	-2.149	0.500	3.315	0.603	54421560.000	-0.034
+8Y/-10Y/+25Y/-SFR2	1.000/-1.000/0.070/-0.098	3.000	5.259	-1.675	1.400	5.043	0.595	53319552.000	53712968.000
-4Y/+8Y/-10Y/+11Y	-0.305/1.000/-1.000/0.309	2.300	3.419	-1.638	1.400	3.883	0.592	46816608.000	0.003
-4Y/+6Y/-9Y/+11Y	-0.377/1.000/-1.000/0.366	1.400	1.641	-1.899	-0.600	2.372	0.590	48713352.000	0.003
-1Y/+2Y/+3Y/-SFR6	-0.856/1.000/0.915/-1.000	5.100	7.328	-0.968	-1.000	8.710	0.586	54085768.000	49479952.000
+7Y/-9Y/-11Y/+12Y	0.752/-1.000/-0.777/1.000	1.600	1.719	-0.355	-0.500	2.751	0.582	45236792.000	-0.019
+5Y/-10Y/+12Y/-30Y	0.174/-1.000/1.000/-0.201	1.500	1.655	-1.312	-1.100	2.582	0.581	55776832.000	-0.013
-3Y/+8Y/-10Y/+12Y	-0.224/1.000/-1.000/0.216	2.500	3.900	-1.652	1.500	4.338	0.576	52596520.000	-0.002
+3Y/-SFR2/+SFR3/-SFR6	1.000/-1.000/0.964/-0.903	4.500	5.968	-0.342	-2.900	7.869	0.572	55051448.000	49111496.000
-3Y/+6Y/-9Y/+15Y	-0.291/1.000/-1.000/0.279	1.900	2.728	-1.868	0.300	3.343	0.568	53696552.000	-0.024
+7Y/-10Y/+12Y/-30Y	0.268/-1.000/1.000/-0.310	1.700	1.923	-1.256	-1.600	2.996	0.567	54408488.000	0.002
+8Y/-9Y/+20Y/-21Y	0.658/-1.000/1.000/-0.606	1.800	2.370	-1.796	1.200	3.187	0.565	49868680.000	-0.040
-2Y/+8Y/-10Y/+15Y	-0.165/1.000/-1.000/0.139	2.900	4.862	-1.778	1.500	5.171	0.561	47466424.000	-0.013
-1Y/+18M/-SFR10/+SFR12	-0.831/1.000/-1.000/0.786	3.400	5.483	-0.644	-1.900	6.120	0.556	53363864.000	55864840.000
-11Y/+12Y/+22Y/-25Y	-1.000/1.000/0.463/-0.448	1.100	1.203	-1.454	0.300	1.987	0.554	55244752.000	-0.013
-5Y/+7Y/-9Y/+21Y	-0.209/1.000/-1.000/0.217	1.400	1.486	-0.453	0.000	2.532	0.553	50245736.000	-0.013

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
+6Y/-11Y/+12Y/-30Y	0.052/-1.000/1.000/-0.053	0.700	0.892	-1.803	0.100	1.275	0.549	53770000.000	-0.016
-3Y/+8Y/-9Y/+SFR8	-0.101/1.000/-1.000/0.061	1.700	2.724	-1.815	0.000	3.097	0.549	46036856.000	46551392.000
-1Y/+3Y/+6Y/-SFR10	-0.570/1.000/0.488/-1.000	5.300	7.193	-0.526	-3.600	9.660	0.549	48345064.000	46019592.000
+6Y/-9Y/-10Y/+12Y	0.624/-1.000/-0.638/1.000	2.000	2.139	-0.521	-0.800	3.646	0.549	48964328.000	-0.033
-4Y/+6Y/-10Y/+11Y	-0.574/1.000/-1.000/0.578	1.900	2.746	-1.825	0.500	3.468	0.548	55564520.000	0.004
-10Y/+12Y/+20Y/-25Y	-0.906/0.919/1.000/-1.000	2.500	2.942	-1.606	0.000	4.573	0.547	53299744.000	-0.005
-10Y/+12Y/+22Y/-25Y	-0.572/0.589/1.000/-1.000	1.600	1.740	-1.072	-0.400	2.928	0.547	52565496.000	0.003
-10Y/+12Y/+21Y/-25Y	-0.758/0.777/1.000/-1.000	2.100	2.368	-1.447	-0.200	3.852	0.545	49615504.000	0.002
-2Y/+8Y/-10Y/+21Y	-0.166/1.000/-1.000/0.161	2.900	4.785	-1.764	1.700	5.325	0.545	54550240.000	-0.014
-2Y/+8Y/-10Y/+11Y	-0.163/1.000/-1.000/0.129	2.700	4.510	-1.771	1.100	4.965	0.544	53770000.000	0.000
-5Y/+8Y/-9Y/+SFR12	-0.157/1.000/-1.000/0.127	1.700	2.636	-1.778	0.200	3.135	0.542	55199864.000	46051568.000
-4Y/+7Y/-9Y/+21Y	-0.164/1.000/-1.000/0.162	1.400	1.602	-1.239	-0.100	2.584	0.542	48384776.000	-0.005
+8Y/-9Y/+15Y/-25Y	0.553/-1.000/1.000/-0.607	2.700	3.323	-1.930	0.000	4.995	0.541	53044256.000	-0.026
-18M/+8Y/-10Y/+15Y	-0.140/1.000/-1.000/0.091	3.000	5.121	-1.659	1.100	5.645	0.531	54585904.000	-0.017
+4Y/-10Y/+12Y/-25Y	0.144/-1.000/1.000/-0.174	1.400	1.455	-0.460	-0.700	2.673	0.524	57912248.000	-0.014
-1Y/+18M/+6Y/-SFR10	-1.000/0.923/1.000/-0.986	6.000	8.911	-0.649	-3.000	11.566	0.519	57929168.000	52828912.000
-18M/+8Y/-10Y/+21Y	-0.140/1.000/-1.000/0.105	2.900	5.057	-1.651	1.200	5.660	0.512	49205848.000	-0.018
-1Y/+18M/+4Y/-SFR10	-1.000/0.777/1.000/-0.927	5.300	8.674	-0.658	-4.500	10.347	0.512	55777456.000	56577128.000
-4Y/+7Y/-9Y/+25Y	-0.147/1.000/-1.000/0.137	1.300	1.403	-1.009	-0.200	2.554	0.509	46701840.000	-0.007
-3Y/+7Y/-10Y/+12Y	-0.262/1.000/-1.000/0.230	2.100	2.999	-1.747	0.600	4.150	0.506	55324552.000	0.003
-11Y/+12Y/+20Y/-25Y	-1.000/1.000/0.290/-0.280	1.000	1.256	-1.608	0.400	1.981	0.505	54374616.000	-0.016
-1Y/+18M/-10Y/+20Y	-0.856/1.000/-1.000/0.791	4.600	9.553	-1.074	-0.700	9.123	0.504	52567656.000	-0.100
-18M/+8Y/-10Y/+25Y	-0.135/1.000/-1.000/0.098	2.800	4.885	-1.665	1.200	5.565	0.503	47440208.000	-0.020
-1Y/+8Y/-10Y/+21Y	-0.123/1.000/-1.000/0.047	3.300	6.051	-1.535	0.500	6.573	0.502	46051568.000	-0.015
-18M/+8Y/-10Y/+11Y	-0.138/1.000/-1.000/0.085	2.800	4.864	-1.649	0.800	5.586	0.501	57926768.000	-0.008
+6Y/-9Y/+15Y/-25Y	0.366/-1.000/1.000/-0.387	2.300	2.660	-2.138	0.200	4.597	0.500	46686664.000	-0.055
-11Y/+12Y/+21Y/-25Y	-1.000/1.000/0.349/-0.335	1.000	1.224	-1.557	0.300	1.999	0.500	54086728.000	-0.014
-1Y/+8Y/-10Y/+15Y	-0.123/1.000/-1.000/0.041	3.300	6.080	-1.538	0.500	6.596	0.500	57926000.000	-0.015
-1Y/+4Y/+SFR8/-SFR10	-0.348/1.000/0.261/-1.000	3.400	4.114	-0.300	-2.700	6.838	0.497	46625152.000	57689912.000
-1Y/+4Y/-SFR10/+SFR12	-0.321/1.000/-1.000/0.304	3.100	3.553	-0.277	-1.500	6.235	0.497	58001544.000	46625824.000
-10Y/+15Y/-30Y/+SFR8	-1.000/1.000/-0.206/0.168	2.500	3.874	-1.734	0.800	5.044	0.496	47423272.000	46626976.000
-2Y/+7Y/+8Y/-10Y	-0.203/0.158/1.000/-1.000	3.000	5.050	-1.760	1.200	6.063	0.495	56727248.000	0.003

Note:

1. Risk adjusted carry is expected return (assuming mean reversion of residual as well as carry/slide) divided by standart deviation.
2. 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.
3. A "+" indicates long position in yield curve trades, and a spread widening position in spread trades.
4. 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.

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**	
2-year auctions													
11/25/2024	69.0	-1.4	2.8	71.6	0.9	-3.2	0.0	0.0	-1.1	2.5	0.0	0.0	
10/28/2024	69.0	1.1	2.5	58.2	0.8	1.6	4.4	4.0	-1.7	-0.4	-0.7	0.4	
09/24/2024	69.0	0.2	2.6	67.6	1.3	-0.1	2.6	3.1	-0.3	-0.6	0.3	-1.3	
08/27/2024	69.0	-0.3	2.7	69.0	-2.6	-0.4	3.2	3.7	-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	0.1	
3-year auctions													
11/04/2024	58.0	0.9	2.6	70.6	0.0	0.5	-0.3	-0.1	-4.2	0.9	1.0	1.1	
10/08/2024	58.0	0.8	2.5	56.9	1.5	-0.1	-1.5	-0.9	1.1	-0.2	-0.3	-0.8	
09/10/2024	58.0	-1.5	2.7	78.2	-1.4	-0.7	1.1	2.1	-0.6	0.7	2.0	1.1	
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	-0.7	-1.3	0.0	-2.2	-2.0	
5-year auctions													
11/26/2024	70.0	0.0	2.4	64.1	-0.7	-0.3	0.0	0.0	2.1	1.7	0.0	0.0	
10/28/2024	70.0	1.6	2.4	76.4	0.8	0.8	2.4	1.9	-1.5	-1.2	-2.0	-1.4	
09/25/2024	70.0	0.1	2.4	70.3	-0.1	0.0	0.0	0.2	0.2	-0.7	-0.2	-0.6	
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	
7-year auctions													
11/27/2024	44.0	-1.3	2.7	64.1	-3.0	-0.5	0.0	0.0	4.1	-0.5	0.0	0.0	
10/29/2024	44.0	-1.9	2.7	72.0	0.1	0.2	3.3	3.5	-2.6	-0.6	-1.6	-1.8	
09/26/2024	44.0	-0.5	2.6	70.8	2.1	-1.3	-2.1	-2.3	-1.4	-0.2	-1.1	-1.0	
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	
10-year auctions													
11/05/2024	42.0	0.0	2.6	61.7	0.5	-0.2	-0.1	-0.3	-2.6	0.0	-0.8	-0.6	
10/09/2024	39.0	0.5	2.5	77.6	-2.0	-0.6	0.5	0.6	0.1	0.1	0.1	0.2	
09/11/2024	39.0	-1.4	2.6	76.0	1.3	-1.0	-0.2	-0.1	-0.6	-0.2	1.4	1.3	
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	
20-year auctions													
11/20/2024	16.0	3.1	2.3	69.5	0.2	-0.2	0.0	0.0	-0.7	0.5	0.0	0.0	
10/23/2024	13.0	1.6	2.6	67.9	0.5	-0.1	0.1	0.5	-0.6	-0.2	-2.7	-3.2	
09/17/2024	13.0	2.1	2.5	65.1	-0.3	0.4	-0.5	-0.2	1.8	-0.5	-0.4	-0.6	
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	

* 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.

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													
11/06/2024	25.0	-2.1	2.6	62.7	4.2	2.4	2.9	3.0	-1.0	1.2	-2.0	-1.8	
10/10/2024	22.0	-1.8	2.5	80.5	3.6	0.5	1.3	1.3	0.0	0.3	0.7	0.6	
09/12/2024	22.0	1.5	2.4	68.7	-0.4	0.3	2.8	2.8	-0.1	0.4	0.5	0.6	
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	

* 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

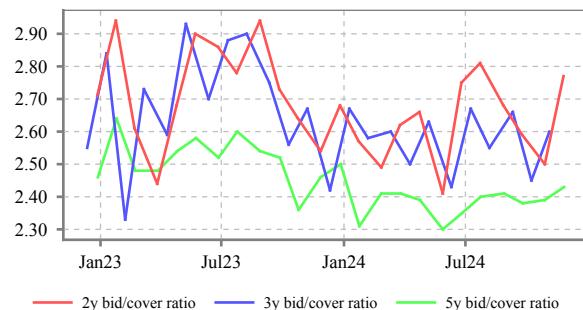
** Prior change is 1-week change for the on-the-run issue; Roll adjusted change in the existing on-the-run on auction date for auction date change; After auction change is for 1-week subsequent to auction for the old and hot-run issue starting 1 day after auction.

U.S. Fixed Income Strategy

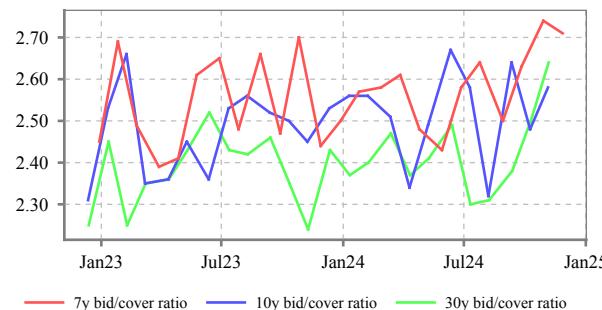
jpmorganmarkets.com

Treasury Auction Demand Statistics

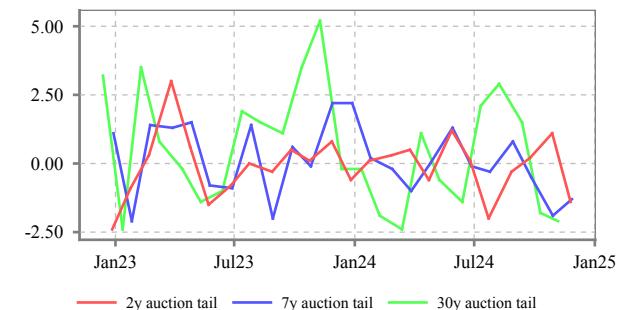
Bid-to-cover ratio (2-, 3-, 5-year)



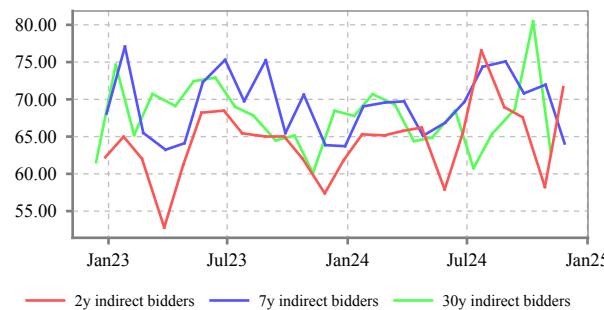
Bid-to-cover ratio (7-, 10-, 30-year)



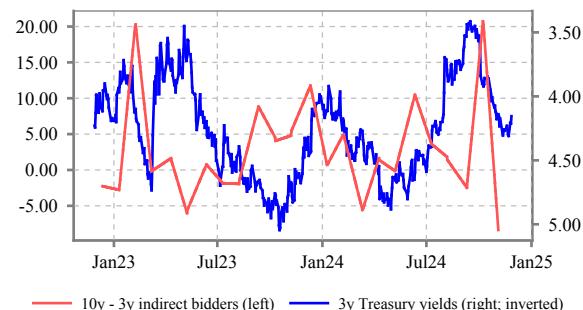
Auction tail
(bp of yield)



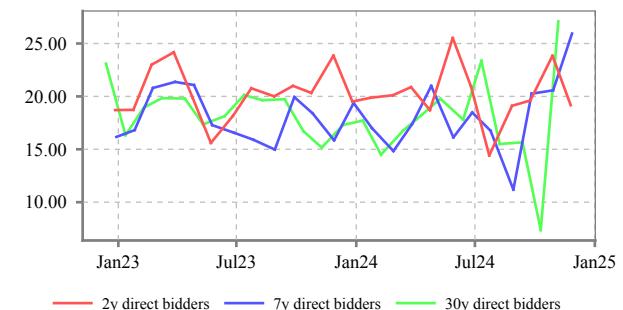
Indirect bidders
(%)



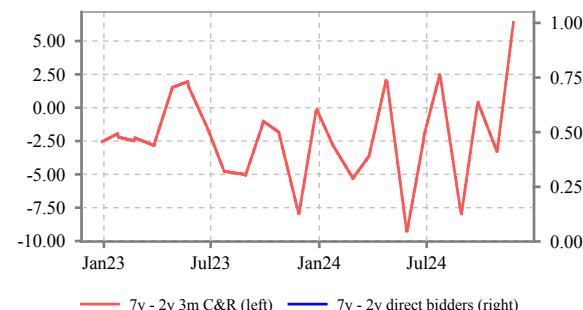
(10-year - 3-year indirect bidders) versus 3-year Treasury yields
(%)



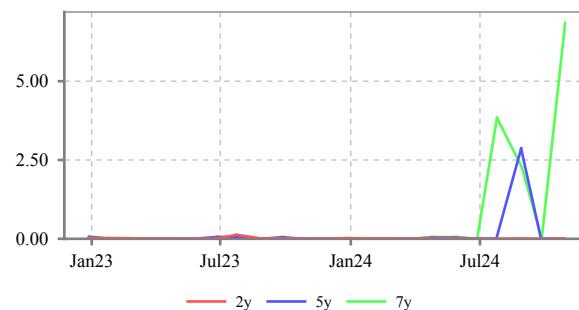
Direct bidders
(%)



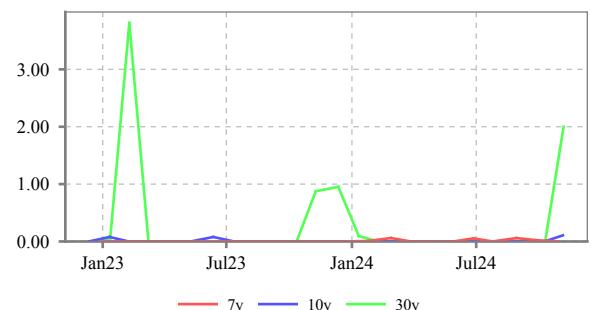
(7-year - 2-year 3m C&R*) versus (7-year - 2-year direct bidders)
(bp)



Depository institutions, percentage at auction
(%)



Pension funds, percentage at auction
(%)



* 3-month carry and roll

US Fixed Income Strategy

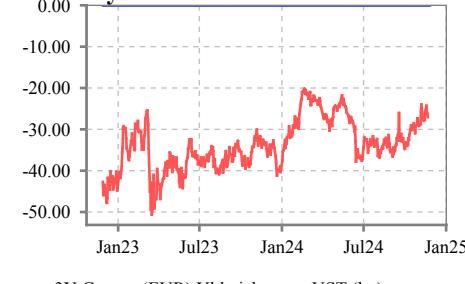
Synthetic USD Government Bond Report

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 (bp)	Sov. CDS diff (bp)
2Y German (EUR)	1.98	-23.0	5.8					1.9		1.2			.0
3Y German (EUR)	1.93	-24.1	5.3					2.8		1.6			.0
5Y German (EUR)	1.98	-18.0	4.2					4.5		2.4			.0
2Y UK Gilt	4.23	4.3	15.9					1.9					.0
3Y UK Gilt	4.15	7.7	15.9					2.8					.0
5Y UK Gilt	4.10	18.6	15.7					4.5					.0
2Y JGB	0.59	-13.8	.0					1.9					.0
3Y JGB	0.62	-17.1	.0					2.8					.0
5Y JGB	0.73	-13.7	.0					4.5					.0
2Y Tsy	4.22	-8.8					-0.04	1.9	0.98	1.2	1.62		
3Y Tsy	4.17	-2.9					-0.01	2.8	1.00	1.7	1.18		
5Y Tsy	4.13	5.0					0.00	4.5	1.01	2.5	0.80		

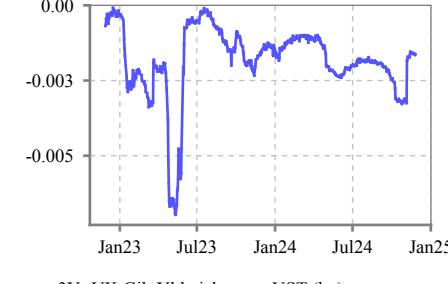
3Y Cross-currency bases (bp)



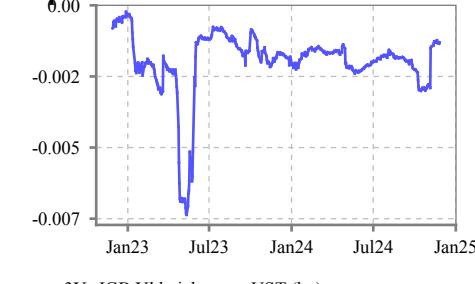
Germany



UK



Japan



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 $2 * (3\text{-month return/risk})$.

European Rates Strategy

Synthetic Yield Pickup using FX Basis - (1)

(1): Buy German bonds; sell USTs

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:				Risk-adj yield pick up		
Term	DEM	UST	DEM	UST	DEM 3s ASW (a)	EUR/USD Fx Basis (b)	USD 3s ASW (c)	Total (a-b-c)	DEM 6s ASW (d)	EUR 3s/6s basis (e)	EUR/USD Fx basis (f)	USD 3s ASW (g)	Total (d+e) - f - g	Ann Risk*	Pick up/Risk
1Y	12-Dec-25	31-Oct-25	2.26	4.39	-8	-14	-15	21	-15	7	-14	-15	21	26	0.8
2Y	10-Dec-26	31-Oct-26	2.04	4.21	-11	-15	-10	14	-17	6	-15	-10	14	36	0.4
3Y	15-Aug-27	15-Oct-27	1.90	4.15	-22	-15	-4	-2	-27	5	-15	-4	-2	43	0.0
5Y	11-Oct-29	31-Oct-29	2.02	4.11	-10	-14	3	1	-14	4	-14	3	1	70	0.0
10Y	15-Aug-34	15-Nov-34	2.17	4.24	-5	-13	19	-11	-6	1	-13	19	-11	138	-0.1
30Y	15-Aug-54	15-Aug-54	2.38	4.43	28	-2	52	-21	36	-7	-2	52	-21	301	-0.1

(2): Buy French bonds; sell USTs

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:				Risk-adj yield pick up		
Term	FRF	UST	FRF	UST	FRF 3s ASW (a)	EUR/USD Fx Basis (b)	USD 3s ASW (c)	Total (a-b-c)	FRF 6s ASW (d)	EUR 3s/6s basis (e)	EUR/USD Fx basis (f)	USD 3s ASW (g)	Total (d+e) - f - g	Ann Risk*	Pick up/Risk
1Y	25-Nov-25	31-Oct-25	2.27	4.39	0	-14	-15	29	-6	6	-14	-15	29	25	1.1
2Y	24-Sep-26	31-Oct-26	2.30	4.21	14	-15	-10	39	9	5	-15	-10	39	27	1.5
3Y	24-Sep-27	15-Oct-27	2.40	4.15	29	-15	-4	48	24	5	-15	-4	48	35	1.4
5Y	25-Feb-30	31-Oct-29	2.66	4.11	54	-14	3	65	50	4	-14	3	65	66	1.0
10Y	25-Nov-34	15-Nov-34	3.02	4.24	80	-13	19	73	79	1	-13	19	73	153	0.5
30Y	25-May-55	15-Aug-54	3.52	4.43	144	-1	52	94	152	-8	-1	52	94	375	0.3

(3): Buy Italian bonds; sell USTs

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:				Risk-adj yield pick up		
Term	ITL	UST	ITL	UST	ITL 3s ASW (a)	EUR/USD Fx Basis (b)	USD 3s ASW (c)	Total (a-b-c)	ITL 6s ASW (d)	EUR 3s/6s basis (e)	EUR/USD Fx basis (f)	USD 3s ASW (g)	Total (d+e) - f - g	Ann Risk*	Pick up/Risk
1Y	15-Nov-25	31-Oct-25	2.40	4.39	5	-13	-15	33	-1	6	-13	-15	33	25	1.3
2Y	01-Jun-26	31-Oct-26	2.35	4.21	14	-15	-10	39	8	6	-15	-10	39	36	1.1
3Y	15-Jul-27	15-Oct-27	2.51	4.15	39	-15	-4	59	33	6	-15	-4	59	65	0.9
5Y	01-Oct-29	31-Oct-29	2.81	4.11	70	-14	3	81	65	4	-14	3	81	116	0.7
10Y	01-Feb-35	15-Nov-34	3.41	4.24	118	-13	19	112	118	1	-13	19	112	232	0.5
30Y	01-Oct-54	15-Aug-54	4.06	4.43	197	-2	52	147	205	-7	-2	52	147	473	0.3

Notes:

ASW defined as govie yield minus swap yield. USD swaps are traded on the 3s curve, while other currencies are traded on the 6s curve. FX basis swaps are traded on the 3s curve.

FX basis and swap bases are maturity matched; FX basis is matched to the maturity of the bonds being bought.

Yield pickup in (1) = { DEM ASW spread vs. 3s } minus { EUR/USD FX basis } minus { Tsy ASW spread vs. 3s } = { DEM ASW spread vs. 6s + EUR 3s/6s basis } minus { EUR/USD FX basis } minus { Tsy ASW spread vs. 3s }

* Annualized risk is defined as { 1Y standard deviation of 3M changes of the yield pick up * sqrt(4) * modified duration of the bond being bought }

European Rates Strategy

Synthetic Yield Pickup using FX Basis - (2)

(1): Buy JGBs; sell USTs

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:				Risk-adj yield pick up		
Term	JPY	UST	JPY	UST	JPY 3s ASW (a)	JPY/USD Fx Basis (b)	USD 3s ASW (c)	Total (a-b-c)	JPY 6s ASW (d)	JPY 3s/6s basis (e)	JPY/USD Fx basis (f)	USD 3s ASW (g)	Total (d+e) - f - g	Ann Risk*	Pick up/Risk
1Y	01-Nov-25	31-Oct-25	0.49	4.39	-14	-38	-15	40	-14	0	-38	-15	40	16	2.4
2Y	01-Oct-26	31-Oct-26	0.59	4.21	-13	-42	-10	39	-13	0	-42	-10	39	28	1.4
3Y	20-Dec-27	15-Oct-27	0.62	4.15	-17	-46	-4	33	-17	0	-46	-4	33	38	0.9
5Y	20-Sep-29	31-Oct-29	0.73	4.11	-12	-52	3	36	-12	0	-52	3	36	48	0.8
10Y	20-Sep-34	15-Nov-34	1.07	4.24	-5	-59	19	35	-5	0	-59	19	35	127	0.3
30Y	20-Sep-54	15-Aug-54	2.31	4.43	39	-46	52	33	39	0	-46	52	33	502	0.1

(2): Buy Gilts; sell USTs

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:				Risk-adj yield pick up		
Term	GBP	UST	GBP	UST	GBP 3s ASW (a)	GBP/USD Fx Basis (b)	USD 3s ASW (c)	Total (a-b-c)	GBP 6s ASW (d)	GBP 3s/6s basis (e)	GBP/USD Fx basis (f)	USD 3s ASW (g)	Total (d+e) - f - g	Ann Risk*	Pick up/Risk
1Y	30-Jan-26	31-Oct-25	3.90	4.39	-43	1	-15	-28	-43	0	1	-15	-28	45	-0.6
2Y	29-Jan-27	31-Oct-26	4.31	4.21	15	0	-10	25	15	0	0	-10	25	182	0.1
3Y	22-Jul-27	15-Oct-27	4.09	4.15	0	0	-4	4	0	0	0	-4	4	77	0.1
5Y	22-Jul-29	31-Oct-29	4.19	4.11	26	-2	3	25	26	0	-2	3	25	136	0.2
10Y	31-Jul-34	15-Nov-34	4.31	4.24	46	-5	19	32	46	0	-5	19	32	132	0.2
30Y	31-Jul-54	15-Aug-54	4.81	4.43	87	-21	52	57	87	0	-21	52	57	205	0.3

(3): Buy Australian bonds; sell USTs

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:				Risk-adj yield pick up		
Term	AUD	UST	AUD	UST	AUD 3s ASW (a)	AUD/USD Fx Basis (b)	USD 3s ASW (c)	Total (a-b-c)	AUD 6s ASW (d)	AUD 3s/6s basis (e)	AUD/USD Fx basis (f)	USD 3s ASW (g)	Total (d+e) - f - g	Ann Risk*	Pick up/Risk
1Y	21-Nov-25	31-Oct-25	4.12	4.39	12	-1	-15	29	-11	24	-1	-15	29	16	1.9
2Y	21-Sep-26	31-Oct-26	3.97	4.21	17	0	-10	27	-4	22	0	-10	27	27	1.0
3Y	21-Nov-27	15-Oct-27	3.97	4.15	17	2	-4	19	-3	20	2	-4	19	24	0.8
5Y	21-Nov-29	31-Oct-29	4.04	4.11	17	4	3	10	0	17	4	3	10	36	0.3
10Y	21-Dec-34	15-Nov-34	4.42	4.24	20	9	19	-8	8	12	9	19	-8	58	-0.1
30Y	21-Jun-54	15-Aug-54	4.85	4.43	62	-9	52	19	50	12	-9	52	19	281	0.1

Notes:

ASW defined as govie yield minus swap yield. USD swaps are traded on the 3s curve, while other currencies are traded on the 6s curve. FX basis swaps are traded on the 3s curve.

FX basis and swap bases are maturity matched; FX basis is matched to the maturity of the bonds being bought.

Yield pickup in (1) = { JPY ASW spread vs. 3s } minus { JPY/USD FX basis } minus { Tsy ASW spread vs. 3s } = { JPY ASW spread vs. 6s + 3s/6s basis } minus { JPY/USD FX basis } minus { Tsy ASW spread vs. 3s }

* Annualized risk is defined as { 1Y standard deviation of 3M changes of the yield pick up * sqrt(4) * modified duration of the bond being bought }

European Rates Strategy

Synthetic Yield Pickup using FX Basis - (3)

(1): Buy German bonds; sell JGBs

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:						Risk-adj yield pick up	
Term	DEM	JPY	DEM	JPY	DEM 3s ASW (a)	EUR/JPY Fx Basis (b)	JPY 3s ASW (c)	Total (a-b-c)	DEM 6s ASW (d)	EUR 3s/6s basis (e)	EUR/JPY Fx basis (f)	JPY 3s/6s basis (g)	JPY 6s ASW (h)	Total (d+e) - f - (g+h)	Ann Risk*	Pick up/Risk
1Y	12-Dec-25	01-Nov-25	2.26	0.49	-8	24	-14	-19	-15	7	24	0	-14	-19	20	-1.0
2Y	10-Dec-26	01-Oct-26	2.04	0.59	-11	27	-13	-25	-17	6	27	0	-13	-25	29	-0.9
3Y	15-Aug-27	20-Dec-27	1.90	0.62	-22	30	-17	-34	-27	5	30	0	-17	-34	47	-0.7
5Y	11-Oct-29	20-Sep-29	2.02	0.73	-10	38	-12	-35	-14	4	38	0	-12	-35	69	-0.5
10Y	15-Aug-34	20-Sep-34	2.17	1.07	-5	46	-5	-46	-6	1	46	0	-5	-46	192	-0.2
30Y	15-Aug-54	20-Sep-54	2.38	2.31	28	45	39	-55	36	-7	45	0	39	-55	674	-0.1

(2): Buy French bonds; sell JGBs

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:						Risk-adj yield pick up	
Term	FRF	JPY	FRF	JPY	FRF 3s ASW (a)	EUR/JPY Fx Basis (b)	JPY 3s ASW (c)	Total (a-b-c)	FRF 6s ASW (d)	EUR 3s/6s basis (e)	EUR/JPY Fx basis (f)	JPY 3s/6s basis (g)	JPY 6s ASW (h)	Total (d+e) - f - (g+h)	Ann Risk*	Pick up/Risk
1Y	25-Nov-25	01-Nov-25	2.27	0.49	0	25	-14	-11	-6	6	25	0	-14	-11	22	-0.5
2Y	24-Sep-26	01-Oct-26	2.30	0.59	14	26	-13	0	9	5	26	0	-13	0	25	0.0
3Y	24-Sep-27	20-Dec-27	2.40	0.62	29	30	-17	16	24	5	30	0	-17	16	36	0.4
5Y	25-Feb-30	20-Sep-29	2.66	0.73	54	39	-12	27	50	4	39	0	-12	27	69	0.4
10Y	25-Nov-34	20-Sep-34	3.02	1.07	80	46	-5	38	79	1	46	0	-5	38	154	0.2
30Y	25-May-55	20-Sep-54	3.52	2.31	144	44	39	61	152	-8	44	0	39	61	557	0.1

(3): Buy Italian bonds; sell JGBs

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:						Risk-adj yield pick up	
Term	ITL	JPY	ITL	JPY	ITL 3s ASW (a)	EUR/JPY Fx Basis (b)	JPY 3s ASW (c)	Total (a-b-c)	ITL 6s ASW (d)	EUR 3s/6s basis (e)	EUR/JPY Fx basis (f)	JPY 3s/6s basis (g)	JPY 6s ASW (h)	Total (d+e) - f - (g+h)	Ann Risk*	Pick up/Risk
1Y	15-Nov-25	01-Nov-25	2.40	0.49	5	25	-14	-6	-1	6	25	0	-14	-6	21	-0.3
2Y	01-Jun-26	01-Oct-26	2.35	0.59	14	26	-13	1	8	6	26	0	-13	1	27	0.0
3Y	15-Jul-27	20-Dec-27	2.51	0.62	39	29	-17	27	33	6	29	0	-17	27	59	0.5
5Y	01-Oct-29	20-Sep-29	2.81	0.73	70	38	-12	44	65	4	38	0	-12	44	126	0.4
10Y	01-Feb-35	20-Sep-34	3.41	1.07	118	46	-5	77	118	1	46	0	-5	77	238	0.3
30Y	01-Oct-54	20-Sep-54	4.06	2.31	197	45	39	114	205	-7	45	0	39	114	547	0.2

Notes:

ASW defined as govie yield minus swap yield. USD swaps are traded on the 3s curve, while other currencies are traded on the 6s curve. FX basis swaps are traded on the 3s curve.

FX basis and swap bases are maturity matched; FX basis is matched to the maturity of the bonds being bought.

Yield pickup in (1) = { DEM ASW spread vs. 3s } minus { EUR/JPY FX basis } minus { JPY ASW spread vs. 3s } = { DEM ASW spread vs. 6s + EUR 3s/6s basis } minus { EUR/JPY FX basis } minus { JPY ASW spread vs. 6s + 3s/6s basis }

* Annualized risk is defined as { 1Y standard deviation of 3M changes of the yield pick up * sqrt(4) * modified duration of the bond being bought }

European Rates Strategy

Synthetic Yield Pickup using FX Basis - (4)

(1): Buy Gilts; sell JGBs

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:						Risk-adj yield pick up	
Term	GBP	JPY	GBP	JPY	GBP 3s ASW (a)	GBP/JPY Fx Basis (b)	JPY 3s ASW (c)	Total (a-b-c)	GBP 6s ASW (d)	GBP 3s/6s basis (e)	GBP/JPY Fx basis (f)	JPY 3s/6s basis (g)	JPY 6s ASW (h)	Total (d+e) - f - (g+h)	Ann Risk*	Pick up/Risk
1Y	30-Jan-26	01-Nov-25	3.90	0.49	-43	40	-14	-68	-43	0	40	0	-14	-68	43	-1.6
2Y	29-Jan-27	01-Oct-26	4.31	0.59	15	43	-13	-15	15	0	43	0	-13	-15	172	-0.1
3Y	22-Jul-27	20-Dec-27	4.09	0.62	0	44	-17	-28	0	0	44	0	-17	-28	86	-0.3
5Y	22-Jul-29	20-Sep-29	4.19	0.73	26	49	-12	-11	26	0	49	0	-12	-11	148	-0.1
10Y	31-Jul-34	20-Sep-34	4.31	1.07	46	53	-5	-3	46	0	53	0	-5	-3	214	0.0
30Y	31-Jul-54	20-Sep-54	4.81	2.31	87	25	39	23	87	0	25	0	39	23	439	0.1

(2): Buy Australian bonds; sell JGBs

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:						Risk-adj yield pick up	
Term	AUD	JPY	AUD	JPY	AUD 3s ASW (a)	AUD/JPY Fx Basis (b)	JPY 3s ASW (c)	Total (a-b-c)	AUD 6s ASW (d)	AUD 3s/6s basis (e)	AUD/JPY Fx basis (f)	JPY 3s/6s basis (g)	JPY 6s ASW (h)	Total (d+e) - f - (g+h)	Ann Risk*	Pick up/Risk
1Y	21-Nov-25	01-Nov-25	4.12	0.49	12	37	-14	-10	-11	24	37	0	-14	-10	20	-0.5
2Y	21-Sep-26	01-Oct-26	3.97	0.59	17	42	-13	-12	-4	22	42	0	-13	-12	34	-0.4
3Y	21-Nov-27	20-Dec-27	3.97	0.62	17	48	-17	-14	-3	20	48	0	-17	-14	40	-0.3
5Y	21-Nov-29	20-Sep-29	4.04	0.73	17	56	-12	-26	0	17	56	0	-12	-26	55	-0.5
10Y	21-Dec-34	20-Sep-34	4.42	1.07	20	67	-5	-43	8	12	67	0	-5	-43	133	-0.3
30Y	21-Jun-54	20-Sep-54	4.85	2.31	62	38	39	-14	50	12	38	0	39	-14	311	0.0

(3): Buy Australian bonds; sell Gilts

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:						Risk-adj yield pick up	
Term	AUD	GBP	AUD	GBP	AUD 3s ASW (a)	AUD/GBP Fx Basis (b)	JPY 3s ASW (c)	Total (a-b-c)	AUD 6s ASW (d)	AUD 3s/6s basis (e)	AUD/GBP Fx basis (f)	GBP 3s/6s basis (g)	GBP 6s ASW (h)	Total (d+e) - f - (g+h)	Ann Risk*	Pick up/Risk
1Y	21-Nov-25	30-Jan-26	4.12	3.90	12	-2	-43	57	-11	24	-2	0	-43	57	44	1.3
2Y	21-Sep-26	29-Jan-27	3.97	4.31	17	0	15	2	-4	22	0	0	15	2	190	0.0
3Y	21-Nov-27	22-Jul-27	3.97	4.09	17	3	0	15	-3	20	3	0	0	15	88	0.2
5Y	21-Nov-29	22-Jul-29	4.04	4.19	17	6	26	-15	0	17	6	0	26	-15	154	-0.1
10Y	21-Dec-34	31-Jul-34	4.42	4.31	20	14	46	-40	8	12	14	0	46	-40	133	-0.3
30Y	21-Jun-54	31-Jul-54	4.85	4.81	62	12	87	-37	50	12	12	0	87	-37	258	-0.1

Notes:

ASW defined as govie yield minus swap yield. USD swaps are traded on the 3s curve, while other currencies are traded on the 6s curve. FX basis swaps are traded on the 3s curve.

FX basis and swap bases are maturity matched; FX basis is matched to the maturity of the bonds being bought.

Yield pickup in (1) = { GBP ASW spread vs. 3s } minus { GBP/JPY FX basis } minus { JPY ASW spread vs. 3s } = { GBP ASW spread vs. 6s + 3s/6s basis } minus { GBP/JPY FX basis } minus { JPY ASW spread vs. 6s + 3s/6s basis }

* Annualized risk is defined as { 1Y standard deviation of 3M changes of the yield pick up * sqrt(4) * modified duration of the bond being bought }

European Rates Strategy

Synthetic Yield Pickup using FX Basis - (5)

(1): Buy Gilts; sell German bonds

Term	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:						Risk-adj yield pick up	
	GBP	DEM	GBP	DEM	GBP 3s ASW (a)	GBP/EUR Fx Basis (b)	DEM 3s ASW (c)	Total (a-b-c)	GBP 6s ASW (d)	GBP 3s/6s basis (e)	GBP/EUR Fx basis (f)	EUR 3s/6s basis (g)	DEM 6s ASW (h)	Total (d+e) - f - (g+h)	Ann Risk*	Pick up/Risk
1Y	30-Jan-26	12-Dec-25	3.90	2.26	-43	15	-8	-49	-43	0	15	7	-15	-49	49	-1.0
2Y	29-Jan-27	10-Dec-26	4.31	2.04	15	16	-11	11	15	0	16	6	-17	11	154	0.1
3Y	22-Jul-27	15-Aug-27	4.09	1.90	0	15	-22	6	0	0	15	5	-27	6	86	0.1
5Y	22-Jul-29	11-Oct-29	4.19	2.02	26	12	-10	24	26	0	12	4	-14	24	113	0.2
10Y	31-Jul-34	15-Aug-34	4.31	2.17	46	7	-5	43	46	0	7	1	-6	43	163	0.3
30Y	31-Jul-54	15-Aug-54	4.81	2.38	87	-19	28	78	87	0	-19	-7	36	78	266	0.3

(2): Buy Australian bonds; sell German bonds

Term	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:						Risk-adj yield pick up	
	AUD	DEM	AUD	DEM	AUD 3s ASW (a)	AUD/EUR Fx Basis (b)	DEM 3s ASW (c)	Total (a-b-c)	AUD 6s ASW (d)	AUD 3s/6s basis (e)	AUD/EUR Fx basis (f)	EUR 3s/6s basis (g)	DEM 6s ASW (h)	Total (d+e) - f - (g+h)	Ann Risk*	Pick up/Risk
1Y	21-Nov-25	12-Dec-25	4.12	2.26	12	12	-8	8	-11	24	12	7	-15	8	26	0.3
2Y	21-Sep-26	10-Dec-26	3.97	2.04	17	16	-11	13	-4	22	16	6	-17	13	41	0.3
3Y	21-Nov-27	15-Aug-27	3.97	1.90	17	17	-22	22	-3	20	17	5	-27	22	47	0.5
5Y	21-Nov-29	11-Oct-29	4.04	2.02	17	18	-10	9	0	17	18	4	-14	9	74	0.1
10Y	21-Dec-34	15-Aug-34	4.42	2.17	20	21	-5	3	8	12	21	1	-6	3	125	0.0
30Y	21-Jun-54	15-Aug-54	4.85	2.38	62	-7	28	41	50	12	-7	-7	36	41	426	0.1

(3): Buy Gilts; sell French bonds

Term	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:						Risk-adj yield pick up	
	GBP	FRF	GBP	FRF	GBP 3s ASW (a)	GBP/EUR Fx Basis (b)	FRF 3s ASW (c)	Total (a-b-c)	GBP 6s ASW (d)	GBP 3s/6s basis (e)	GBP/EUR Fx basis (f)	EUR 3s/6s basis (g)	FRF 6s ASW (h)	Total (d+e) - f - (g+h)	Ann Risk*	Pick up/Risk
1Y	30-Jan-26	25-Nov-25	3.90	2.27	-43	15	0	-58	-43	0	15	6	-6	-58	45	-1.3
2Y	29-Jan-27	24-Sep-26	4.31	2.30	15	16	14	-15	15	0	16	5	9	-15	182	-0.1
3Y	22-Jul-27	24-Sep-27	4.09	2.40	0	15	29	-44	0	0	15	5	24	-44	90	-0.5
5Y	22-Jul-29	25-Feb-30	4.19	2.66	26	12	54	-40	26	0	12	4	50	-40	158	-0.3
10Y	31-Jul-34	25-Nov-34	4.31	3.02	46	7	80	-41	46	0	7	1	79	-41	238	-0.2
30Y	31-Jul-54	25-May-55	4.81	3.52	87	-19	144	-38	87	0	-19	-8	152	-38	367	-0.1

Notes:

ASW defined as govie yield minus swap yield. USD swaps are traded on the 3s curve, while other currencies are traded on the 6s curve. FX basis swaps are traded on the 3s curve.

FX basis and swap bases are maturity matched; FX basis is matched to the maturity of the bonds being bought.

Yield pickup in (1) = { GBP ASW spread vs. 3s } minus { GBP/EUR FX basis } minus { DEM ASW spread vs. 3s } = { GBP ASW spread vs. 6s + 3s/6s basis } minus { GBP/EUR FX basis } minus { DEM ASW spread vs. 6s + EUR 3s/6s basis }

* Annualized risk is defined as { 1Y standard deviation of 3M changes of the yield pick up * sqrt(4) * modified duration of the bond being bought }

European Rates Strategy

Synthetic Yield Pickup using FX Basis - (5)

(4): Buy Australian bonds; sell French bonds

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:						Risk-adj yield pick up	
Term	AUD	FRF	AUD	FRF	AUD 3s ASW (a)	AUD/EUR Fx Basis (b)	FRF 3s ASW (c)	Total (a-b-c)	AUD 6s ASW (d)	AUD 3s/6s basis (e)	AUD/EUR Fx basis (f)	EUR 3s/6s basis (g)	FRF 6s ASW (h)	Total (d+e) - f - (g+h)	Ann Risk*	Pick up/Risk
1Y	21-Nov-25	25-Nov-25	4.12	2.27	12	12	0	0	-11	24	12	6	-6	0	22	0.0
2Y	21-Sep-26	24-Sep-26	3.97	2.30	17	16	14	-12	-4	22	16	5	9	-12	42	-0.3
3Y	21-Nov-27	24-Sep-27	3.97	2.40	17	17	29	-29	-3	20	17	5	24	-29	38	-0.8
5Y	21-Nov-29	25-Feb-30	4.04	2.66	17	18	54	-54	0	17	18	4	50	-54	74	-0.7
10Y	21-Dec-34	25-Nov-34	4.42	3.02	20	21	80	-81	8	12	21	1	79	-81	164	-0.5
30Y	21-Jun-54	25-May-55	4.85	3.52	62	-7	144	-75	50	12	-7	-8	152	-75	431	-0.2

(5): Buy Gilts; sell Italian bonds

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:						Risk-adj yield pick up	
Term	GBP	ITL	GBP	ITL	GBP 3s ASW (a)	GBP/EUR Fx Basis (b)	ITL 3s ASW (c)	Total (a-b-c)	GBP 6s ASW (d)	GBP 3s/6s basis (e)	GBP/EUR Fx basis (f)	EUR 3s/6s basis (g)	ITL 6s ASW (h)	Total (d+e) - f - (g+h)	Ann Risk*	Pick up/Risk
1Y	30-Jan-26	15-Nov-25	3.90	2.40	-43	15	5	-62	-43	0	15	6	-1	-62	50	-1.2
2Y	29-Jan-27	01-Jun-26	4.31	2.35	15	16	14	-14	15	0	16	6	8	-14	178	-0.1
3Y	22-Jul-27	15-Jul-27	4.09	2.51	0	15	39	-55	0	0	15	6	33	-55	108	-0.5
5Y	22-Jul-29	01-Oct-29	4.19	2.81	26	12	70	-56	26	0	12	4	65	-56	188	-0.3
10Y	31-Jul-34	01-Feb-35	4.31	3.41	46	7	118	-80	46	0	7	1	118	-80	313	-0.3
30Y	31-Jul-54	01-Oct-54	4.81	4.06	87	-19	197	-91	87	0	-19	-7	205	-91	416	-0.2

(6): Buy Australian bonds; sell Italian bonds

	Govt Bond Maturity		Govt Bond Yield (%)		Yield pick up:				Components of yield pick up:						Risk-adj yield pick up	
Term	AUD	ITL	AUD	ITL	AUD 3s ASW (a)	AUD/EUR Fx Basis (b)	ITL 3s ASW (c)	Total (a-b-c)	AUD 6s ASW (d)	AUD 3s/6s basis (e)	AUD/EUR Fx basis (f)	EUR 3s/6s basis (g)	ITL 6s ASW (h)	Total (d+e) - f - (g+h)	Ann Risk*	Pick up/Risk
1Y	21-Nov-25	15-Nov-25	4.12	2.40	12	12	5	-5	-11	24	12	6	-1	-5	31	-0.1
2Y	21-Sep-26	01-Jun-26	3.97	2.35	17	16	14	-12	-4	22	16	6	8	-12	54	-0.2
3Y	21-Nov-27	15-Jul-27	3.97	2.51	17	17	39	-39	-3	20	17	6	33	-39	74	-0.5
5Y	21-Nov-29	01-Oct-29	4.04	2.81	17	18	70	-70	0	17	18	4	65	-70	136	-0.5
10Y	21-Dec-34	01-Feb-35	4.42	3.41	20	21	118	-120	8	12	21	1	118	-120	250	-0.5
30Y	21-Jun-54	01-Oct-54	4.85	4.06	62	-7	197	-128	50	12	-7	-7	205	-128	428	-0.3

Notes:

ASW defined as govie yield minus swap yield. USD swaps are traded on the 3s curve, while other currencies are traded on the 6s curve. FX basis swaps are traded on the 3s curve.

FX basis and swap bases are maturity matched; FX basis is matched to the maturity of the bonds being bought.

Yield pickup in (4) = { AUD ASW spread vs. 3s } minus { AUD/EUR FX basis } minus { FRF ASW spread vs. 3s } = { AUD ASW spread vs. 6s + 3s/6s basis } minus { AUD/EUR FX basis } minus { FRF ASW spread vs. 6s + EUR 3s/6s basis }

* Annualized risk is defined as { 1Y standard deviation of 3M changes of the yield pick up * sqrt(4) * modified duration of the bond being bought }

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	1.625 OCT 15, 2029	1.768	99-10+	1.00194	4.66	464
	Nominal	4.125 NOV 30, 2029	4.114	100-1+		4.47	447
10 year	TIPS	1.875 JUL 15, 2034	1.964	99-7	1.00473	8.70	874
	Nominal	4.250 NOV 15, 2034	4.240	100-2+		8.04	806
30 year	TIPS	2.125 FEB 15, 2054	2.194	98-16+	1.02725	21.48	2187
	Nominal	4.500 NOV 15, 2054	4.427	101-6+		16.42	1665

Spreads of hot-run TIPS to hot-run Nominals

	Spread	Change	3M Avg	3M Wide	3M Narrow	3M Z-score
5yr TIPS/5s	234.5	-2.0	219.2	247.0	185.8	0.8
10yr TIPS/10s	227.6	-2.2	223.9	239.5	202.2	0.4
30yr TIPS/30s	223.3	-2.1	222.5	234.9	204.5	0.1

TIPS curve/butterfly spreads

	Spread	Change	3M Avg	3M Wide	3M Narrow	3M Z-score
5s/10s	19.5	0.5	13.4	22.8	2.7	1.1
5s/30s	42.6	1.3	41.4	51.6	29.7	0.2
10s/30s	23.0	0.8	28.0	35.8	18.0	-1.0
5s/10s/30s	-1.8	-0.2	-7.3	0.4	-12.1	1.3

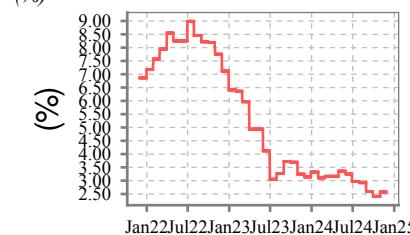
Hedging with nominal bonds

	Yield Beta⁴	Hedge Ratio⁵
5s	63.9%	0.664
10s	69.4%	0.753
30s	77.0%	1.011



Chg				
	Current	1d	1w	1m
5Yx5Y BE	204	-2.1	-6.3	-5.5

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 Summary Report

CUSIP	Cpn	Mat	Yrs To Mat	Orig Issue	Yld	1D Yld Chg	B/E	SOFR ASW w/Floor	OIS ASW w/Floor	Z-Spd	OA Z-Spd	Inflation Swap Rate(%)	Real Yield Carry to:			B/E Carry to:			Issue Size (\$bn)	Issue % in SOMA	Nom Cpn	Nom Mat
													30-Nov	31-Dec	31-Jan	30-Nov	31-Dec	31-Jan				
912810FR4	2.375	15-Jan-25	0.13	20	4.077	10.0	45.5	12.4	14.5	-13.7	-13.7	0.630	2.9	153.3		3.2	177.8		28.0	41.8	2.500	Jan-25
912828H45	0.250	15-Jan-25	0.13	10	4.012	0.6	47.8	6.0	8.1	-20.3	-20.3	0.630	2.7	139.0		3.2	196.7		41.0	26.8	1.125	Jan-25
912828ZJ2	0.125	15-Apr-25	0.38	5	2.991	7.3	137.7	8.2	9.6	-18.2	-18.2	1.565	0.3	-10.4	-122.6	0.6	1.6	-91.8	35.6	26.4	2.625	Apr-25
912828XL9	0.375	15-Jul-25	0.63	10	1.964	0.7	246.6	9.9	11.1	-16.9	-16.9	2.526	-0.4	-22.6	-94.1	-0.2	-17.4	-82.9	40.9	19.6	2.000	Aug-25
91282CAQ4	0.125	15-Oct-25	0.88	5	1.780	-0.7	262.1	11.1	12.3	-15.5	-15.5	2.649	-0.3	-17.2	-64.9	-0.2	-13.8	-58.0	34.3	6.7	0.250	Oct-25
912810FS2	2.000	15-Jan-26	1.13	20	2.049	-1.9	228.2	17.6	19.2	-8.9	-8.9	2.366	-0.2	-11.1	-43.8	-0.1	-7.5	-36.4	19.9	44.8	1.625	Feb-26
912828N71	0.625	15-Jan-26	1.13	10	2.016	-2.4	231.5	14.5	16.2	-12.1	-12.1	2.366	-0.2	-11.3	-44.1	-0.1	-7.6	-36.6	42.1	34.7	1.625	Feb-26
91282CCA7	0.125	15-Apr-26	1.38	5	2.018	-2.3	228.8	18.6	20.7	-8.1	-8.1	2.326	-0.1	-8.9	-34.6	0.0	-6.2	-29.1	39.9	37.4	0.750	Apr-26
912828S50	0.125	15-Jul-26	1.63	10	1.664	-1.9	260.4	22.6	24.9	-4.3	-4.3	2.665	-0.2	-9.6	-33.0	-0.1	-6.4	-26.9	36.8	24.1	4.500	Jul-26
91282CDC2	0.125	15-Oct-26	1.88	5	1.695	-2.5	254.6	26.6	29.1	-0.7	-0.7	2.628	-0.2	-8.0	-27.8	-0.1	-5.7	-23.2	38.3	6.0	1.125	Oct-26
912810PS1	2.375	15-Jan-27	2.13	20	1.814	-2.8	239.0	21.7	24.4	-5.0	-5.0	2.428	-0.1	-6.8	-23.8	-0.1	-4.3	-18.9	16.4	34.2	2.250	Feb-27
912828V49	0.375	15-Jan-27	2.13	10	1.837	-2.8	236.7	24.9	27.7	-2.4	-2.4	2.428	-0.1	-6.5	-23.1	0.0	-4.0	-18.1	38.4	31.9	2.250	Feb-27
91282CEJ6	0.125	15-Apr-27	2.38	5	1.861	-3.2	232.1	24.2	27.3	-3.2	-3.2	2.356	-0.1	-5.6	-20.2	0.0	-3.5	-16.1	39.4	3.5	2.750	Apr-27
912828L23	0.375	15-Jul-27	2.63	10	1.640	-3.3	252.1	26.6	29.9	-1.0	-1.0	2.574	-0.1	-5.9	-19.8	-0.1	-4.1	-16.3	36.9	20.7	3.875	Oct-27
91282CFR7	1.625	15-Oct-27	2.88	5	1.669	-3.4	247.8	27.3	30.7	-0.1	0.0	2.535	-0.1	-5.3	-18.0	0.0	-3.4	-14.3	40.0	4.125	Oct-27	
912810PV4	1.750	15-Jan-28	3.13	20	1.807	-3.5	235.3	30.0	33.6	3.7	3.7	2.407	-0.1	-4.6	-15.8	0.0	-2.7	-12.2	15.6	32.1	2.750	Feb-28
9128283R9	0.500	15-Jan-28	3.13	10	1.812	-3.3	234.8	31.3	34.9	4.4	4.4	2.407	-0.1	-4.5	-15.5	-0.1	-2.6	-11.9	38.8	22.3	2.750	Feb-28
912810FD5	3.625	15-Apr-28	3.38	30	1.869	-3.9	228.8	33.5	37.1	7.4	7.4	2.362	-0.1	-4.1	-14.6	0.0	-2.5	-11.5	16.8	50.0	3.500	Apr-28
91282CGW5	1.250	15-Apr-28	3.38	5	1.856	-4.2	230.1	33.8	37.6	6.4	6.6	2.362	-0.1	-4.0	-14.2	0.0	-2.4	-11.1	39.9	3.500	Apr-28	
912828Y38	0.750	15-Jul-28	3.63	10	1.695	-4.3	246.1	35.5	39.5	7.9	7.9	2.522	-0.1	-4.1	-13.9	0.0	-2.5	-10.7	36.6	27.2	2.875	Aug-28
91282CJH5	2.375	15-Oct-28	3.88	5	1.716	-4.1	243.8	36.3	40.3	8.5	9.1	2.500	-0.1	-3.9	-13.2	0.0	-2.5	-10.5	42.0	4.875	Oct-28	
912810PZ5	2.500	15-Jan-29	4.13	20	1.812	-4.1	233.2	38.1	42.2	11.0	11.0	2.409	-0.1	-3.5	-12.1	0.0	-2.1	-9.2	14.1	29.0	2.625	Feb-29
9128285W6	0.875	15-Jan-29	4.13	10	1.801	-4.0	234.3	38.5	42.7	10.1	10.1	2.409	-0.1	-3.4	-11.7	0.0	-2.0	-8.9	36.2	36.2	2.625	Feb-29
912810FH6	3.875	15-Apr-29	4.38	30	1.873	-4.3	227.0	41.9	46.0	15.3	15.3	2.377	-0.1	-3.2	-11.4	0.0	-1.9	-8.8	19.4	49.6	4.625	Apr-29
91282CKL4	2.125	15-Apr-29	4.38	5	1.864	-4.6	227.9	43.4	47.6	14.7	15.5	2.377	-0.1	-3.1	-11.0	0.0	-1.9	-8.5	44.1	0.2	4.625	Apr-29
9128287D6	0.250	15-Jul-29	4.63	10	1.719	-4.3	238.6	43.9	48.4	14.2	14.2	2.505	-0.1	-3.2	-10.6	0.0	-1.8	-8.0	39.8	30.7	1.625	Aug-29
91282CLV1	1.625	15-Oct-29	4.88	5	1.768	-4.5	235.7	47.8	52.3	18.0	18.8	2.491	0.0	-2.9	-10.0	0.0	-2.1	-8.1	24.4	1.7	4.125	Oct-29
912828Z37	0.125	15-Jan-30	5.13	10	1.826	-4.3	232.3	48.7	53.4	17.8	17.8	2.418	-0.1	-2.7	-9.2	0.0	-1.5	-6.9	41.0	23.6	1.500	Feb-30
912828ZZ6	0.125	15-Jul-30	5.63	10	1.776	-4.2	238.2	53.5	58.5	21.7	21.7	2.493	0.0	-2.5	-8.5	0.0	-1.5	-6.6	42.7	19.4	4.125	Aug-30
91282CBF7	0.125	15-Jan-31	6.13	10	1.868	-4.1	224.0	57.1	62.3	24.4	24.4	2.419	0.0	-2.2	-7.5	0.0	-1.1	-5.5	43.3	16.1	1.125	Feb-31
91282CCM1	0.125	15-Jul-31	6.63	10	1.827	-4.1	235.0	61.3	66.7	27.6	27.6	2.484	0.0	-2.0	-7.0	0.0	-1.2	-5.4	46.8	18.3	1.250	Aug-31
91282CDX6	0.125	15-Jan-32	7.13	10	1.889	-3.9	230.4	62.4	68.0	27.9	28.0	2.422	0.0	-1.8	-6.4	0.0	-1.0	-4.8	51.1	15.5	1.875	Feb-32
912810FQ6	3.375	15-Apr-32	7.38	30	1.856	-4.2	233.7	50.4	55.4	22.3	22.3	2.403	0.0	-2.0	-6.9	0.0	-1.2	-5.4	5.0	23.2	1.875	Feb-32
91282CEZ0	0.625	15-Jul-32	7.63	10	1.869	-4.0	233.8	66.0	71.6	31.7	31.8	2.479	0.0	-1.8	-6.1	0.0	-1.0	-4.7	48.6	3.4	2.750	Aug-32
91282CGK1	1.125	15-Jan-33	8.14	10	1.940	-4.1	227.4	67.0	72.5	33.5	33.7	2.427	0.0	-1.6	-5.7	0.0	-0.9	-4.3	49.8	5.6	3.500	Feb-33
91282CHP9	1.375	15-Jul-33	8.63	10	1.932	-3.9	229.7	72.0	77.6	37.7	37.9	2.478	0.0	-1.5	-5.5	0.0	-0.9	-4.1	46.9	0.4	3.875	Aug-33
91282CJY8	1.750	15-Jan-34	9.14	10	1.983	-4.1	225.7	71.7	77.3	38.2	38.5	2.432	0.0	-1.4	-5.1	0.0	-0.8	-3.9	50.9	1.9	4.000	Feb-34
91282CLE9	1.875	15-Jul-34	9.63	10	1.964	-4.0	227.9	74.4	80.1	40.5	40.8	2.479	0.0	-1.4	-4.9	0.0	-0.9	-3.9	54.4	3.7	3.875	Aug-34
912810QF8	2.125	15-Feb-40	15.22	30	2.098	-3.7	228.4	81.0	87.4	43.0	43.0	2.411	0.0	-0.9	-3.2	0.0	-0.5	-2.5	15.1	60.1	4.625	Feb-40
912810QP6	2.125	15-Feb-41	16.23	30	2.092	-3.7	239.2	80.1	86.6	41.6	41.6	2.403	0.0	-0.8	-3.0	0.0	-0.6	-2.6	24.0	62.5	1.875	Feb-41
912810QV3	0.750	15-Feb-42	17.23	30	2.143	-3.6	233.8	95.2	102.7	45.6	45.6	2.396	0.0	-0.7	-2.5	0.0	-0.5	-2.1	23.1	35.3	3.125	Feb-42

US Fixed Income Strategy

TIPS Summary Report

CUSIP	Cpn	Mat	Yrs To Mat	Orig Issue	Yld	1D Yld Chg	B/E	SOFR ASW w/Floor	OIS ASW w/Floor	Z-Spd	OA Z-Spd	Inflation Swap Rate(%)	Real Yield Carry to:			B/E Carry to:			Issue Size (\$bn)	Issue % in SOMA	Nom Cpn	Nom Mat
912810RA8	0.625	15-Feb-43	18.23	30	2.180	-3.4	235.7	103.1	110.8	49.2	49.2	2.390	0.0	-0.6	-2.3	0.0	-0.4	-2.0	23.0	48.0	3.125	Feb-43
912810RF7	1.375	15-Feb-44	19.23	30	2.191	-3.5	237.0	100.0	107.3	50.9	50.9	2.384	0.0	-0.6	-2.4	0.0	-0.5	-2.1	23.0	27.5	3.625	Feb-44
912810RL4	0.750	15-Feb-45	20.23	30	2.211	-3.4	237.3	111.5	119.5	53.5	53.5	2.378	0.0	-0.5	-2.1	0.0	-0.4	-1.9	23.0	19.3	2.500	Feb-45
912810RR1	1.000	15-Feb-46	21.23	30	2.228	-3.3	236.4	114.3	122.2	56.3	56.3	2.370	0.0	-0.5	-2.1	0.0	-0.4	-1.9	20.4	52.8	2.500	Feb-46
912810RW0	0.875	15-Feb-47	22.23	30	2.223	-3.2	238.0	118.7	126.9	57.1	57.1	2.362	0.0	-0.5	-2.0	0.0	-0.4	-1.8	18.7	35.8	3.000	Feb-47
912810SB5	1.000	15-Feb-48	23.23	30	2.222	-3.1	237.8	120.7	128.9	58.5	58.6	2.356	0.0	-0.5	-1.9	0.0	-0.4	-1.7	18.7	52.4	3.000	Feb-48
912810SG4	1.000	15-Feb-49	24.23	30	2.217	-2.9	237.2	124.3	132.7	59.7	59.7	2.350	0.0	-0.5	-1.9	0.0	-0.4	-1.7	15.2	45.0	3.000	Feb-49
912810SM1	0.250	15-Feb-50	25.23	30	2.205	-2.9	237.0	142.5	152.1	60.8	60.9	2.346	0.0	-0.4	-1.6	0.0	-0.3	-1.4	15.6	15.7	2.000	Feb-50
912810SV1	0.125	15-Feb-51	26.23	30	2.178	-2.8	235.8	148.4	158.5	60.9	61.0	2.347	0.0	-0.4	-1.5	0.0	-0.3	-1.3	17.9	25.5	1.875	Feb-51
912810TE8	0.125	15-Feb-52	27.23	30	2.150	-2.9	236.2	151.1	161.4	60.8	60.9	2.348	0.0	-0.4	-1.5	0.0	-0.3	-1.3	19.6	15.0	2.250	Feb-52
912810TP3	1.500	15-Feb-53	28.24	30	2.195	-2.9	227.9	133.3	141.7	66.1	66.2	2.350	0.0	-0.5	-1.8	0.0	-0.3	-1.4	19.8	14.5	3.625	Feb-53
912810TY4	2.125	15-Feb-54	29.24	30	2.194	-3.1	225.0	128.8	136.8	67.6	67.7	2.351	0.0	-0.5	-1.8	0.0	-0.3	-1.4	17.4	2.2	4.250	Feb-54

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)
2.375	15-Jan-25	4.077	10.0	99-25+	1.67253	0.13	21	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	4.5	2.500	Jan-25	4.532	17	45.5	12%	0.149	0.0	0.0
0.250	15-Jan-25	4.012	0.6	99-16+	1.33106	0.13	17	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	4.5	1.125	Jan-25	4.490	13	47.8	9%	0.112	0.0	0.0
0.125	15-Apr-25	2.991	7.3	98-29+	1.22054	0.37	45	0.0	0.0	0	0.0	0.0	0.0	-1.1	74.4	78.9	2.625	Apr-25	4.367	37	137.7	60%	0.717	-7.8	109.4
0.375	15-Jul-25	1.964	0.7	99-0+	1.32944	0.62	82	0.0	0.0	0	0.0	0.0	0.0	-1.3	48.4	52.9	2.000	Aug-25	4.430	68	246.6	50%	0.595	-7.1	105.8
0.125	15-Oct-25	1.780	-0.7	98-18+	1.21504	0.87	104	0.0	-5.1	0	8.8	-5.1	0.0	-2.1	43.1	47.6	0.250	Oct-25	4.402	87	262.1	64%	0.770	-8.8	104.2
2.000	15-Jan-26	2.049	-1.9	99-30+	1.58843	1.10	175	4.3	1.1	50	3.3	-4.7	-0.9	-1.4	50.1	54.6	1.625	Feb-26	4.331	114	228.2	63%	0.965	-4.6	102.5
0.625	15-Jan-26	2.016	-2.4	98-14+	1.32682	1.11	145	1.1	-0.5	47	3.5	-4.4	-1.5	-1.4	49.0	53.5	1.625	Feb-26	4.331	114	231.5	63%	0.803	-4.6	102.5
0.125	15-Apr-26	2.018	-2.3	97-14+	1.20216	1.36	160	-5.2	2.1	92	7.3	-2.9	1.2	-1.2	49.0	53.5	0.750	Apr-26	4.306	132	228.8	67%	0.813	-4.7	102.2
0.125	15-Jul-26	1.664	-1.9	97-17+	1.31525	1.61	207	-4.2	4.6	95	8.7	-4.3	1.5	-1.1	39.9	44.4	4.500	Jul-26	4.269	156	260.4	68%	0.904	-3.4	101.5
0.125	15-Oct-26	1.695	-2.5	97-3+	1.15374	1.86	208	7.1	4.8	98	4.8	-3.8	1.7	-0.9	40.8	45.3	1.125	Oct-26	4.242	176	254.6	64%	0.763	-3.6	100.2
2.375	15-Jan-27	1.814	-2.8	101-5+	1.56333	2.05	324	-2.4	-1.1	16	1.4	-2.8	-0.5	-0.5	44.6	49.1	2.250	Feb-27	4.204	204	239.0	63%	1.005	-2.2	99.4
0.375	15-Jan-27	1.837	-2.8	96-30+	1.30513	2.10	266	0.0	0.6	83	1.5	-1.5	1.1	-0.5	44.9	49.4	2.250	Feb-27	4.204	204	236.7	63%	0.822	-2.2	99.4
0.125	15-Apr-27	1.861	-3.2	95-31+	1.11660	2.35	252	-3.2	-1.1	9	2.1	-1.7	-0.8	-0.2	46.0	50.5	2.750	Apr-27	4.182	223	232.1	63%	0.713	-2.3	99.8
0.375	15-Jul-27	1.640	-3.3	96-24+	1.28881	2.59	323	-4.9	-1.6	20	3.2	-1.9	-0.3	-0.1	40.7	45.2	3.875	Oct-27	4.162	267	252.1	66%	0.800	-0.9	101.3
1.625	15-Oct-27	1.669	-3.4	99-28+	1.06427	2.79	297	2.4	-1.9	17	2.0	-4.3	-0.9	0.2	42.0	46.6	4.125	Oct-27	4.148	272	247.8	65%	0.705	-1.1	101.1
1.750	15-Jan-28	1.807	-3.5	99-26+	1.50488	3.01	452	0.1	-0.8	47	2.7	-1.8	0.4	0.6	46.9	51.4	2.750	Feb-28	4.160	290	235.3	64%	0.999	-0.2	102.1
0.500	15-Jan-28	1.812	-3.3	96-0+	1.27812	3.07	377	0.6	-0.5	53	2.7	-1.9	0.4	0.6	46.9	51.4	2.750	Feb-28	4.160	290	234.8	64%	0.831	-0.2	102.1
3.625	15-Apr-28	1.869	-3.9	105-22+	1.94922	3.17	654	2.7	0.0	36	1.1	-2.7	-0.9	0.8	48.9	53.4	3.500	Apr-28	4.157	312	228.8	67%	1.405	-0.6	102.1
1.250	15-Apr-28	1.856	-4.2	98-0+	1.05107	3.28	338	1.8	-1.3	6	1.8	-3.2	-1.5	0.8	48.7	53.2	3.500	Apr-28	4.157	312	230.1	66%	0.718	-0.6	102.1
0.750	15-Jul-28	1.695	-4.3	96-22+	1.25596	3.54	430	-1.6	-0.4	48	2.4	-2.0	0.4	0.9	45.2	49.7	2.875	Aug-28	4.157	332	246.1	66%	0.855	-0.1	102.0
2.375	15-Oct-28	1.716	-4.1	102-14+	1.02930	3.69	389	3.6	-2.2	3	1.7	-5.8	-2.0	0.9	46.0	50.5	4.875	Oct-28	4.154	364	243.8	63%	0.677	-0.7	101.4
2.500	15-Jan-29	1.812	-4.1	102-23+	1.46841	3.88	585	0.2	-0.6	17	1.1	-0.8	-3.0	1.1	49.6	54.1	2.625	Feb-29	4.145	370	233.2	64%	1.013	-0.5	100.5
0.875	15-Jan-29	1.801	-4.0	96-10+	1.24857	4.01	483	-0.9	-0.9	2	0.7	-1.0	-2.5	1.1	49.2	53.8	2.625	Feb-29	4.145	370	234.3	64%	0.829	-0.5	100.5
3.875	15-Apr-29	1.873	-4.3	108-11+	1.91776	4.03	837	2.4	0.8	61	2.2	-2.5	-1.5	1.1	51.1	55.6	4.625	Apr-29	4.143	405	227.0	64%	1.324	-0.8	100.4
2.125	15-Apr-29	1.864	-4.6	101-2+	1.01927	4.15	428	2.9	0.3	55	2.0	-2.6	-3.1	1.2	51.1	55.6	4.625	Apr-29	4.143	405	227.9	65%	0.683	-0.8	100.4
0.250	15-Jul-29	1.719	-4.3	93-15+	1.23251	4.56	525	-3.5	-0.6	14	2.9	-1.3	-2.6	1.1	47.7	52.2	1.625	Aug-29	4.105	398	238.6	64%	0.837	-0.3	99.9
1.625	15-Oct-29	1.768	-4.5	99-10+	1.00194	4.66	463	0.0	0.0	0	0.0	0.0	0.0	1.1	48.9	53.4	4.125	Oct-29	4.125	441	235.7	54%	0.568	-0.4	101.4
0.125	15-Jan-30	1.826	-4.3	91-22+	1.22537	5.06	569	-1.2	1.0	95	2.2	-0.9	1.9	1.2	51.1	55.6	1.500	Feb-30	4.149	431	232.3	64%	0.841	0.4	104.1
0.125	15-Jul-30	1.776	-4.2	91-6+	1.22963	5.56	623	-2.3	1.4	95	3.7	-1.1	2.2	1.1	49.9	54.4	4.125	Aug-30	4.158	507	238.2	63%	0.775	0.4	106.1
0.125	15-Jan-31	1.868	-4.1	89-30+	1.21109	6.05	659	-0.1	2.0	95	2.1	-1.4	3.0	1.1	52.7	57.2	1.125	Feb-31	4.108	492	224.0	65%	0.866	0.6	104.6
0.125	15-Jul-31	1.827	-4.1	89-13+	1.17628	6.54	688	-1.1	1.2	94	2.3	-1.6	2.6	1.0	51.7	56.2	1.250	Aug-31	4.177	523	235.0	65%	0.855	0.6	106.8
0.125	15-Jan-32	1.889	-3.9	88-9+	1.13732	7.03	705	-1.0	-0.1	38	1.9	-1.5	2.1	1.0	53.6	58.1	1.875	Feb-32	4.192	565	230.4	57%	0.712	1.1	110.4
3.375	15-Apr-32	1.856	-4.2	110-13+	1.77615	6.55	1285	-6.4	-3.6	2	2.9	-3.6	-1.8	0.8	51.6	56.1	1.875	Feb-32	4.192	565	233.7	58%	1.307	1.1	110.4
0.625	15-Jul-32	1.869	-4.0	91-6+	1.08508	7.36	729	-0.3	0.0	45	0.6	-1.0	2.0	0.9	53.1	57.6	2.750	Aug-32	4.207	617	233.8	67%	0.791	1.2	111.6
1.125	15-Jan-33	1.940	-4.1	93-28+	1.05838	7.67	762	1.3	-0.6	6	0.8	-2.0	-1.1	0.9	55.3	59.8	3.500	Feb-33	4.214	668	227.4	67%	0.769	0.8	109.2
1.375	15-Jul-33	1.932	-3.9	95-19+	1.03806	8.03	797	3.1	0.8	92	1.0	-2.2	1.3	0.9	55.3	59.8	3.875	Aug-33	4.228	712	229.7	68%	0.767	-0.1	103.8
1.750	15-Jan-34	1.983	-4.1	98-2+	1.02562	8.33	838	3.4	-0.2	28	1.0	-3.5	-2.3	0.9	56.7	61.2	4.000	Feb-34	4.240	748	225.7	69%	0.769	-0.7	99.7
Note ⁷	15-Jul-34	1.964	-4.0	99-7+	1.00473	8.70	868	3.4	0.1	53	1.6	-3.4	-2.2	0.9	56.4	60.9	3.875	Aug-34	4.243	776	227.9	69%	0.777	-0.7	99.1

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 4.5 . 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)

This document is being provided for the sole use of CHRISTOPHER Lee at JPMorgan Chase & Co. and clients of J.P. Morgan.

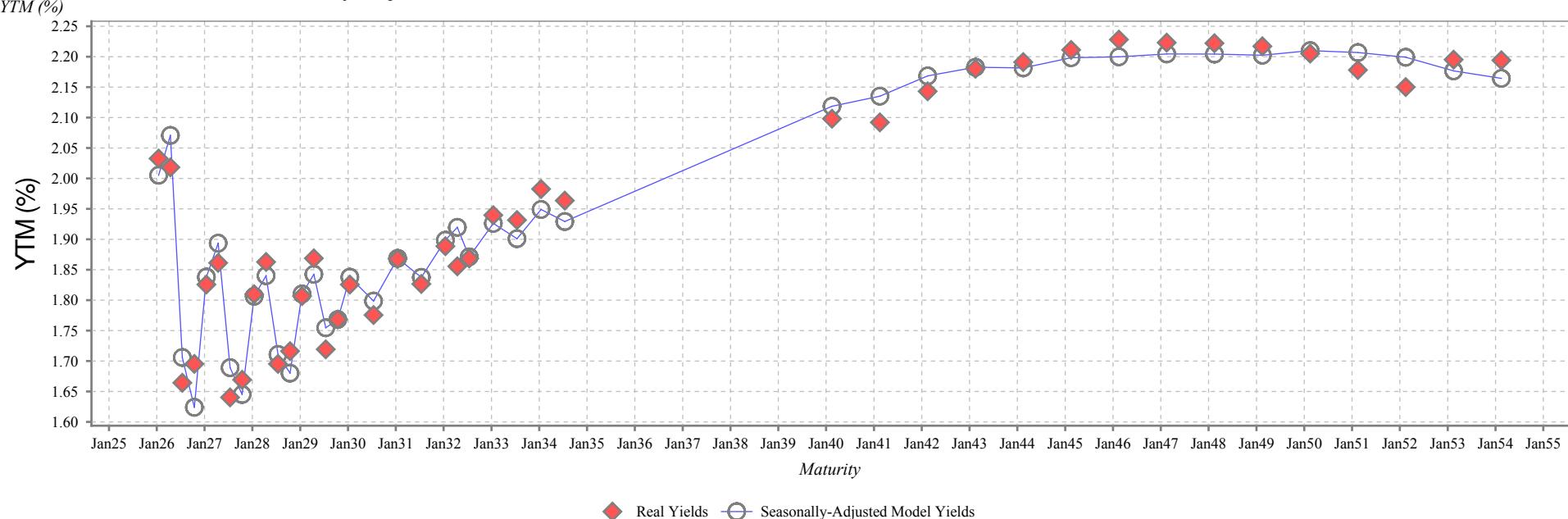
US Fixed Income Strategy

TIPS Fitted Curve Relative Value Report

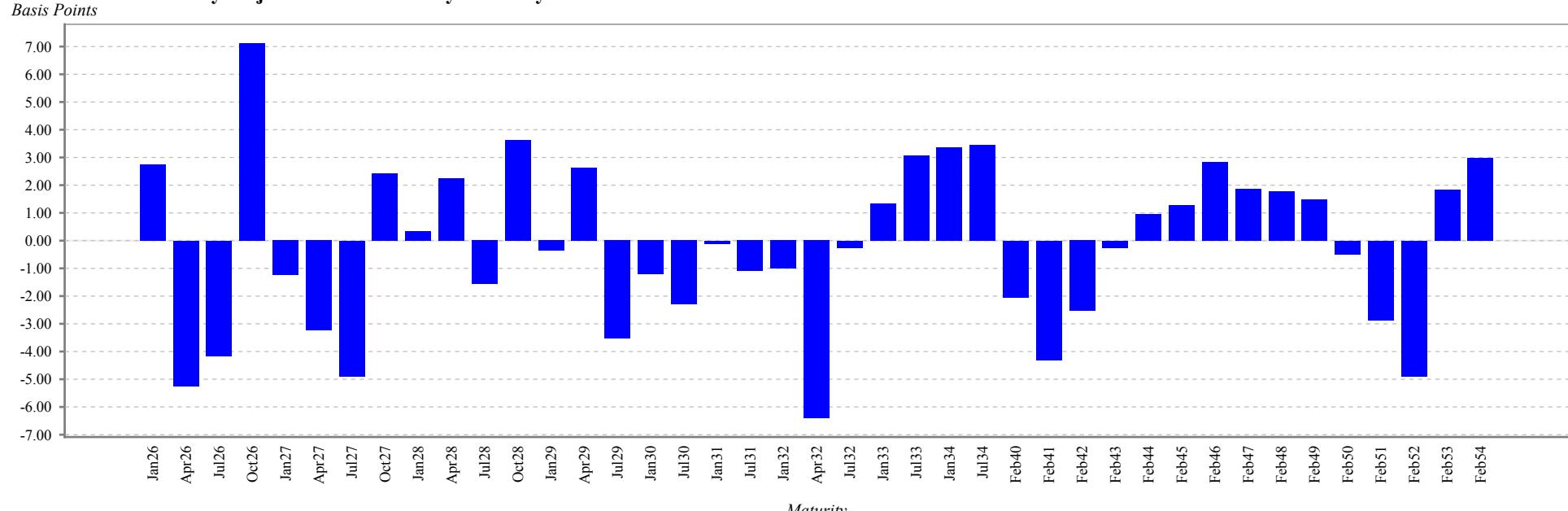
Cpn	Mat	Yld	1d Yld Chg	Clean Price	Index Ratio ¹	Mod Dur ²	pvbp	Model ³					3M Return (bp) ⁴			Treasury with Closest Maturity									
								Yld Err	R/C	Perct	Hi	Lo	Z-score	Roll	RealRet	TotRet	B/E	Yield	Hedge	3M Roll	3M TotRet				
																Spred	Beta ⁵	Ratio ⁶	(bp)	(bp)					
2.125	15-Feb-40	2.098	-3.7	100-11+	1.45863	12.87	1884	-2.0	0.0	52	2.1	-0.9	-0.7	0.6	59.3	63.8	4.625	Feb-40	4.383	1120	228.4	66%	1.112	1.3	122.1
2.125	15-Feb-41	2.092	-3.7	100-14+	1.43964	13.58	1964	-4.3	0.2	73	4.5	-0.7	-1.0	0.5	58.5	63.0	1.875	Feb-41	4.484	928	239.2	67%	1.419	1.3	127.9
0.750	15-Feb-42	2.143	-3.6	80-1+	1.39523	15.81	1765	-2.5	-0.7	20	1.8	-1.5	2.1	0.5	60.5	65.0	3.125	Feb-42	4.482	1068	233.8	68%	1.117	1.1	123.7
0.625	15-Feb-43	2.180	-3.4	76-23+	1.37126	16.84	1771	-0.3	0.2	70	1.5	-1.0	1.2	0.4	61.0	65.5	3.125	Feb-43	4.538	1092	235.7	70%	1.128	0.9	123.2
1.375	15-Feb-44	2.191	-3.5	87-8+	1.35274	16.49	1946	1.0	-0.1	45	0.7	-1.0	0.1	0.3	59.8	64.3	3.625	Feb-44	4.562	1172	237.0	72%	1.195	0.7	121.1
0.750	15-Feb-45	2.211	-3.4	76-9+	1.33882	18.27	1866	1.3	-0.1	39	0.9	-1.4	-1.6	0.3	59.4	63.9	2.500	Feb-45	4.585	1073	237.3	73%	1.268	0.5	120.0
1.000	15-Feb-46	2.228	-3.3	79-10+	1.33055	18.56	1960	2.8	0.5	83	0.9	-2.3	-0.1	0.2	58.6	63.1	2.500	Feb-46	4.593	1094	236.4	73%	1.307	0.3	117.2
0.875	15-Feb-47	2.223	-3.2	76-15+	1.30604	19.58	1956	1.9	-0.3	20	1.1	-2.2	-0.9	0.1	57.0	61.5	3.000	Feb-47	4.603	1176	238.0	72%	1.204	0.1	114.4
1.000	15-Feb-48	2.222	-3.1	77-29+	1.27847	20.05	1998	1.8	0.2	67	0.5	-1.6	1.4	0.0	55.6	60.1	3.000	Feb-48	4.600	1199	237.8	73%	1.219	-0.1	111.1
1.000	15-Feb-49	2.217	-2.9	77-9+	1.25287	20.78	2013	1.5	0.0	55	0.7	-1.4	-0.2	0.0	54.1	58.6	3.000	Feb-49	4.590	1223	237.2	73%	1.195	-0.4	107.5
0.250	15-Feb-50	2.205	-2.9	62-10+	1.22627	23.88	1825	-0.5	0.2	70	0.7	-0.7	-0.1	-0.1	51.3	55.8	2.000	Feb-50	4.575	1094	237.0	74%	1.232	-0.7	101.2
0.125	15-Feb-51	2.178	-2.8	59-5+	1.21093	25.33	1815	-2.9	0.1	61	3.0	-0.8	0.3	-0.2	48.2	52.7	1.875	Feb-51	4.537	1094	235.8	73%	1.215	-0.8	96.5
0.125	15-Feb-52	2.150	-2.9	58-14+	1.13253	26.27	1739	-4.9	-0.7	11	4.2	-1.0	0.4	-0.3	45.3	49.8	2.250	Feb-52	4.513	1173	236.2	73%	1.084	-0.8	96.2
1.500	15-Feb-53	2.195	-2.9	85-13+	1.06060	22.23	2014	1.8	0.1	62	0.6	-1.7	0.5	-0.2	49.7	54.2	3.625	Feb-53	4.475	1441	227.9	73%	1.019	-0.6	99.8
2.125	15-Feb-54	2.194	-3.1	98-16+	1.02725	21.48	2173	3.0	0.2	61	0.6	-2.8	-1.1	-0.2	50.0	54.5	4.250	Feb-54	4.444	1591	225.0	73%	0.998	-0.5	102.0

US Fixed Income Strategy

USD INFL: Real Yields Vs Seasonally-Adjusted Model Yields



USD INFL: Seasonally-Adjusted Yield Error by Maturity



Yield Error in Basis Points = Real Yields - Seasonally-Adjusted Model Yield

Potential Fed Secondary Market Purchase Candidates - TIPS

Securities with highest yield errors* (bp) and rich/cheap measures** (bp) in SOMA purchase buckets, bucketed by SOMA ownership buckets

<25%					25-50%					50-70%		
Year to Maturity	Coupon	Maturity	YE	R/C	Coupon	Maturity	YE	R/C	Coupon	Maturity	YE	R/C
1.00 - 7.50	0.125	Oct-2026	4.6	3.2	2.000	Jan-2026	4.6	3.7	3.625	Apr-2028	2.1	-0.4
	2.125	Apr-2029	2.8	1.4	0.625	Jan-2026	4.2	4.8				
	0.500	Jan-2028	-0.3	-2.4	3.875	Apr-2029	1.8	1.8				
7.50 - 30.0	1.750	Jan-2034	3.4	0.4	0.875	Feb-2047	2.5	0.2	1.000	Feb-2046	2.7	0.7
	2.125	Feb-2054	3.4	0.7	1.375	Feb-2044	1.5	0.3	1.000	Feb-2048	1.6	-0.3
	0.750	Feb-2045	2.3	1.5	1.000	Feb-2049	1.4	-0.1	2.125	Feb-2040	-2.5	0.1

*Yield error = Actual yield - par fitted yield for each securities

**Rich/Cheap = Yield error - 3-month moving average of yield error

This list excludes the following securities not eligible for buybacks:

1. Nominal securities with free float below \$10bn and TIPS with free float below \$5bn. Free float is defined as the amount outstanding less the sum of SOMA holdings and the stripped amount.
2. Securities with SOMA ownership of more than 70% of the outstanding par amount after the buyback settlement.
3. Recently issued securities, defined as those that have not paid their first coupon at the date of the report.
4. CTDs for all front and back contracts.
5. Repo specials, defined as securities that are trading more than 75bp below GC in 1-month repo.

This list might include near CTD securities that are not eligible for buybacks

Source: J.P. Morgan

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
2.375	Jan 15, 2025	20	28.0	11.71	4.077	5.339	N/A	N/A	N/A	126.3	N/A	N/A	N/A	45.5	-102.5	N/A	N/A	148.0	N/A	N/A
0.250	Jan 15, 2025	10	41.0	10.97	4.012	5.162	N/A	N/A	N/A	115.0	N/A	N/A	N/A	47.8	-115.3	N/A	N/A	163.1	N/A	N/A
0.125	Apr 15, 2025	5	35.6	9.39	2.991	2.896	1.864	0.010	N/A	-9.5	-112.7	-298.1	N/A	137.7	136.1	371.2	N/A	1.5	-233.6	N/A
0.375	Jul 15, 2025	10	41.0	8.03	1.964	1.755	1.078	0.292	0.895	-20.9	-88.6	-167.2	-106.9	246.6	262.7	396.8	312.4	-16.1	-150.2	-65.8
0.125	Oct 15, 2025	5	34.3	2.30	1.780	1.621	1.165	0.699	1.171	-16.0	-61.5	-108.1	-61.0	262.1	274.9	360.1	301.6	-12.8	-97.9	-39.5
2.000	Jan 15, 2026	20	N/A	8.93	2.049	1.945	1.634	1.345	1.891	-10.4	-41.5	-70.5	-15.9	228.2	235.2	288.0	225.4	-7.0	-59.9	2.8
0.625	Jan 15, 2026	10	42.4	14.64	2.016	1.911	1.598	1.307	1.837	-10.5	-41.8	-70.9	-18.0	231.5	238.6	291.8	230.8	-7.1	-60.3	0.7
0.125	Apr 15, 2026	5	39.9	14.90	2.018	1.935	1.690	1.468	1.889	-8.3	-32.9	-55.0	-13.0	228.8	234.5	275.9	226.9	-5.7	-47.1	1.8
0.125	Jul 15, 2026	10	36.8	8.88	1.664	1.575	1.351	1.150	1.410	-8.9	-31.3	-51.4	-25.5	260.4	266.5	303.6	271.5	-6.0	-43.1	-11.0
0.125	Oct 15, 2026	5	38.3	2.31	1.695	1.620	1.431	1.265	1.496	-7.5	-26.4	-43.0	-19.9	254.6	259.9	291.1	262.6	-5.3	-36.5	-8.0
2.375	Jan 15, 2027	20	16.5	5.61	1.814	1.751	1.588	1.448	1.678	-6.3	-22.7	-36.6	-13.6	239.0	243.0	268.7	240.9	-4.0	-29.7	-1.9
0.375	Jan 15, 2027	10	38.5	12.24	1.837	1.776	1.618	1.482	1.713	-6.1	-22.0	-35.6	-12.4	236.7	240.4	265.3	237.4	-3.7	-28.6	-0.7
0.125	Apr 15, 2027	5	39.4	1.38	1.861	1.809	1.669	1.551	1.759	-5.3	-19.2	-31.0	-10.2	232.1	235.4	257.3	231.7	-3.3	-25.2	0.4
0.375	Jul 15, 2027	10	36.9	7.62	1.640	1.585	1.452	1.339	1.499	-5.5	-18.8	-30.2	-14.1	252.1	256.0	277.3	256.9	-3.8	-25.2	-4.8
1.625	Oct 15, 2027	5	40.0	N/A	1.669	1.619	1.498	1.394	1.545	-5.0	-17.2	-27.5	-12.4	247.8	251.1	270.1	250.9	-3.2	-22.3	-3.1
1.750	Jan 15, 2028	20	15.6	5.02	1.807	1.765	1.656	1.567	1.722	-4.3	-15.1	-24.0	-8.5	235.3	237.8	254.3	235.5	-2.5	-18.9	-0.2
0.500	Jan 15, 2028	10	38.8	8.65	1.812	1.770	1.664	1.577	1.730	-4.2	-14.8	-23.5	-8.2	234.8	237.3	253.3	234.7	-2.4	-18.5	0.1
3.625	Apr 15, 2028	30	16.8	8.39	1.869	1.831	1.730	1.647	1.798	-3.8	-13.9	-22.2	-7.1	228.8	231.2	246.7	228.3	-2.4	-17.9	0.5
1.250	Apr 15, 2028	5	40.0	N/A	1.856	1.819	1.721	1.641	1.787	-3.8	-13.5	-21.6	-7.0	230.1	232.4	247.4	229.5	-2.3	-17.2	0.6
0.750	Jul 15, 2028	10	36.7	9.95	1.695	1.656	1.563	1.485	1.607	-3.9	-13.3	-21.0	-8.8	246.1	248.5	262.8	247.8	-2.4	-16.6	-1.7
2.375	Oct 15, 2028	5	42.0	N/A	1.716	1.680	1.590	1.516	1.633	-3.6	-12.6	-20.0	-8.3	243.8	246.1	259.9	245.3	-2.3	-16.1	-1.5
2.500	Jan 15, 2029	20	14.2	4.10	1.812	1.779	1.697	1.630	1.749	-3.3	-11.5	-18.2	-6.3	233.2	235.2	247.5	233.1	-1.9	-14.3	0.1
0.875	Jan 15, 2029	10	36.2	13.10	1.801	1.769	1.689	1.624	1.739	-3.2	-11.2	-17.7	-6.2	234.3	236.2	248.1	234.1	-1.8	-13.8	0.2
3.875	Apr 15, 2029	30	19.7	9.60	1.873	1.843	1.765	1.701	1.820	-3.0	-10.8	-17.2	-5.3	227.0	228.8	240.7	226.3	-1.8	-13.7	0.7
2.125	Apr 15, 2029	5	44.1	0.11	1.864	1.835	1.759	1.697	1.812	-2.9	-10.5	-16.7	-5.2	227.9	229.6	241.1	227.0	-1.7	-13.2	0.9
0.250	Jul 15, 2029	10	39.8	12.20	1.719	1.690	1.618	1.559	1.656	-3.0	-10.1	-16.0	-6.4	238.6	240.3	250.9	238.9	-1.7	-12.3	-0.3
1.625	Oct 15, 2029	5	24.4	0.40	1.768	1.741	1.673	1.617	1.711	-2.7	-9.5	-15.1	-5.7	235.7	237.7	248.2	236.3	-2.0	-12.5	-0.6
0.125	Jan 15, 2030	10	41.1	9.70	1.826	1.801	1.738	1.688	1.781	-2.5	-8.7	-13.8	-4.5	232.3	233.8	243.0	231.9	-1.4	-10.7	0.4
0.125	Jul 15, 2030	10	42.9	8.30	1.776	1.752	1.695	1.649	1.730	-2.3	-8.1	-12.7	-4.5	238.2	239.6	248.3	238.1	-1.4	-10.1	0.2
0.125	Jan 15, 2031	10	43.3	6.97	1.868	1.847	1.796	1.755	1.834	-2.0	-7.1	-11.2	-3.3	224.0	225.1	232.5	222.9	-1.1	-8.5	1.1
0.125	Jul 15, 2031	10	46.8	8.58	1.827	1.807	1.759	1.721	1.793	-1.9	-6.7	-10.5	-3.4	235.0	236.1	243.3	234.9	-1.1	-8.3	0.1
0.125	Jan 15, 2032	10	51.1	7.90	1.889	1.871	1.828	1.793	1.862	-1.7	-6.1	-9.5	-2.7	230.4	231.3	237.8	229.8	-1.0	-7.5	0.6
3.375	Apr 15, 2032	31	5.0	1.17	1.856	1.837	1.790	1.752	1.823	-1.9	-6.6	-10.4	-3.2	233.7	234.8	241.9	233.7	-1.1	-8.3	0.0
0.625	Jul 15, 2032	10	48.6	1.63	1.869	1.852	1.810	1.777	1.842	-1.7	-5.8	-9.1	-2.7	233.8	234.7	241.0	233.5	-1.0	-7.2	0.3
1.125	Jan 15, 2033	10	49.8	2.81	1.940	1.925	1.885	1.854	1.919	-1.5	-5.4	-8.5	-2.1	227.4	228.2	234.0	226.6	-0.8	-6.6	0.8
1.375	Jul 15, 2033	10	47.2	0.17	1.932	1.917	1.880	1.850	1.911	-1.5	-5.2	-8.1	-2.0	229.7	230.5	236.0	229.1	-0.8	-6.4	0.6
1.750	Jan 15, 2034	10	50.9	0.95	1.983	1.969	1.934	1.906	1.966	-1.3	-4.9	-7.7	-1.7	225.7	226.5	231.8	225.0	-0.7	-6.0	0.8

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 = 4.670 2M = 4.660 3M = 4.630 6M = 4.550

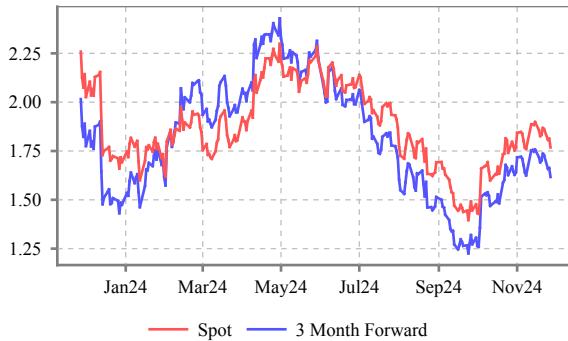
US Fixed Income Strategy

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	37.4	1.40	1.964	1.951	1.917	1.891	1.947	-1.3	-4.7	-7.3	-1.7	227.9	228.7	233.9	227.5	-0.8	-6.0	0.4
2.125	Feb 15, 2040	30	15.2	9.06	2.098	2.090	2.068	2.051	2.092	-0.8	-3.0	-4.7	-0.6	228.4	228.9	232.4	228.1	-0.5	-3.9	0.4
2.125	Feb 15, 2041	30	24.0	15.00	2.092	2.085	2.063	2.047	2.086	-0.8	-2.9	-4.5	-0.6	239.2	239.8	243.2	239.4	-0.6	-4.0	-0.2
0.750	Feb 15, 2042	30	23.1	8.16	2.143	2.137	2.119	2.105	2.140	-0.6	-2.4	-3.8	-0.3	233.8	234.3	237.1	233.7	-0.4	-3.3	0.1
0.625	Feb 15, 2043	30	23.0	11.03	2.180	2.174	2.158	2.145	2.178	-0.6	-2.2	-3.5	-0.2	235.7	236.2	238.9	235.7	-0.4	-3.1	0.0
1.375	Feb 15, 2044	30	23.0	6.32	2.191	2.185	2.168	2.156	2.189	-0.6	-2.3	-3.5	-0.2	237.0	237.5	240.3	237.1	-0.4	-3.2	-0.1
0.750	Feb 15, 2045	30	23.0	4.44	2.211	2.206	2.191	2.179	2.210	-0.5	-2.0	-3.2	-0.1	237.3	237.7	240.3	237.4	-0.4	-2.9	-0.1
1.000	Feb 15, 2046	30	N/A	10.76	2.228	2.223	2.208	2.197	2.227	-0.5	-2.0	-3.1	-0.1	236.4	236.8	239.3	236.5	-0.4	-2.9	-0.1
0.875	Feb 15, 2047	30	18.7	6.69	2.223	2.218	2.204	2.194	2.222	-0.5	-1.9	-2.9	-0.1	238.0	238.4	240.7	238.1	-0.4	-2.7	-0.1
1.000	Feb 15, 2048	30	N/A	9.79	2.222	2.218	2.204	2.193	2.221	-0.5	-1.8	-2.9	-0.1	237.8	238.1	240.4	237.8	-0.4	-2.6	-0.1
1.000	Feb 15, 2049	30	N/A	6.86	2.217	2.213	2.199	2.189	2.216	-0.4	-1.8	-2.8	-0.1	237.2	237.6	239.8	237.3	-0.3	-2.5	-0.1
0.250	Feb 15, 2050	30	15.6	2.44	2.205	2.201	2.190	2.181	2.204	-0.4	-1.5	-2.4	-0.1	237.0	237.3	239.2	237.0	-0.3	-2.2	0.0
0.125	Feb 15, 2051	30	18.0	4.58	2.178	2.174	2.163	2.155	2.177	-0.4	-1.5	-2.3	-0.1	235.8	236.1	237.9	235.8	-0.3	-2.0	0.0
0.125	Feb 15, 2052	30	19.6	2.94	2.150	2.146	2.136	2.128	2.148	-0.4	-1.4	-2.3	-0.2	236.2	236.5	238.2	236.2	-0.2	-1.9	0.0
1.500	Feb 15, 2053	30	19.9	2.88	2.195	2.191	2.178	2.169	2.194	-0.4	-1.7	-2.6	-0.1	227.9	228.2	230.2	227.7	-0.3	-2.2	0.2
0.125	Feb 15, 2054	30	17.4	0.39	2.194	2.190	2.177	2.167	2.193	-0.4	-1.7	-2.7	-0.2	225.0	225.2	227.2	224.7	-0.2	-2.2	0.3

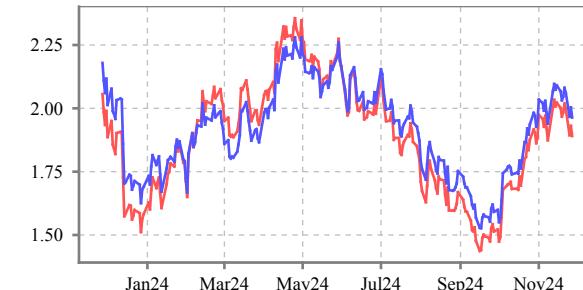
US Fixed Income Strategy

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

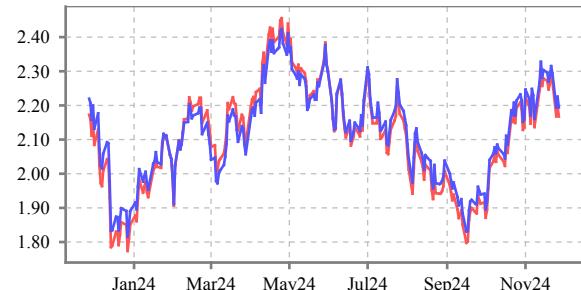
5 year



10 year



30 year

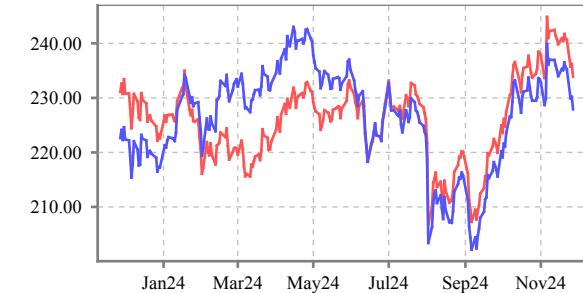


Spot and 3 Month Forward Breakeven Spreads

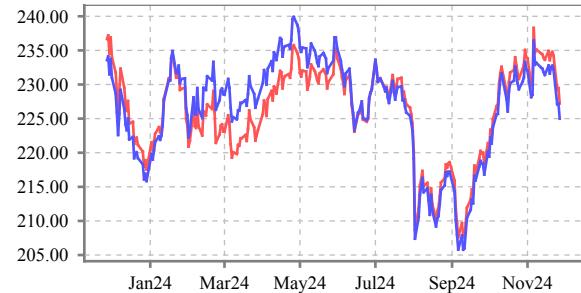
5 year Breakeven Spread



10 year Breakeven Spread

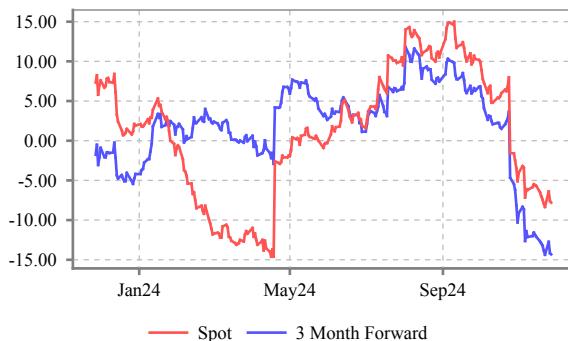


30 year Breakeven Spread



Spot and 3 Month Forward Breakeven Curves

5s/10s Breakeven Curve



5s/30s Breakeven Curve



10s/30s Breakeven Curve

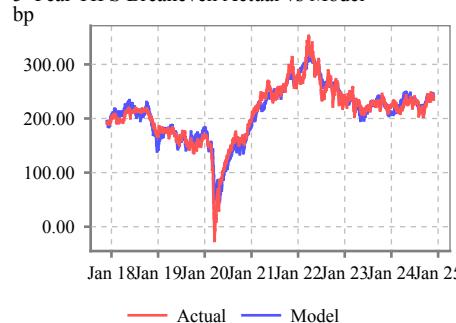


US Fixed Income Strategy

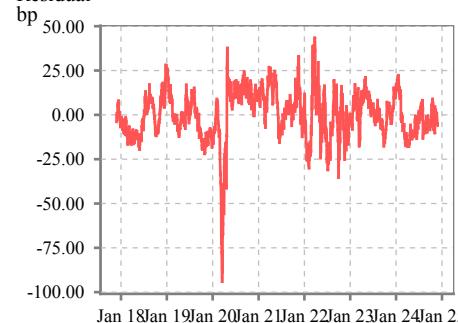
www.jpmm.com

5-Year TIPS Breakeven Fair Value Model

5-Year TIPS Breakeven Actual vs Model



Residual



Model

	Coeff	T-stat	Current Value
Intercept	-401.96	-49.2	
JPMCCI	3.89	61.2	287.26
JPMCCI ²	-0.01	-46.4	82516.42
3mx3m/15mx3m OIS curve; bp	0.27	52.0	-52.83
Residual (bp)	-6.04		
Current 1Mx5Y Breakeven (bp)	235.05		
R-squared (%)	92.95		

JPMCCI

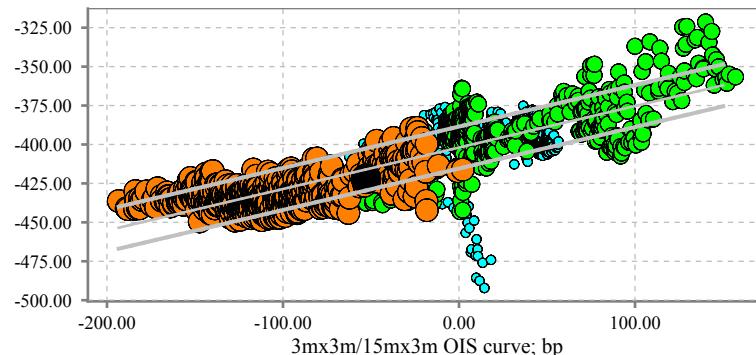
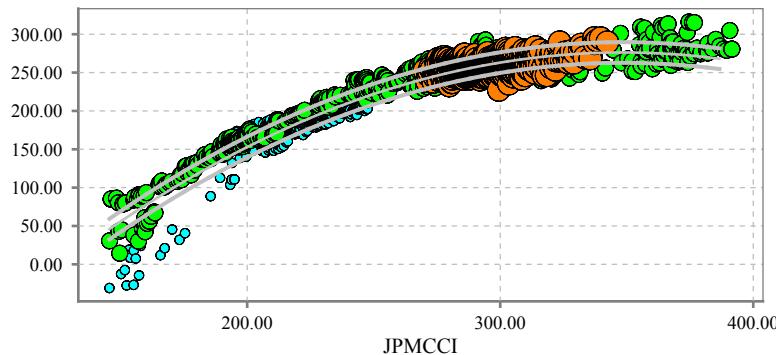


3mx3m/15mx3m OIS curve; bp



Partial regressions

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



Note:

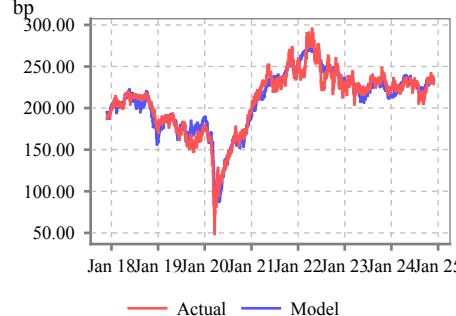
Model is fitted using daily data over the past 7 years and uses 1-month forward seasonally-adjusted breakevens to account for the effects of near-term carry and seasonality.

US Fixed Income Strategy

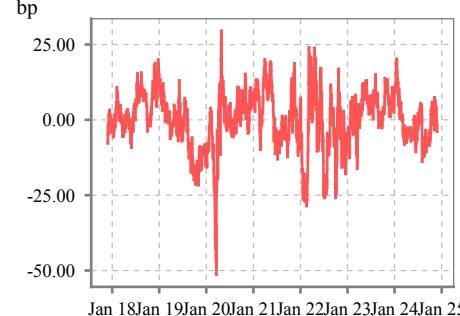
www.jpmm.com

10-Year TIPS Breakeven Fair Value Model

10-Year TIPS Breakeven Actual vs Model



Residual



Model

	Coeff	T-stat	Current Value
Intercept	-244.02	-44.2	
JPMCCI	2.88	67.1	287.26
JPMCCI ²	0.00	-51.3	82516.42
3mx3m/15mx3m OIS curve; bp	0.14	40.4	-52.83
Residual (bp)	-3.92		
Current 1Mx10Y Breakeven (bp)	229.01		
R-squared (%)	93.68		

JPMCCI

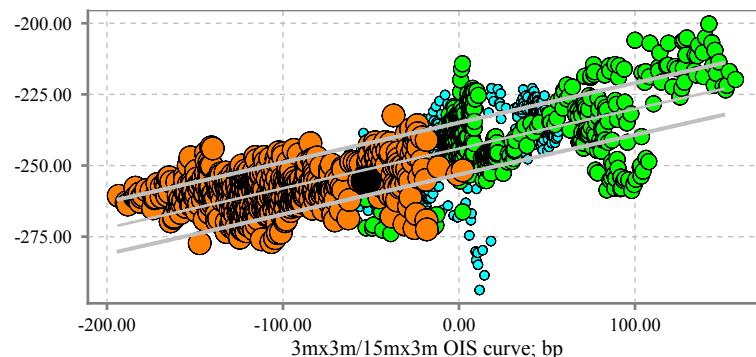
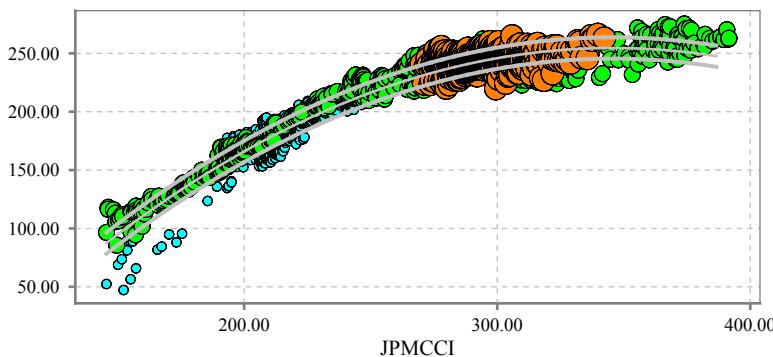


3mx3m/15mx3m OIS curve; bp



Partial regressions

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



Note:

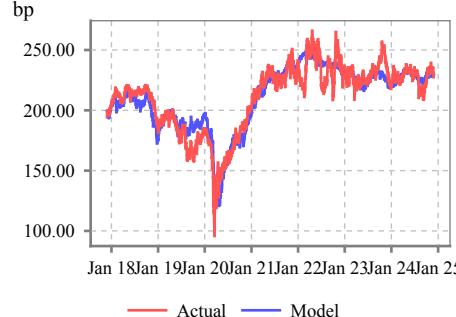
Model is fitted using daily data over the past 7 years and uses 1-month forward seasonally-adjusted breakevens to account for the effects of near-term carry and seasonality.

US Fixed Income Strategy

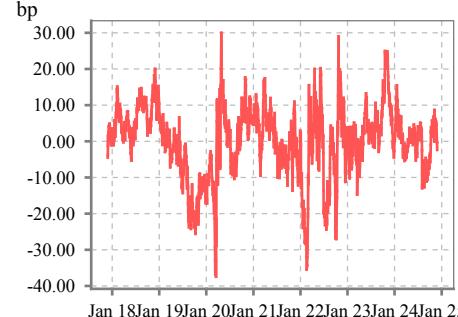
www.jpmm.com

30-Year TIPS Breakeven Fair Value Model

30-Year TIPS Breakeven Actual vs Model



Residual
bp



Model

	Coeff	T-stat	Current Value
Intercept	-130.37	-22.6	
JPMCCI	2.20	49.0	287.26
JPMCCI ²	0.00	-38.3	82516.42
3mx3m/15mx3m OIS curve; bp	0.06	16.5	-52.83
Residual (bp)	-2.40		
Current 1Mx30Y Breakeven (bp)	227.44		
R-squared (%)	87.52		

JPMCCI

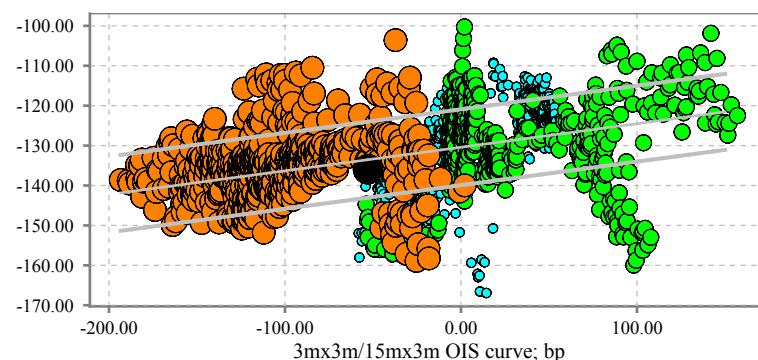
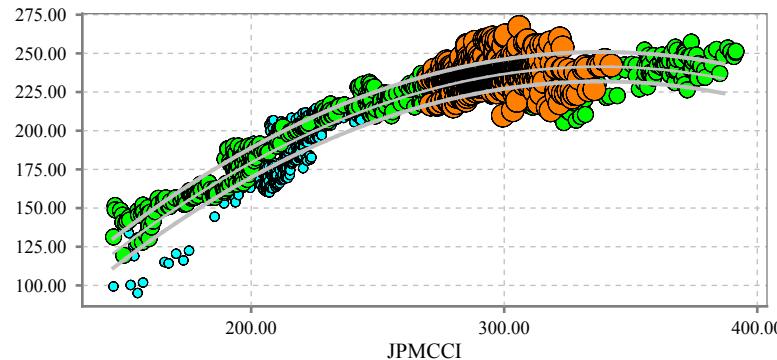


3mx3m/15mx3m OIS curve; bp



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

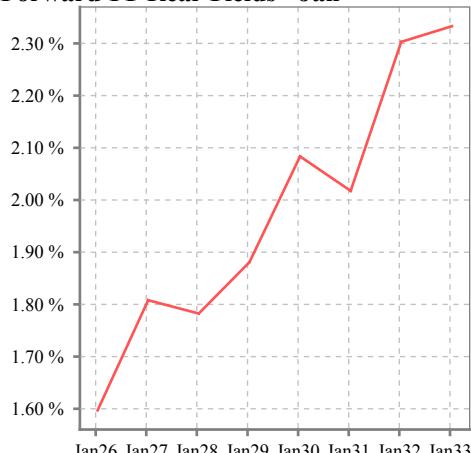
Jan Issues

Maturity	Coupon	Half-Yrs to Mat	Fwd 1Y		Fwd 1Y BEI
			Real Yield	Real Yields	
20260115	0.625	2.3	2.016 %		2.315 %
20260115	2.000	2.3	2.049 %	1.597 %	2.282 %
20270115	0.375	4.3	1.837 %		2.367 %
20270115	2.375	4.3	1.814 %	1.808 %	2.390 %
20280115	0.500	6.3	1.812 %		2.348 %
20280115	1.750	6.3	1.807 %	1.782 %	2.353 %
20290115	0.875	8.3	1.801 %		2.343 %
20290115	2.500	8.3	1.812 %	1.881 %	2.332 %
20300115	0.125	10.3	1.826 %	2.084 %	2.323 %
20310115	0.125	12.3	1.868 %	2.018 %	2.240 %
20320115	0.125	14.3	1.889 %	2.303 %	2.304 %
20330115	1.125	16.3	1.940 %	2.333 %	2.274 %
20340115	1.750	18.3	1.983 %		2.257 %

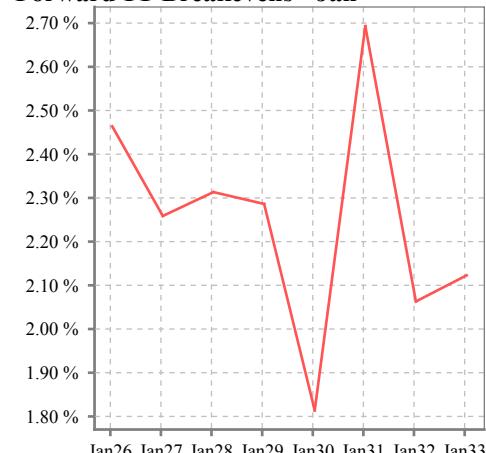
Apr Issues

Maturity	Coupon	Half-Yrs to Mat	Fwd 1Y		Fwd 1Y BEI
			Real Yield	Real Yields	
20260415	0.125	2.8	2.018 %		2.288 %
20270415	0.125	4.8	1.861 %	1.844 %	2.321 %
20280415	1.250	6.8	1.856 %	1.891 %	2.301 %
20290415	2.125	8.8	1.864 %	1.843 %	2.279 %
20320415	3.375	14.8	1.856 %		2.337 %

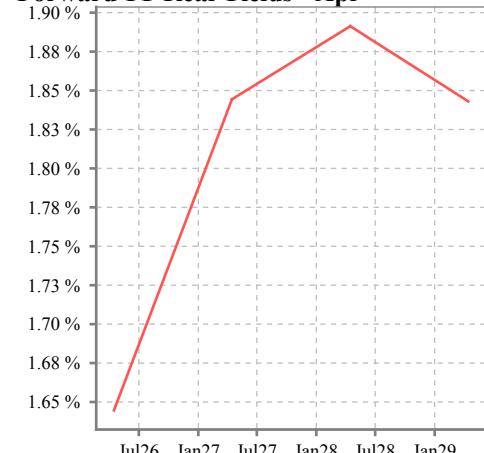
Forward 1Y Real Yields - Jan



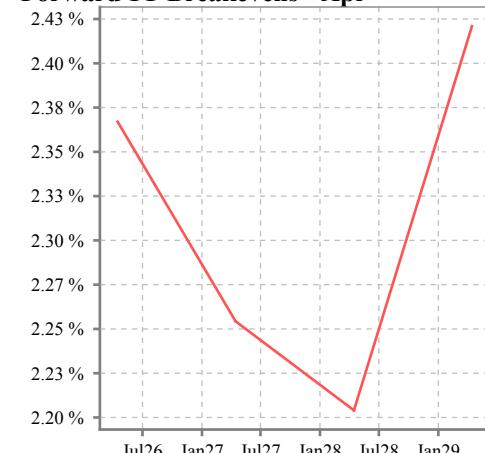
Forward 1Y Breakevens - Jan



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	1.3	1.964 %	1.475 %	2.466 %	2.692 %
20260715	0.125	3.3	1.664 %	1.601 %	2.604 %	2.386 %
20270715	0.375	5.3	1.640 %	1.840 %	2.521 %	2.304 %
20280715	0.750	7.3	1.695 %	1.806 %	2.461 %	2.111 %
20290715	0.250	9.3	1.719 %	2.037 %	2.386 %	2.366 %
20300715	0.125	11.3	1.776 %	2.114 %	2.382 %	2.171 %
20310715	0.125	13.3	1.827 %	2.147 %	2.350 %	2.256 %
20320715	0.625	15.3	1.869 %	2.413 %	2.338 %	1.983 %
20330715	1.375	17.3	1.932 %	2.240 %	2.297 %	2.126 %
20340715	1.875	19.3	1.964 %		2.279 %	

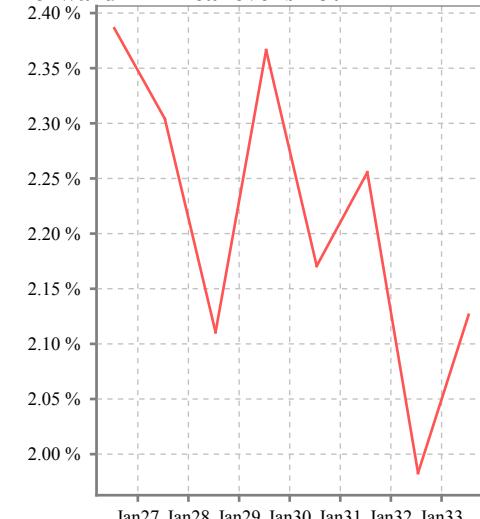
Feb Issues

Maturity	Coupon	Half-Yrs to Mat	Fwd 1Y		Fwd 1Y	
			Real Yield	Real Yields	BEI	BEI
20400215	2.125	30.5	2.098 %	2.001 %	2.284 %	4.033 %
20410215	2.125	32.5	2.092 %	2.973 %	2.392 %	1.471 %
20420215	0.750	34.5	2.143 %	2.819 %	2.338 %	2.686 %
20430215	0.625	36.5	2.180 %	2.392 %	2.357 %	2.608 %
20440215	1.375	38.5	2.191 %	2.595 %	2.370 %	2.431 %
20450215	0.750	40.5	2.211 %	2.572 %	2.373 %	2.182 %
20460215	1.000	42.5	2.228 %	2.117 %	2.364 %	2.709 %
20470215	0.875	44.5	2.223 %	2.200 %	2.380 %	2.326 %
20480215	1.000	46.5	2.222 %	2.101 %	2.378 %	2.251 %
20490215	1.000	48.5	2.217 %	1.915 %	2.372 %	2.309 %
20500215	0.250	50.5	2.205 %	1.498 %	2.370 %	2.068 %
20510215	0.125	52.5	2.178 %	1.417 %	2.358 %	2.467 %
20520215	0.125	54.5	2.150 %	3.421 %	2.362 %	0.038 %
20530215	1.500	56.5	2.195 %	2.166 %	2.279 %	1.419 %
20540215	2.125	58.5	2.194 %		2.250 %	

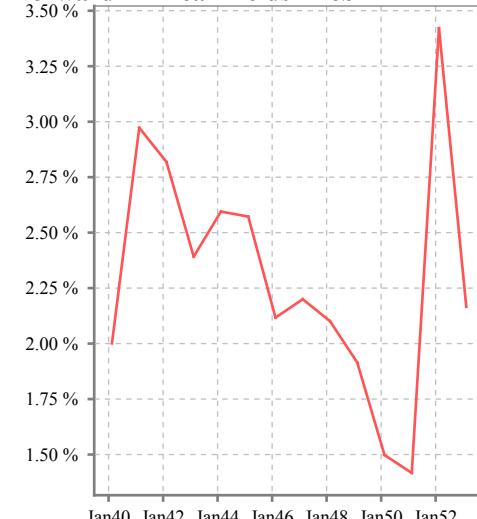
Forward 1Y Real Yields - Jul



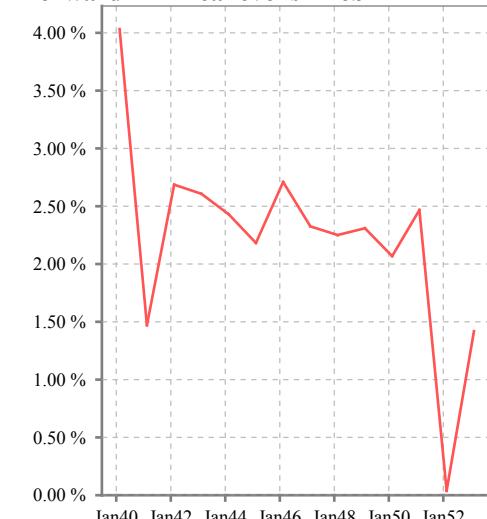
Forward 1Y Breakevens - Jul



Forward 1Y Real Yields - Feb



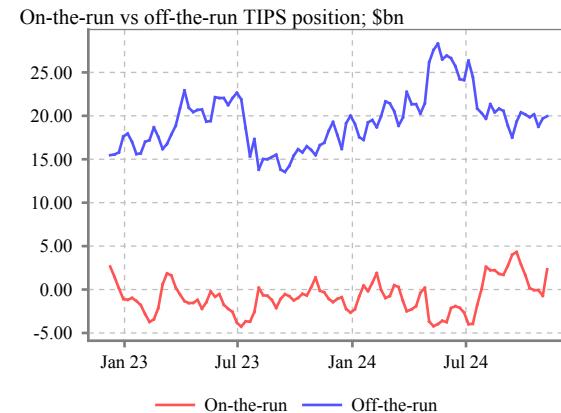
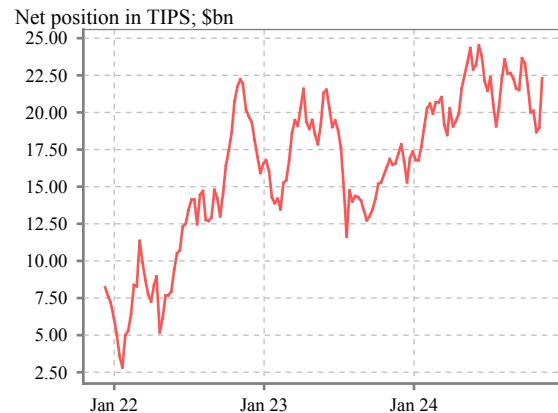
Forward 1Y Breakevens - Feb



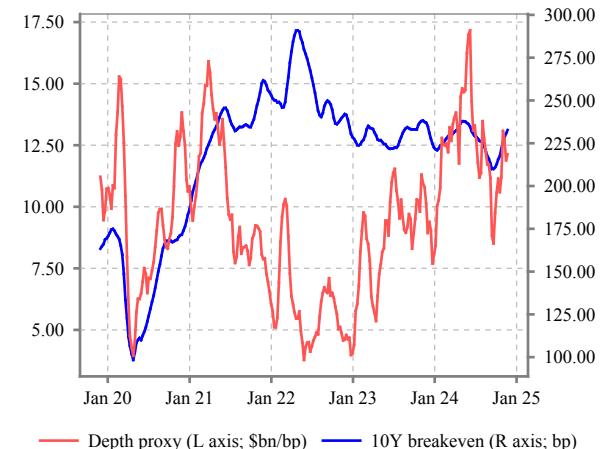
US Fixed Income Strategy

www.jpmm.com

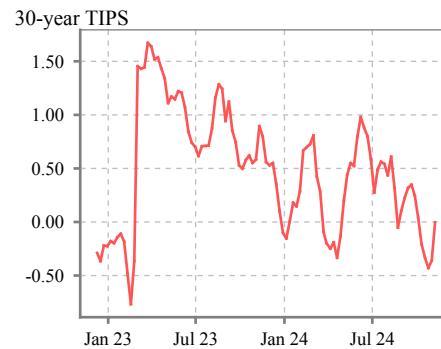
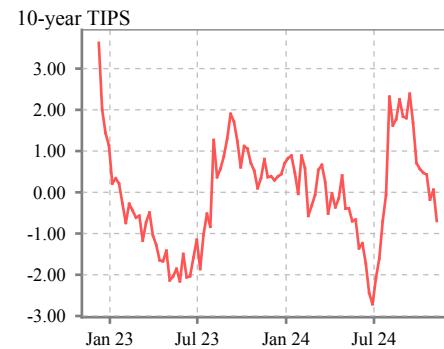
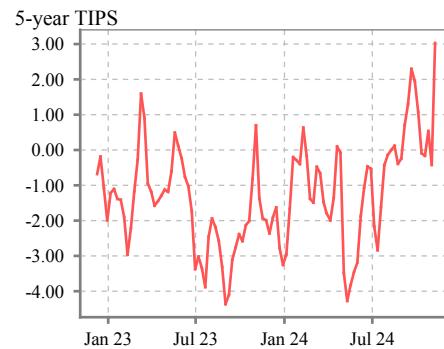
Primary dealer positions in TIPS



TIPS market depth proxy* vs 10-year breakevens

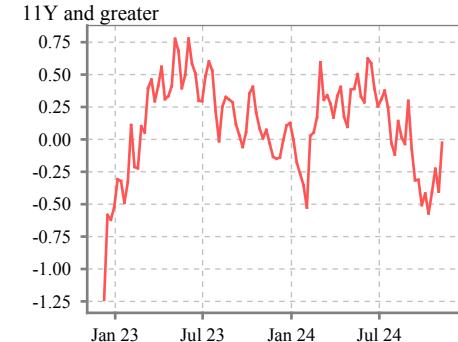
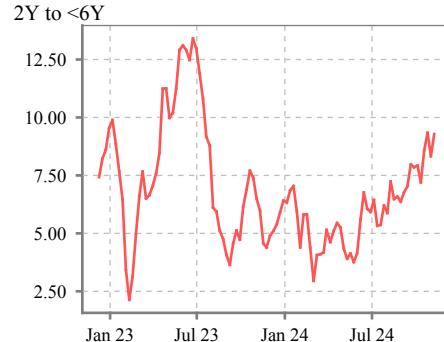


On-the-run positions in TIPS (\$bn)



* 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.

Positions by maturity sector (\$bn)

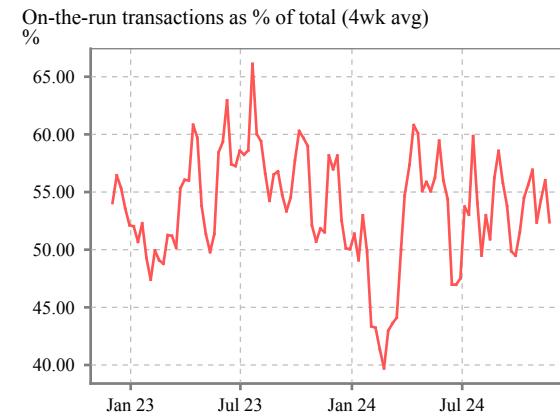
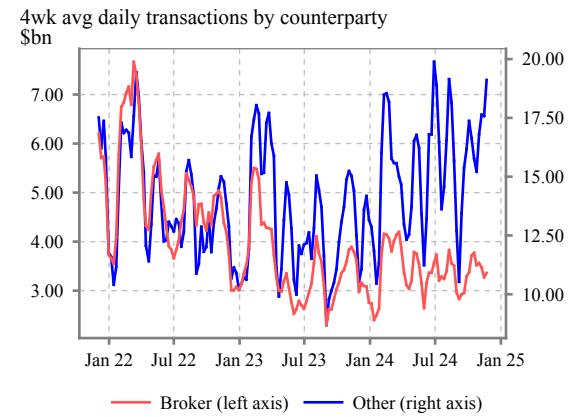
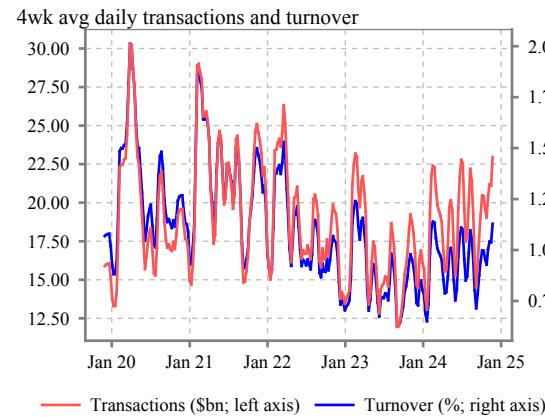


Source: Federal Reserve Bank of New York, J.P. Morgan

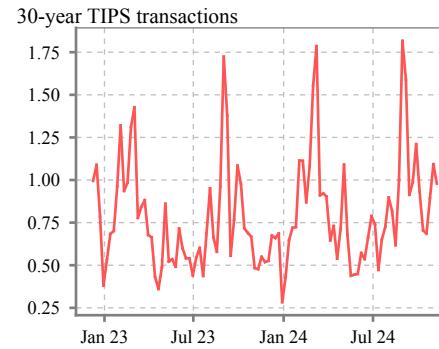
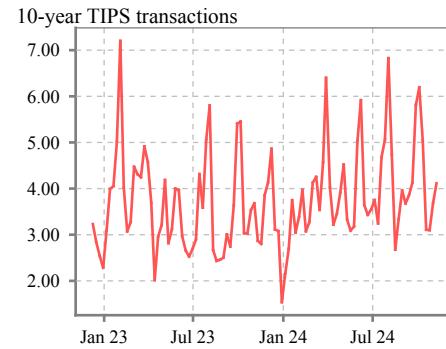
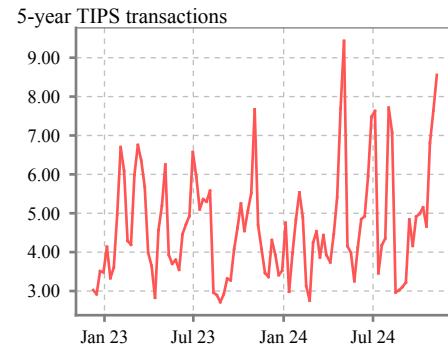
US Fixed Income Strategy

www.jpmm.com

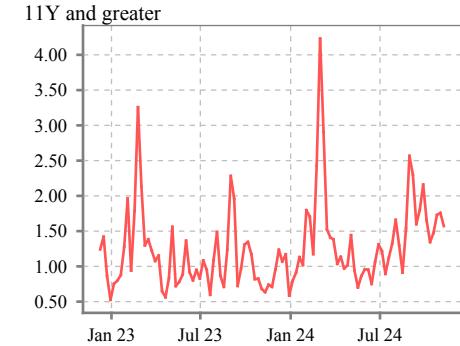
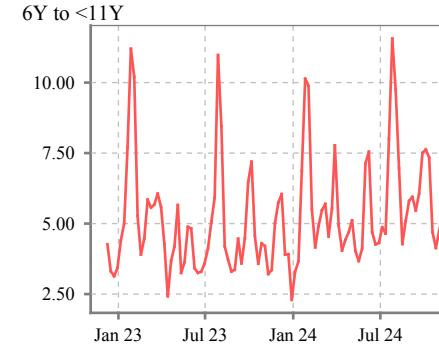
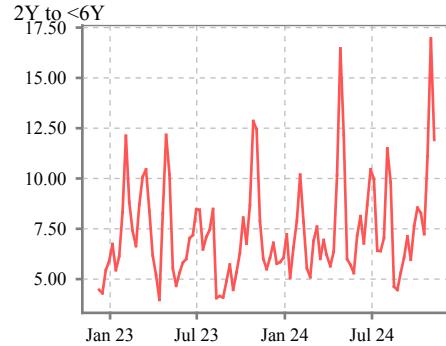
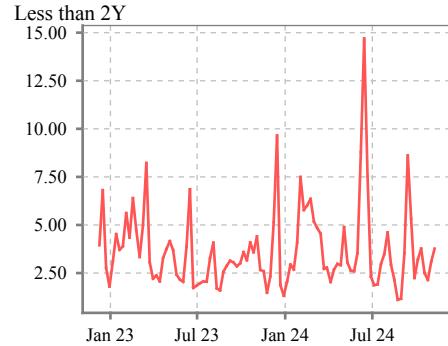
Primary dealer transactions in TIPS



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



Transactions by maturity sector (\$bn)



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

U.S. Fixed Income Strategy

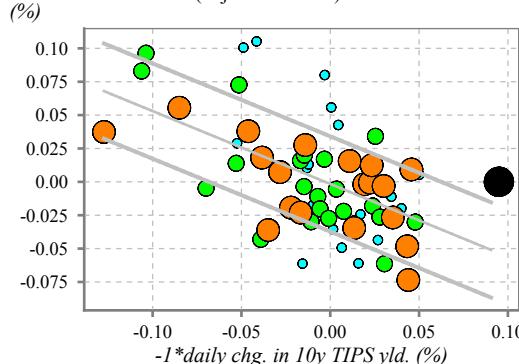
Excess Exposure of TIPS Fund Managers

Excess Exposure of Top 15 TIPS Fund Index*

	3M Beta**	3M T-Stat
10Y TIPS yield	-.5	-4.9
5s/30s real curve	.5	4.3
10Y Breakeven	-.3	-1.3

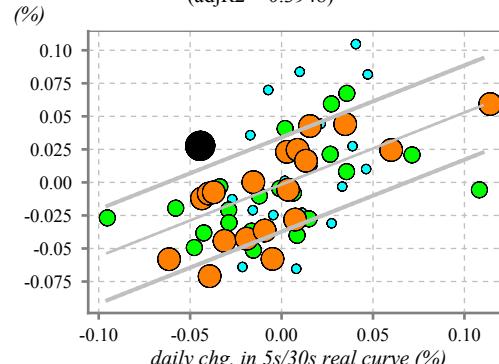
Index vs. 10Y TIPS Yield

$Y = -0.5459 X_1 + 0.5444 X_2 - 0.2576 X_3 - 0.0016$
(adjR² = 0.3948)



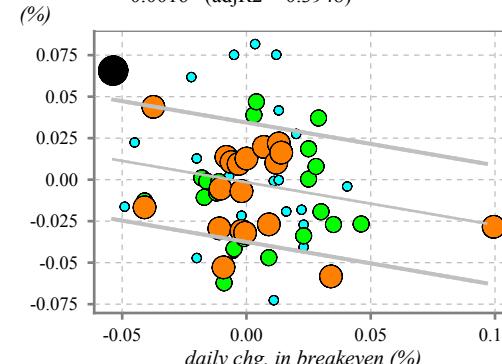
Index vs. 5s/30s real curve

$Y = 0.5444 X_1 - 0.5459 X_2 - 0.2576 X_3 - 0.0016$
(adjR² = 0.3948)

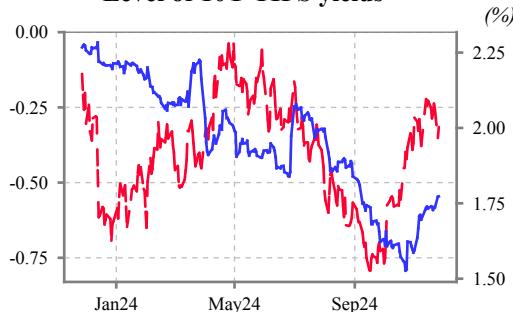


Index vs. 10Y Breakeven

$Y = -0.2576 X_1 - 0.5459 X_2 + 0.5444 X_3 - 0.0016$
(adjR² = 0.3948)



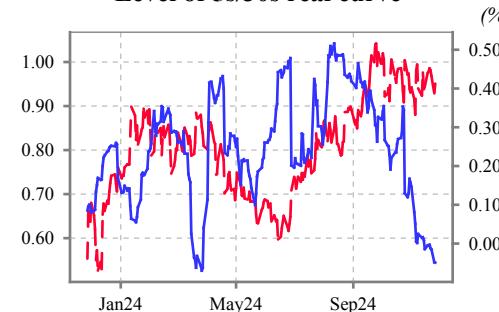
3M Beta of 10Y TIPS yields plotted versus Level of 10Y TIPS yields



— Excess 10Y TIPS yld. exposure (left)

- - 10Y TIPS yield (right)

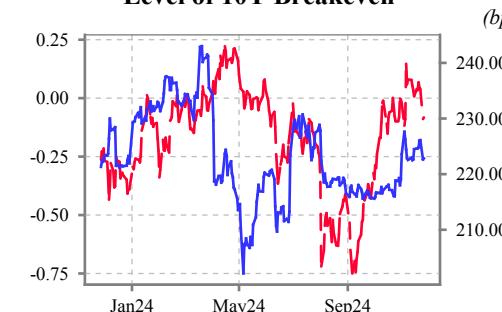
3M Beta of 5s/30s real curve plotted versus Level of 5s/30s real curve



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

- - 5s/30s real yield curve (right)

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

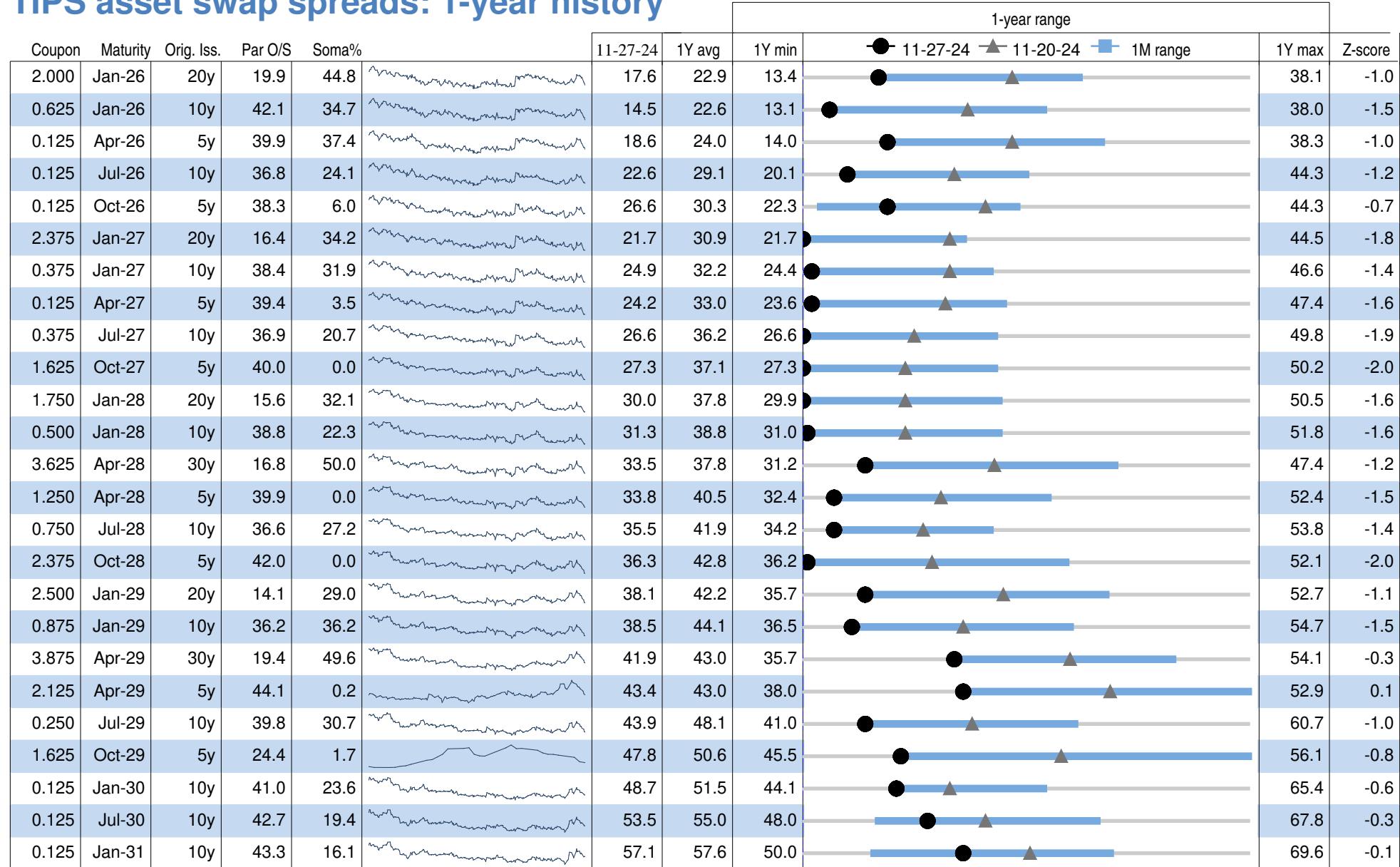


— Excess 10Y breakeven exposure (left)

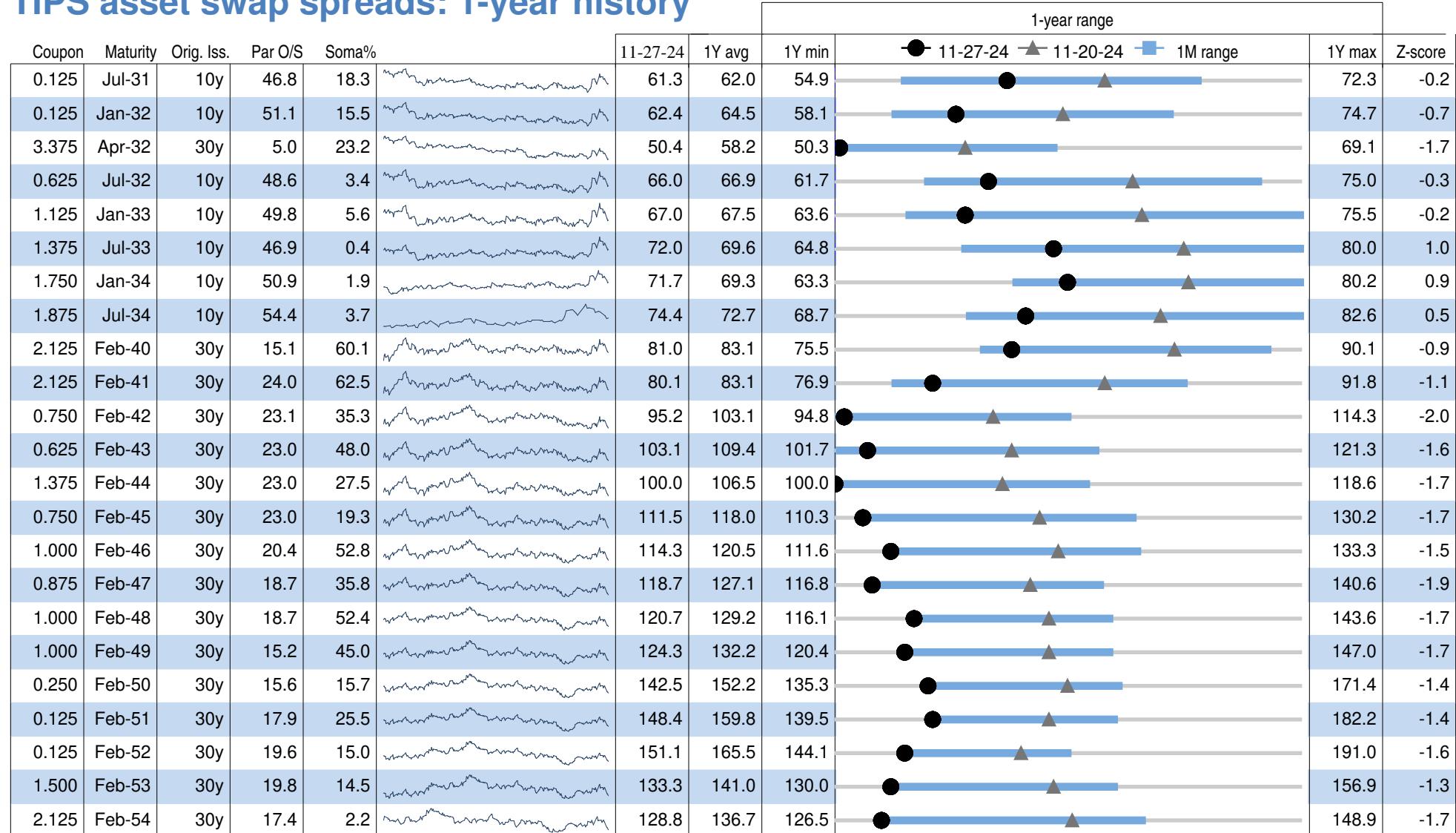
- - 10Y Breakeven (right)

* 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

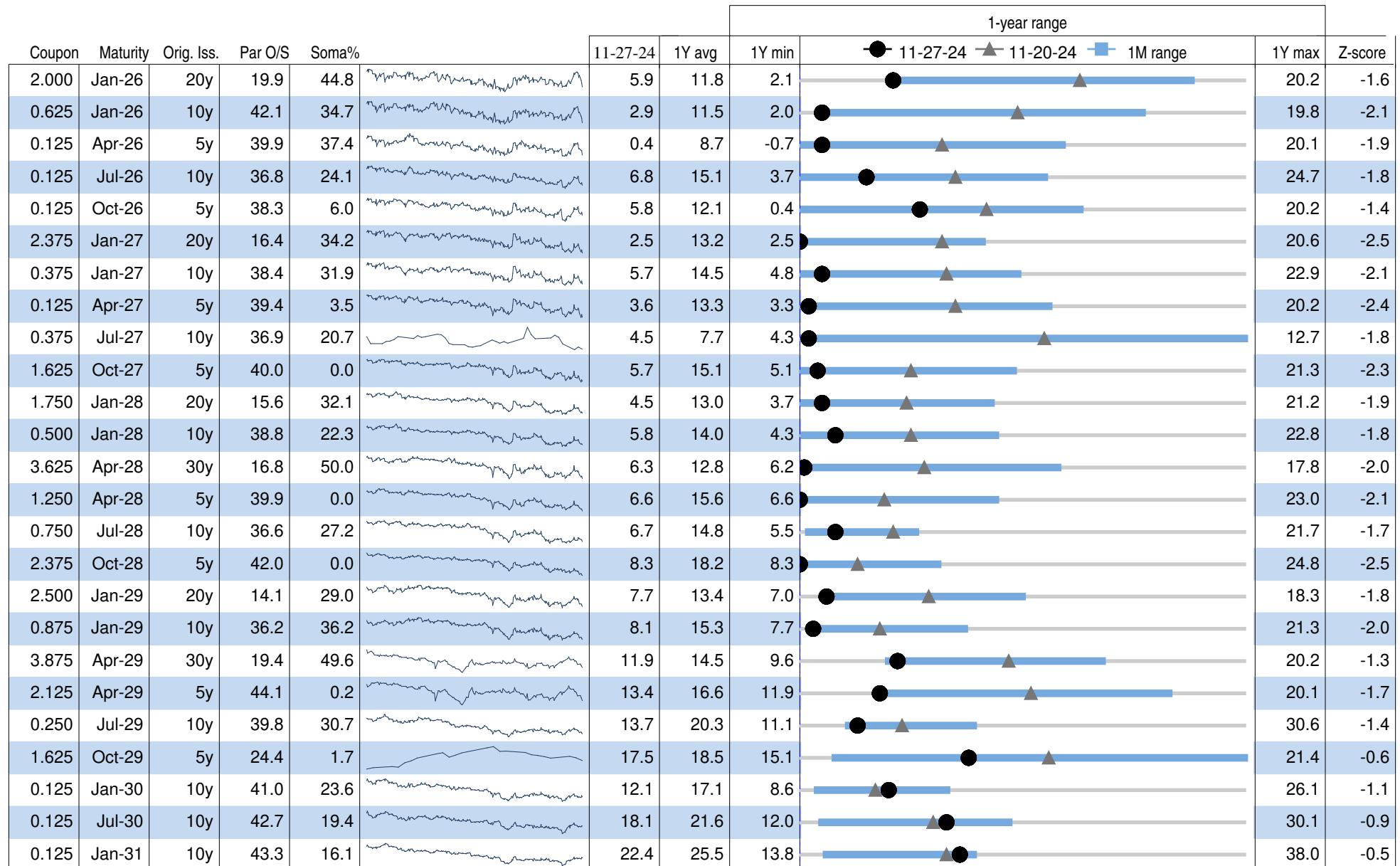
TIPS asset swap spreads: 1-year history



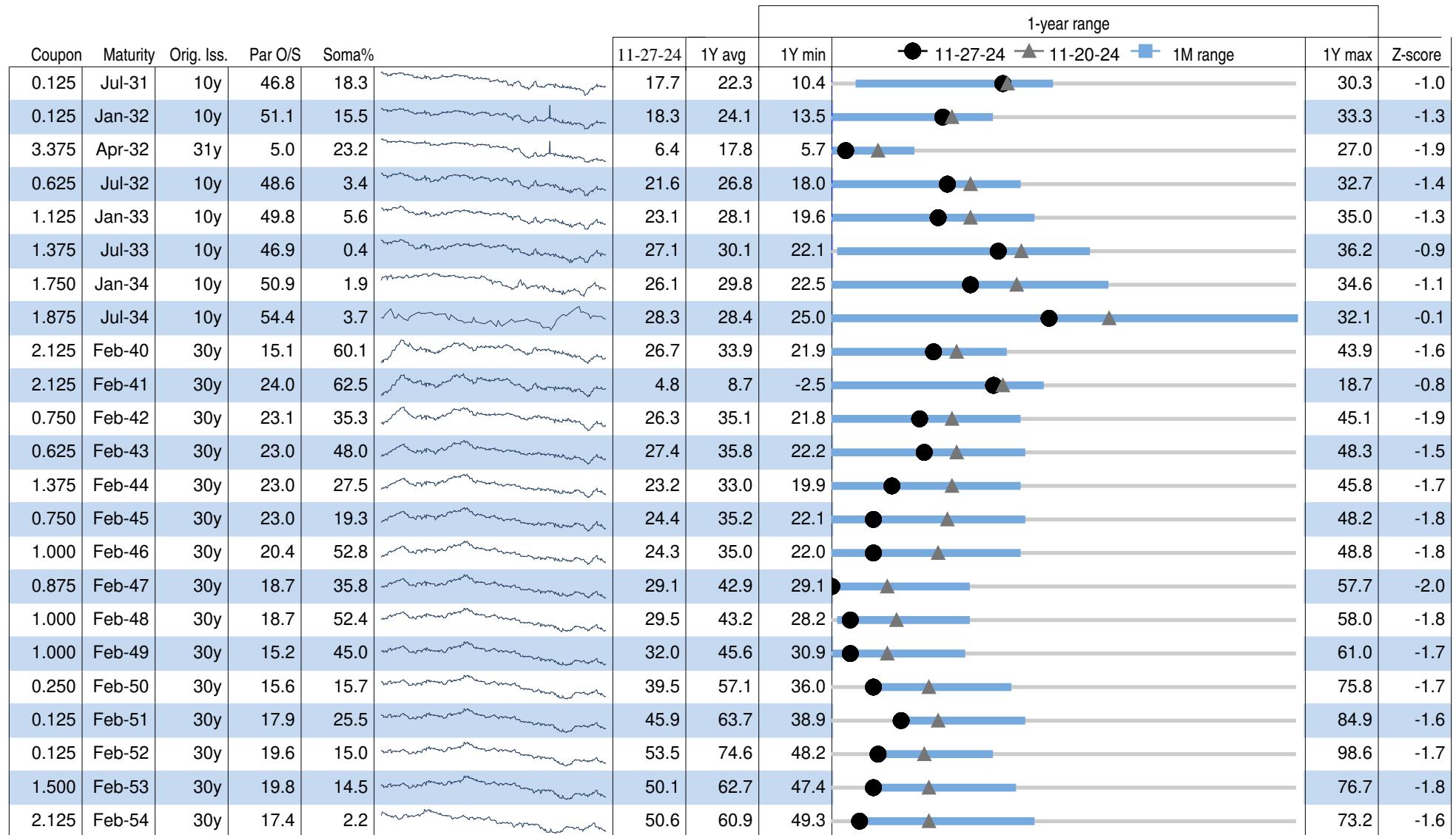
TIPS asset swap spreads: 1-year history



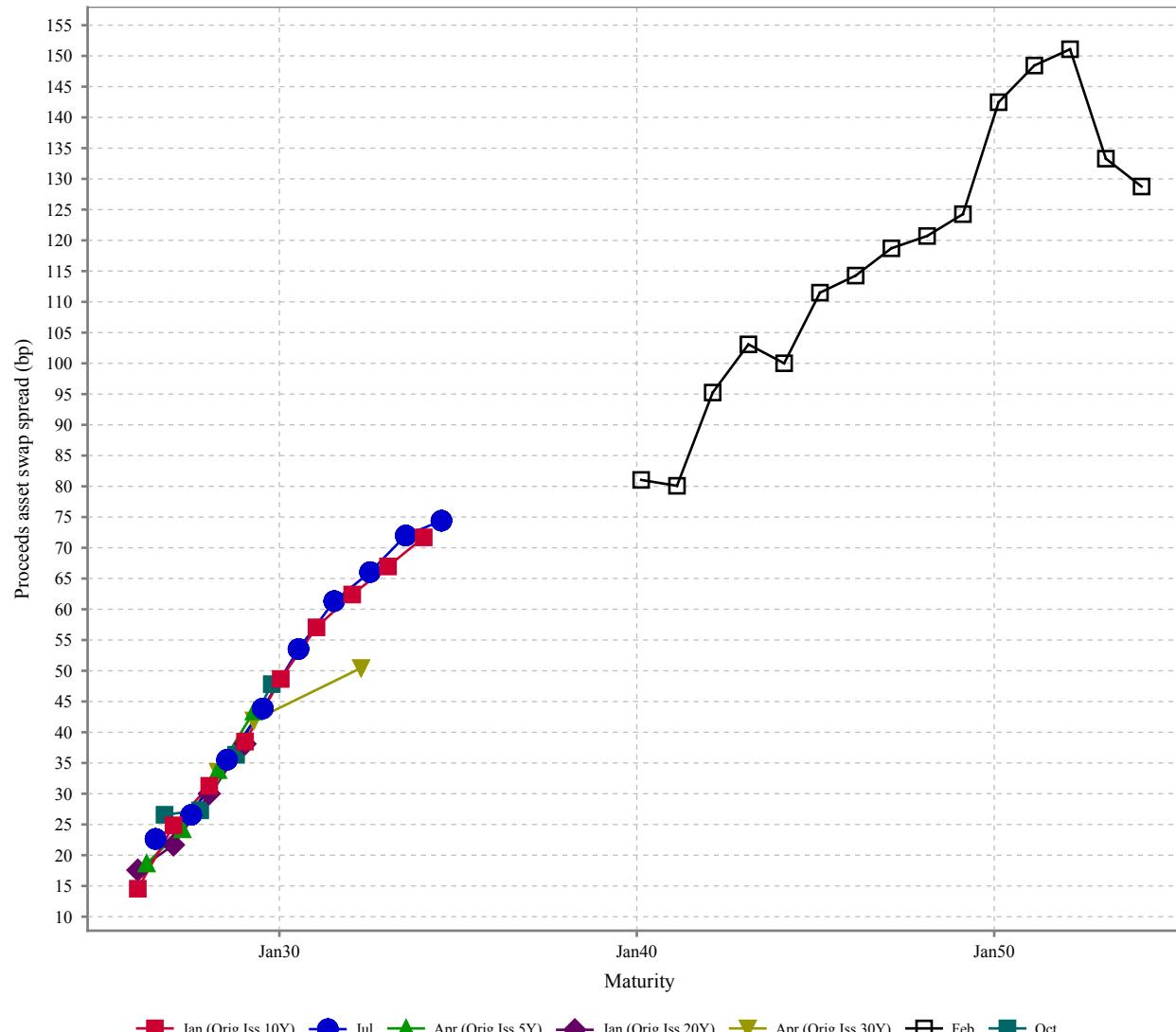
TIPS asset swap spreads vs. closest-maturity Treasury asset swap spreads: 1-year history



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



TIPS asset Sofr Swaps by maturity month



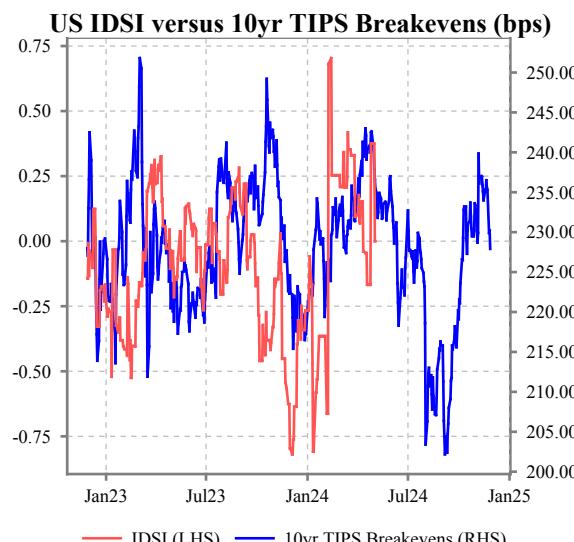
US Fixed Income Strategy

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	12/06/2024	0.3	0.3	0.00	0.00	0.98
DOE US Crude oil inventories (1wk chg; 000s of barrels)	DOEASCRD	04/03/2024	11/27/2024	-1844.0	-1000.0	-4210.00	-0.68	1.04
DOE US Gasoline inventories (1wk chg; 000s of barrels)	DOEASMGS	04/03/2024	11/27/2024	3314.0	100.0	4356.00	1.79	1.04
Import Price Index (NSA MoM %chg)	IMP1CHNG	03/15/2024	12/13/2024	0.3	0.3	0.00	0.00	1.19
Core CPI (SA MoM %chg)	CPUPXCHG	03/13/2024	12/11/2024	0.0	0.0	0.04		1.12
Core PCE (SA MoM %chg)	PCECMOM	02/29/2024	11/27/2024	0.30	0.40	0.00	0.00	1.01
Headline CPI (SA MoM %chg)	CPICHNG	02/13/2024	12/11/2024	0.3	0.2	0.10	0.68	1.10

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 Fixed Income Strategy

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
Nov 30, 2024	P	9128203Z8	0	0.000	4.689	-468.875	0.0	0.03	27.2	97	-468.8	-525.6	-485.8	-513.1	97	-485.8	-546.4		
Jan 31, 2025	P	9128204K0	13	4.483	4.714	-13.100	0.8	0.20	-3.0	36	23.3	-25.4	-39.2	-33.7	23	-5.3	-44.0		
Feb 15, 2025	C	912833LU2	0	4.310	4.709	-45.185	2.9	0.24	7.2	61	-17.7	-94.7	-59.6	-67.5	58	-32.2	-98.1		
Feb 15, 2025	P	912820T31	650	4.508	4.709	-25.602	4.5	0.24	-11.0	5	1.5	-29.9	-39.8	-29.7	5	-18.9	-43.3		
Feb 15, 2025	P	912803BE2	1027	3.827	4.709	-92.833	-0.2	0.24	-4.7	42	-48.9	-125.7	-107.9	-103.4	42	-62.4	-129.1		
Feb 28, 2025	P	9128204Q7	6	4.426	4.617	-16.644	1.6	0.27	-4.1	20	21.8	-24.4	-46.1	-37.3	3	-2.5	-48.2	-2.1	1.137
Apr 30, 2025	P	9128204Z7	10	0.000	4.552	-455.206	0.0	0.44	-3.4	33	-426.8	-472.5	-475.7	-468.9	20	-444.6	-490.2	-11.4	-0.021
May 15, 2025	C	912833LV0	0	4.482	4.545	-3.804	7.2	0.48	12.5	98	-3.8	-29.2	-25.9	-33.9	91	-24.4	-43.2	-8.9	
May 15, 2025	P	912820U96	723	4.443	4.545	-7.750	1.1	0.48	-2.4	31	4.7	-14.1	-29.8	-22.9	0	-14.8	-29.8	-8.9	1.115
May 31, 2025	P	9128205F0	117	0.000	4.553	-455.334	0.0	0.52	-9.9	16	-417.2	-466.1	-472.5	-460.5	9	-433.2	-481.1	-11.9	-0.032
Jul 31, 2025	P	912821AF2	66	4.441	4.477	-1.797	3.0	0.68	0.8	72	41.1	-8.4	-21.9	-20.7	53	23.2	-28.7	-7.5	1.078
Aug 15, 2025	C	912833LW8	0	4.362	4.470	-8.534	7.2	0.72	0.3	50	7.5	-26.6	-29.4	-27.3	41	-12.0	-40.3	-7.7	
Aug 15, 2025	P	912820W78	381	4.457	4.470	1.093	1.4	0.72	1.5	91	2.2	-4.1	-19.9	-19.0	36	-12.3	-24.0	-7.5	1.078
Aug 15, 2025	P	912803BF9	993	3.515	4.470	-94.047	-14.5	0.72	-36.2	2	-20.0	-98.8	-114.2	-75.6	2	-40.9	-117.2	-9.0	0.836
Aug 31, 2025	P	912821AL9	0	0.000	4.485	-448.479	0.0	0.77	-20.4	2	-395.0	-449.6	-464.0	-442.5	2	-408.9	-464.6	-11.6	-0.060
Oct 31, 2025	P	912821AU9	14	0.000	4.452	-445.191	0.0	0.94	-28.2	2	-380.7	-447.1	-460.2	-432.3	2	-395.7	-461.6	-6.8	-0.047
Nov 15, 2025	C	912833LX6	0	4.422	4.446	-0.176	7.2	0.96	3.5	77	1.9	-10.7	-16.4	-17.6	72	-11.4	-23.1	-5.0	
Nov 15, 2025	P	912820Y43	375	4.408	4.446	-1.604	2.6	0.96	-0.3	38	0.9	-2.8	-17.8	-15.3	25	-10.5	-19.5	-5.0	1.107
Nov 30, 2025	P	912821AZ8	0	0.000	4.393	-439.335	0.0	1.02	-26.8	2	-376.5	-441.3	-457.5	-428.4	2	-391.3	-458.9	-5.5	-0.042
Dec 31, 2025	P	912821BD6	0	0.000	4.383	-438.342	0.0	1.11	-28.8	2	-372.9	-440.6	-454.1	-423.5	2	-385.7	-455.9	-4.5	-0.039
Jan 31, 2026	P	912821BJ3	1	4.365	4.375	-0.046	2.2	1.17	0.2	53	1.6	-2.3	-15.1	-13.6	23	-9.5	-17.3	-7.7	1.058
Feb 15, 2026	C	912833LY4	0	4.462	4.371	7.104	7.2	1.21	6.0	88	8.6	-6.8	-5.9	-10.6	78	-1.8	-16.7	-7.7	
Feb 15, 2026	P	9128202A4	321	4.369	4.371	-2.122	2.7	1.21	-0.8	23	0.2	-3.6	-15.2	-13.0	8	-9.3	-16.0	-7.5	1.060
Feb 15, 2026	P	912803BG7	380	4.202	4.371	-18.783	7.2	1.21	5.2	89	-15.7	-27.5	-31.9	-35.7	81	-25.8	-41.2	-7.2	1.018
Feb 28, 2026	P	912821BP9	0	0.000	4.353	-435.301	0.0	1.27	-32.5	2	-365.1	-437.8	-451.4	-417.8	2	-379.2	-453.5	-3.2	-0.033
Apr 30, 2026	P	912821BY0	0	0.000	4.334	-433.363	0.0	1.44	-35.0	2	-360.1	-436.1	-446.4	-410.3	2	-372.1	-448.8	-2.5	-0.030
May 15, 2026	C	912833LZ1	0	4.435	4.330	10.582	3.7	1.45	3.2	95	10.9	1.5	-2.0	-3.9	77	0.7	-8.2	-2.9	
May 15, 2026	P	912820R7	335	4.335	4.330	0.559	3.5	1.45	-0.3	38	2.0	-0.2	-12.0	-10.4	22	-7.7	-13.7	-2.9	1.060
May 31, 2026	P	912821CD5	0	0.000	4.334	-433.420	0.0	1.52	-36.3	2	-358.6	-436.3	-444.7	-407.6	2	-369.3	-447.1	-2.3	-0.030
Jul 31, 2026	P	912821CP8	0	4.319	4.317	0.143	2.6	1.66	-0.5	12	1.5	-0.1	-9.8	-8.9	27	-5.4	-10.7	-1.6	1.055
Aug 15, 2026	C	912833PA2	0	4.395	4.316	6.608	3.7	1.70	8.9	98	6.6	-7.4	-2.0	-10.7	94	-0.5	-16.7	-1.4	

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
Aug 15, 2026	P	9128205K9	23	4.312	4.316	-1.726	3.3	1.70	-1.0	11	0.8	-2.2	-10.4	-9.1	17	-6.7	-11.8	-1.4	1.053
Aug 15, 2026	P	912803BH5	737	4.150	4.316	-17.818	3.7	1.70	1.6	94	-16.7	-21.1	-26.5	-27.9	78	-22.8	-31.2	-1.4	1.013
Sep 30, 2026	P	912821CY9	0	0.000	4.312	-431.184	0.0	1.86	-40.4	2	-352.1	-434.4	-439.5	-399.6	2	-361.6	-442.3	-2.0	-0.032
Oct 31, 2026	P	912821DD4	0	0.000	4.306	-430.577	0.0	1.94	-40.9	2	-351.1	-433.8	-439.0	-397.7	2	-359.2	-441.8	-2.0	-0.033
Nov 15, 2026	C	912833PB0	0	4.368	4.302	6.017	3.4	1.94	4.3	89	6.9	-5.4	-2.1	-6.3	78	-0.1	-14.9	-2.5	
Nov 15, 2026	P	9128205Y9	43	4.289	4.302	-1.847	3.3	1.94	-1.1	25	0.8	-3.3	-10.0	-8.8	22	-6.4	-11.7	-2.5	1.042
Nov 15, 2026	P	912803BJ1	1051	3.963	4.302	-34.431	3.4	1.94	1.6	47	-32.0	-44.4	-42.6	-44.1	59	-37.7	-53.9	-2.4	0.961
Dec 31, 2026	P	912821DN2	0	0.000	4.294	-429.360	0.0	2.11	-41.9	2	-348.8	-432.7	-436.9	-395.1	2	-357.1	-439.8	-1.9	-0.036
Jan 31, 2027	P	912821DT9	1054	4.296	4.289	1.792	2.2	2.15	-1.0	22	5.1	0.2	-6.2	-5.2	23	-1.9	-9.0	-1.7	1.040
Feb 15, 2027	C	912833PC8	0	4.324	4.286	3.214	3.3	2.19	5.5	94	3.6	-9.8	-3.8	-9.4	84	-2.4	-18.0	-1.6	
Feb 15, 2027	P	9128206P7	198	4.285	4.286	-0.681	3.4	2.19	-0.7	3	1.2	-0.7	-7.7	-7.1	31	-4.0	-9.1	-1.6	1.036
Feb 15, 2027	P	912803BK8	511	4.034	4.286	-25.754	3.3	2.19	-1.1	11	-22.3	-26.2	-32.9	-31.8	22	-29.0	-34.1	-1.6	0.973
May 15, 2027	C	912833PD6	0	4.365	4.263	9.267	3.0	2.43	7.2	89	9.9	-3.0	3.5	-3.5	88	5.1	-9.5	-1.7	
May 15, 2027	P	9128207D3	209	4.271	4.263	-0.179	3.4	2.43	-1.2	6	3.1	-1.3	-6.0	-4.5	16	-1.3	-7.1	-1.7	1.043
Aug 15, 2027	C	912833PE4	0	4.365	4.263	9.761	3.0	2.68	5.3	95	10.0	-0.7	5.4	0.2	80	7.7	-5.8	0.0	
Aug 15, 2027	P	9128203H8	16	4.255	4.263	-1.254	3.1	2.68	-1.5	0	1.1	-1.3	-5.6	-4.0	6	0.2	-6.6	0.0	1.060
Aug 15, 2027	P	912803BL6	1329	4.190	4.263	-7.726	3.0	2.68	0.9	91	-7.0	-9.8	-12.1	-12.9	66	-7.9	-15.7	0.0	1.043
Nov 15, 2027	C	912833QB9	0	4.367	4.269	9.803	2.9	2.92	4.1	92	11.2	0.9	7.0	3.0	81	10.1	-3.1	-0.1	
Nov 15, 2027	P	9128203W5	9	4.267	4.269	-0.173	3.3	2.92	-0.7	5	1.1	-0.4	-3.0	-2.3	30	2.0	-4.8	-0.1	1.076
Nov 15, 2027	P	912803BM4	1216	4.202	4.269	-6.702	2.9	2.92	-0.7	25	-4.7	-7.2	-9.5	-8.8	39	-3.9	-11.3	-0.1	1.060
Feb 15, 2028	C	912833RY8	0	4.353	4.275	7.784	3.0	3.16	1.7	95	8.0	4.0	7.1	5.1	80	10.1	1.2	0.6	
Feb 15, 2028	P	9128204M6	544	4.260	4.275	-1.481	2.5	3.17	-1.8	0	1.7	-1.5	-2.1	-0.7	14	3.3	-3.1	0.6	1.079
Mar 31, 2028	P	912821MA0	0	0.000	4.277	-427.673	0.0	3.36	-44.8	6	-341.5	-432.6	-426.9	-382.9	3	-344.0	-430.3	0.4	0.011
Apr 30, 2028	P	912821MF9	0	0.000	4.274	-427.425	0.0	3.44	-44.8	6	-341.3	-432.4	-426.7	-382.5	3	-343.4	-430.1	0.4	0.011
May 15, 2028	C	912833WQ9	0	4.362	4.275	8.790	2.8	3.41	2.4	91	9.2	3.6	9.8	6.9	75	12.5	2.2	0.1	
May 15, 2028	P	9128205B9	52	4.265	4.275	-0.909	2.5	3.41	-1.3	0	1.5	-0.9	0.1	1.0	23	5.7	-1.7	0.1	1.081
Jun 30, 2028	P	912821MQ5	0	0.000	4.277	-427.682	0.0	3.61	-44.9	6	-341.4	-432.8	-425.7	-381.6	3	-342.5	-429.1	0.3	0.010
Aug 15, 2028	C	912833RZ5	0	4.365	4.279	8.624	2.8	3.65	2.9	92	9.7	2.2	11.4	7.6	77	14.2	2.0	0.5	
Aug 15, 2028	P	912821AH8	7	4.278	4.279	-0.127	2.3	3.66	-0.7	6	1.7	-0.3	2.6	2.4	67	7.1	-1.0	0.5	1.081
Aug 15, 2028	P	912803BP7	571	4.146	4.279	-13.302	2.8	3.66	-0.5	17	-11.3	-14.3	-10.5	-10.9	67	-6.2	-13.5	0.5	1.048
Aug 31, 2028	P	912821NA9	2	0.000	4.284	-428.414	0.0	3.77	-45.3	6	-341.6	-433.5	-424.6	-380.6	3	-341.7	-428.0	0.2	0.008

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
Sep 30, 2028	P	912821GM1	0	0.000	4.283	-428.260	0.0	3.86	-45.3	6	-341.6	-433.3	-424.4	-380.5	3	-341.7	-427.8	0.2	0.006
Nov 15, 2028	C	912833WR7	0	4.366	4.283	8.330	2.7	3.90	0.3	59	9.5	3.0	12.3	10.8	77	16.5	4.0	-0.2	
Nov 15, 2028	P	912821AW5	9	4.270	4.283	-1.270	2.2	3.90	-1.4	2	1.5	-1.3	2.7	2.9	50	8.0	-0.8	-0.2	1.073
Nov 15, 2028	P	912803BV4	763	4.233	4.283	-4.989	2.1	3.90	0.0	45	-3.8	-8.3	-1.0	-2.3	75	3.6	-7.0	-0.2	1.064
Nov 30, 2028	P	912821GX7	0	0.000	4.283	-428.259	0.0	4.02	-45.3	6	-341.6	-433.3	-424.1	-380.1	5	-341.1	-427.5	0.1	0.003
Dec 31, 2028	P	912821HB4	0	0.000	4.283	-428.308	0.0	4.11	-45.3	6	-341.7	-433.3	-423.3	-379.4	5	-340.5	-426.7	0.0	0.001
Jan 31, 2029	P	912821HG3	1	0.000	4.283	-428.343	0.0	4.19	-45.4	8	-341.8	-433.3	-423.3	-379.5	6	-340.6	-426.7	0.0	-0.001
Feb 15, 2029	C	912833XN5	0	4.371	4.284	8.767	2.5	4.14	1.5	97	8.8	3.3	13.8	10.7	80	16.7	4.6	0.1	
Feb 15, 2029	P	912821BL8	9	4.276	4.284	-0.724	2.5	4.15	-0.8	3	1.0	-0.8	4.3	3.5	73	8.8	0.4	0.1	1.069
Feb 15, 2029	P	912803BW2	334	4.147	4.284	-13.721	2.4	4.15	-0.5	45	-10.7	-15.2	-8.7	-9.8	72	-5.0	-13.9	0.1	1.036
Feb 28, 2029	P	912821HM0	0	0.000	4.279	-427.939	0.0	4.27	-45.5	8	-341.3	-432.8	-422.9	-379.2	6	-340.4	-426.4	-0.1	-0.003
Mar 31, 2029	P	912821HR9	2	0.000	4.280	-428.032	0.0	4.36	-45.5	8	-341.5	-432.9	-422.0	-378.6	6	-340.0	-425.4	-0.1	-0.003
May 15, 2029	C	912833XS4	0	4.383	4.277	10.644	2.8	4.39	1.2	98	10.6	7.5	16.3	13.4	81	18.8	8.0	-0.3	
May 15, 2029	P	912821CA1	12	4.262	4.277	-1.499	2.2	4.39	-1.3	3	0.9	-1.9	4.2	3.8	72	8.8	0.7	-0.3	1.065
May 31, 2029	P	912821JB2	0	0.000	4.280	-427.954	0.0	4.52	-45.4	8	-341.8	-432.7	-422.1	-378.5	6	-339.8	-425.5	-0.1	-0.003
Jun 30, 2029	P	912821JF3	0	0.000	4.278	-427.775	0.0	4.61	-45.3	9	-341.8	-432.5	-421.6	-378.2	6	-339.5	-425.0	0.0	-0.001
Aug 15, 2029	C	912833XP0	0	4.395	4.279	11.634	2.3	4.63	1.9	97	11.7	7.2	18.2	14.4	81	20.7	8.3	0.2	
Aug 15, 2029	P	912821CR4	33	4.244	4.279	-3.504	2.5	4.64	-0.3	42	-1.9	-4.0	3.1	1.5	77	6.7	-1.2	0.2	1.065
Aug 15, 2029	P	912803CG6	727	4.243	4.279	-3.590	2.5	4.64	-0.9	3	-1.3	-3.8	3.0	2.0	75	8.1	-1.4	0.2	1.065
Aug 31, 2029	P	912821JR7	1	0.000	4.283	-428.303	0.0	4.77	-45.3	9	-342.4	-432.9	-420.7	-377.6	6	-339.1	-424.1	0.1	0.003
Sep 30, 2029	P	912821JV8	0	0.000	4.283	-428.252	0.0	4.86	-45.2	9	-342.6	-432.8	-420.8	-377.9	6	-339.4	-424.2	0.2	0.007
Oct 31, 2029	P	912821KA2	1	0.000	4.284	-428.354	0.0	4.94	-45.0	9	-343.0	-432.9	-420.8	-377.7	6	-339.0	-424.2	0.2	0.011
Nov 15, 2029	C	912833XT2	0	4.418	4.284	13.444	2.5	4.88	2.4	97	13.7	7.5	20.9	16.6	81	23.4	9.8	0.1	
Nov 15, 2029	P	912821DF9	35	4.230	4.284	-5.336	1.7	4.88	-1.7	11	-1.5	-5.7	2.1	2.0	61	5.9	-0.1	0.1	1.073
Nov 30, 2029	P	912821KF1	2	0.000	4.284	-428.448	0.0	5.02	-44.8	9	-343.3	-433.0	-420.8	-377.8	6	-339.3	-424.1	0.3	0.015
Jan 31, 2030	P	912821KQ7	0	0.000	4.290	-428.965	0.0	5.19	-44.6	9	-344.2	-433.4	-420.3	-377.7	6	-339.3	-423.7	0.5	0.026
Feb 15, 2030	C	912833XX3	0	4.416	4.291	12.466	2.5	5.12	2.2	94	12.6	7.4	21.1	17.0	83	23.7	10.9	0.7	
Feb 15, 2030	P	912821DV4	7	4.300	4.291	0.893	2.5	5.12	0.3	78	1.5	-0.4	9.5	7.3	78	13.0	4.4	0.7	1.106
Feb 28, 2030	P	912821KV6	0	0.000	4.289	-428.852	0.0	5.27	-44.6	9	-344.2	-433.3	-420.1	-377.6	6	-339.2	-423.5	0.6	0.031
Mar 31, 2030	P	912821KZ7	0	0.000	4.292	-429.208	0.0	5.36	-44.5	9	-344.7	-433.7	-419.5	-377.2	6	-339.0	-422.8	0.7	0.035
May 15, 2030	C	912833XU9	0	4.421	4.294	12.690	2.5	5.36	2.5	98	12.7	6.8	22.4	18.1	81	25.3	12.0	0.6	

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, 2030	P	912803CH4	666	4.276	4.294	-1.815	2.5	5.37	0.4	86	-0.7	-3.4	7.9	5.6	78	11.8	1.8	0.6	1.113
May 15, 2030	P	912821EK7	1513	4.304	4.294	1.031	2.3	5.37	0.3	59	1.5	-0.6	10.7	8.6	77	14.2	5.4	0.6	1.120
May 31, 2030	P	912821LK9	1	0.000	4.297	-429.730	0.0	5.52	-44.2	9	-345.5	-434.2	-419.8	-377.4	6	-339.2	-423.0	0.8	0.043
Jun 30, 2030	P	912821LP8	0	0.000	4.298	-429.843	0.0	5.61	-44.1	9	-345.7	-434.3	-419.3	-377.1	8	-338.9	-422.6	0.8	0.044
Jul 31, 2030	P	912821LU7	0	0.000	4.302	-430.194	0.0	5.69	-44.1	9	-346.1	-434.7	-419.3	-377.2	8	-339.1	-422.5	0.8	0.046
Aug 15, 2030	C	912833XY1	0	4.443	4.304	13.967	2.5	5.61	-0.3	41	16.7	9.0	24.9	23.2	67	30.0	14.5	1.0	
Aug 15, 2030	P	912821EZ4	526	4.311	4.304	0.783	3.1	5.61	0.7	84	1.0	-1.5	11.7	9.0	80	15.0	5.1	1.0	1.127
Aug 31, 2030	P	912821NC5	0	0.000	4.308	-430.802	0.0	5.77	-44.2	9	-346.5	-435.2	-418.8	-376.9	8	-338.8	-422.0	0.8	0.047
Oct 31, 2030	P	912821NM3	2	0.000	4.312	-431.224	0.0	5.94	-44.2	9	-347.0	-435.7	-419.2	-377.2	8	-339.1	-422.4	0.8	0.046
Nov 15, 2030	C	9128337N4	0	4.456	4.313	14.251	2.5	5.85	0.3	64	15.7	10.0	26.2	23.7	77	29.9	15.9	0.6	
Nov 15, 2030	P	912821FP5	13	4.270	4.313	-4.336	1.9	5.86	-1.6	2	-0.6	-4.3	7.7	7.0	67	11.7	4.3	0.6	1.115
Nov 30, 2030	P	912821NS0	0	0.000	4.314	-431.433	0.0	6.02	-44.2	9	-347.2	-435.9	-419.3	-377.5	8	-339.4	-422.4	0.8	0.045
Jan 31, 2031	P	912821PB5	1	0.000	4.320	-431.986	0.0	6.19	-44.1	9	-347.8	-436.5	-419.0	-377.5	8	-339.5	-422.1	0.7	0.041
Feb 15, 2031	C	912833XZ8	0	4.458	4.322	13.094	2.5	6.10	0.7	92	13.9	9.6	26.7	23.3	80	30.1	16.1	0.8	
Feb 15, 2031	P	912821GD1	2	4.262	4.322	-6.514	1.6	6.10	-1.8	5	1.1	-6.7	7.1	6.1	75	11.7	1.9	0.8	1.108
Feb 15, 2031	P	912803CK7	711	4.253	4.322	-7.389	2.5	6.10	1.4	94	-7.3	-10.9	6.2	2.1	80	9.4	-4.7	0.8	1.106
May 15, 2031	C	9128337P9	0	4.463	4.323	13.986	2.5	6.34	0.1	44	15.5	10.8	27.7	24.8	78	31.2	17.3	0.5	
May 15, 2031	P	912821MH5	19	4.324	4.323	0.037	2.1	6.35	-0.6	27	3.0	-0.5	13.7	11.5	77	17.9	7.8	0.5	1.124
Aug 15, 2031	C	9128334S6	0	4.470	4.332	13.808	2.5	6.59	-0.2	41	15.9	11.6	28.5	25.8	77	32.1	18.8	0.9	
Aug 15, 2031	P	912821MX0	10	4.332	4.332	-0.020	2.1	6.59	-0.8	17	3.4	-0.8	14.7	12.5	80	18.5	8.6	0.9	1.135
Nov 15, 2031	C	9128337Q7	0	4.495	4.344	14.796	2.5	6.83	0.7	67	15.9	11.4	31.0	27.4	77	34.5	20.3	0.8	
Nov 15, 2031	P	912821GU3	14	4.339	4.344	-0.833	2.4	6.84	-0.9	12	2.4	-1.2	15.3	13.4	77	19.8	10.1	0.8	1.153
Feb 15, 2032	C	9128334T4	0	4.486	4.358	12.517	2.5	7.07	-0.3	33	15.3	9.8	30.1	27.6	72	34.4	20.6	1.4	
Feb 15, 2032	P	912821HJ7	2	4.355	4.358	-0.582	2.7	7.08	-0.1	52	1.7	-1.5	17.0	14.3	81	19.9	10.4	1.4	1.180
May 15, 2032	C	9128337R5	0	4.511	4.370	13.775	2.5	7.32	1.1	69	15.3	9.1	32.7	29.0	78	35.6	21.9	1.3	
May 15, 2032	P	912821HY4	42	4.354	4.370	-1.849	2.4	7.32	0.1	62	-0.5	-2.7	17.1	14.3	81	20.4	10.3	1.3	1.193
Aug 15, 2032	C	9128334U1	0	4.524	4.385	13.828	2.5	7.56	1.7	73	15.2	7.7	34.0	29.6	78	36.9	22.1	1.5	
Aug 15, 2032	P	912821JN6	4	4.364	4.385	-2.153	3.1	7.57	0.9	89	-1.7	-14.2	18.1	14.4	81	20.5	-0.6	1.5	1.196
Nov 15, 2032	C	9128337S3	0	4.535	4.397	13.763	2.5	7.81	1.6	61	15.8	7.3	34.9	30.6	78	38.7	23.0	1.0	
Nov 15, 2032	P	912821KC8	5	4.336	4.397	-6.070	2.6	7.81	-0.9	12	-3.8	-6.7	15.1	13.3	80	18.2	10.8	1.0	1.176
Feb 15, 2033	C	9128334V9	0	4.539	4.406	13.294	2.5	8.05	0.9	50	16.4	7.6	35.3	31.4	75	39.1	23.7	0.9	

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, 2033	P	912821KS3	1050	4.369	4.406	-3.635	2.6	8.06	-0.7	17	-2.0	-4.2	18.4	16.1	81	20.9	13.0	0.9	1.156
May 15, 2033	C	9128337T1	0	4.543	4.405	13.621	2.5	8.30	0.9	58	15.9	8.7	35.9	31.7	78	38.8	24.8	0.1	
May 15, 2033	P	912821LG8	14	4.378	4.405	-2.895	2.3	8.30	-1.1	0	-0.6	-2.9	19.3	17.2	81	22.2	14.0	0.2	1.119
Aug 15, 2033	C	9128334W7	0	4.563	4.403	16.036	2.5	8.54	0.8	67	17.8	11.7	37.7	33.3	84	40.0	26.8	-0.3	
Aug 15, 2033	P	912821LW3	11	4.379	4.403	-2.343	1.8	8.55	-21.4	0	629.6	-2.3	19.4	37.1	78	644.2	15.2	-0.3	1.068
Nov 15, 2033	C	9128337U8	0	4.550	4.395	15.524	2.9	8.78	-0.8	16	18.6	13.5	36.3	33.2	84	38.7	26.0	-1.0	
Nov 15, 2033	P	912821NP6	28	4.373	4.395	-2.169	2.1	8.79	-12.4	0	631.1	-2.2	18.6	27.1	75	642.8	13.9	-0.9	1.024
Feb 15, 2034	C	9128334X5	0	4.554	4.385	16.918	2.9	9.03	-1.3	12	19.8	16.0	36.5	33.6	84	38.9	26.7	-1.0	
Feb 15, 2034	P	912821PD1	27	4.386	4.385	0.125	2.2	9.04	-2.3	2	11.4	0.0	19.7	17.8	78	22.3	11.6	-1.0	0.999
May 15, 2034	C	9128337V6	0	4.566	4.370	19.561	2.9	9.27	-1.1	19	22.6	18.1	37.8	34.6	86	40.0	28.4	-1.3	
May 15, 2034	P	912821PT6	50	4.380	4.370	0.989	1.9	9.28	-2.5	0	13.1	1.0	19.2	17.4	75	22.3	14.7	-1.3	0.987
Aug 15, 2034	C	9128334Y3	0	4.566	4.360	20.661	2.9	9.52	-2.0	8	24.7	20.2	37.7	35.3	83	39.9	29.2	-1.1	
Aug 15, 2034	P	912821QH1	7	4.386	4.360	2.658	2.2	9.52	-2.1	3	13.5	2.6	19.7	17.3	80	21.9	12.1	-1.1	0.992
Nov 15, 2034	C	9128337W4	0	4.580	4.351	22.828	2.9	9.76	-2.0	9	26.6	19.2	38.8	36.4	80	40.9	30.5	-1.0	
Nov 15, 2034	P	912821QX6	1	4.378	4.351	2.675	2.4	9.77	261.9	60	3.2	-440.0	18.6	-243.1	60	20.1	-422.1	-1.0	1.009
Feb 15, 2035	C	9128334Z0	0	4.590	4.346	24.318	2.9	10.00	-1.6	11	27.2	20.7	39.5	36.9	83	42.0	30.6	-0.5	
May 15, 2035	C	912833X88	0	4.596	4.342	25.427	2.9	10.25	-2.0	3	28.9	22.1	40.2	38.1	75	43.4	32.0	-0.3	
Aug 15, 2035	C	9128335A4	0	4.602	4.344	25.853	2.9	10.49	-1.9	3	29.3	22.3	40.5	38.4	70	44.0	32.4	0.2	
Nov 15, 2035	C	912833X96	0	4.610	4.348	26.122	2.9	10.74	-1.0	6	28.4	21.4	40.9	38.1	78	44.1	32.1	0.3	
Feb 15, 2036	C	9128335B2	0	4.620	4.356	26.410	2.9	10.98	-1.1	5	29.1	21.5	41.7	39.0	77	45.1	32.9	0.7	
Feb 15, 2036	P	912803CX9	1710	4.266	4.356	-8.993	2.9	11.00	-2.0	3	-3.9	-13.5	6.3	4.5	77	9.8	-1.3	0.7	1.139
May 15, 2036	C	912833Y20	0	4.626	4.363	26.282	2.9	11.22	-1.1	6	29.0	21.4	42.1	39.6	75	46.6	32.7	0.8	
Aug 15, 2036	C	91283370000.0000	0	4.642	4.374	26.745	2.9	11.47	-0.7	16	29.5	22.3	43.5	40.8	77	47.9	33.3	1.1	
Nov 15, 2036	C	912833Y38	0	4.661	4.388	27.071	2.9	11.71	0.1	36	28.6	21.4	45.1	41.7	77	49.1	34.0	1.2	
Feb 15, 2037	C	9128337F1	0	4.669	4.402	26.487	2.8	11.95	-0.3	25	28.6	22.0	45.8	42.9	80	49.5	36.0	1.5	
Feb 15, 2037	P	912803CZ4	368	4.354	4.402	-5.002	2.8	11.97	-0.7	20	-2.7	-10.0	14.3	11.9	75	18.0	6.5	1.5	1.258
May 15, 2037	C	912833Y46	0	4.677	4.415	26.258	2.7	12.20	-1.3	3	28.9	21.9	46.5	44.9	70	50.7	38.8	1.4	
May 15, 2037	P	912803DA8	378	4.362	4.415	-5.245	2.7	12.22	-1.0	8	-2.5	-10.1	15.0	13.1	75	18.7	7.8	1.4	1.278
Aug 15, 2037	C	912833Z52	0	4.702	4.432	26.816	2.7	12.44	0.2	45	27.5	21.1	48.7	45.8	77	52.4	38.4	1.7	
Nov 15, 2037	C	912834AD0	0	4.727	4.450	27.625	2.7	12.68	0.7	61	28.4	22.0	51.0	47.7	73	55.1	38.6	1.7	
Feb 15, 2038	C	912833Z60	0	4.742	4.469	27.207	2.7	12.93	1.4	95	27.3	20.9	52.2	48.4	77	56.0	40.1	1.9	

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, 2038	P	912803DC4	548	4.412	4.469	-5.788	2.7	12.95	0.3	83	-5.3	-12.1	19.2	16.4	77	23.0	10.6	1.9	1.337
May 15, 2038	C	912834AE8	0	4.743	4.485	25.595	2.8	13.17	0.6	95	25.6	19.4	52.2	49.4	73	55.7	41.7	1.8	
May 15, 2038	P	912803DD2	479	4.428	4.485	-5.896	2.8	13.19	0.4	97	-5.9	-12.1	20.7	18.1	73	24.2	12.2	1.8	1.352
Aug 15, 2038	C	912834AT5	0	4.758	4.504	25.268	2.8	13.41	1.3	98	25.3	18.7	53.5	50.2	75	56.9	42.3	1.9	
Nov 15, 2038	C	912834DU9	0	4.778	4.524	25.407	2.8	13.66	2.0	98	25.4	17.5	55.3	51.5	77	58.7	42.6	1.8	
Feb 15, 2039	C	912834AU2	0	4.773	4.543	23.004	2.7	13.90	0.6	92	23.1	16.8	54.7	52.4	73	59.2	45.5	2.0	
Feb 15, 2039	P	912803DF7	97	4.463	4.543	-8.001	2.7	13.92	0.6	91	-7.9	-14.3	23.7	21.5	73	28.2	15.5	2.0	1.382
May 15, 2039	C	912834DV7	0	4.800	4.560	23.915	2.7	14.14	0.8	75	24.3	17.9	57.3	55.1	69	62.0	47.6	1.8	
May 15, 2039	P	912803DG5	984	4.495	4.560	-6.577	2.7	14.17	0.6	77	-6.2	-12.6	26.8	24.9	70	31.5	19.0	1.8	1.392
Aug 15, 2039	C	912834EP9	0	4.815	4.579	23.702	2.6	14.39	0.9	66	24.3	17.5	58.8	56.7	70	63.9	49.2	1.9	
Aug 15, 2039	P	912803DH3	747	4.505	4.579	-7.297	2.6	14.41	0.5	66	-6.7	-13.5	27.8	26.2	70	32.9	20.5	1.9	1.394
Nov 15, 2039	C	912834EV6	0	4.834	4.597	23.675	2.9	14.63	1.9	98	23.7	16.2	60.5	57.7	73	65.2	49.8	1.7	
Nov 15, 2039	P	912803DJ9	2180	4.519	4.597	-7.826	2.9	14.65	1.3	98	-7.8	-14.8	29.0	26.8	73	33.7	20.6	1.7	1.394
Feb 15, 2040	C	912834FB9	0	4.838	4.615	22.317	2.7	14.87	1.7	91	22.5	15.8	60.9	58.4	70	65.8	50.7	1.8	
Feb 15, 2040	P	912803DK6	2513	4.523	4.615	-9.206	2.7	14.90	1.4	89	-9.0	-15.7	29.4	27.2	70	34.3	20.4	1.8	1.390
May 15, 2040	C	912834HV3	0	4.850	4.630	21.951	2.7	15.12	1.6	92	22.1	15.3	62.1	59.9	72	67.2	54.2	1.6	
May 15, 2040	P	912803FQ1	354	4.620	4.630	-0.999	2.7	15.13	-0.8	9	1.6	-5.7	39.2	39.4	48	44.7	34.0	1.6	1.408
May 15, 2040	P	912803DM2	2413	4.525	4.630	-10.549	2.7	15.14	1.6	92	-10.4	-17.2	29.6	27.5	72	34.7	22.0	1.6	1.384
Aug 15, 2040	C	912834JB5	0	4.868	4.647	22.182	2.6	15.36	2.2	80	22.8	15.5	64.0	61.4	69	69.1	55.0	1.6	
Aug 15, 2040	P	912803FS7	130	4.636	4.647	-1.068	2.4	15.38	-1.0	5	1.8	-5.5	40.7	41.3	31	46.4	36.0	1.6	1.406
Aug 15, 2040	P	912803DN0	258	4.543	4.647	-10.316	2.6	15.38	1.2	80	-9.7	-17.0	31.5	29.9	69	36.6	24.4	1.6	1.383
Nov 15, 2040	C	912834JH2	0	4.872	4.663	20.934	2.7	15.60	2.4	98	20.9	13.9	64.2	61.7	72	69.0	55.2	1.5	
Nov 15, 2040	P	912803FU2	28	4.653	4.663	-0.928	2.5	15.62	-1.1	19	3.0	-5.3	42.4	43.4	17	47.0	37.9	1.5	1.404
Nov 15, 2040	P	912803DP5	990	4.542	4.663	-12.062	2.7	15.63	1.7	98	-12.1	-19.1	31.2	29.4	72	36.0	24.1	1.5	1.376
Feb 15, 2041	C	912834JP4	0	4.887	4.678	20.925	2.3	15.85	2.3	70	21.7	13.7	65.7	63.4	69	70.8	57.0	1.5	
Feb 15, 2041	P	912803FW8	342	4.657	4.678	-2.026	2.5	15.86	-1.7	5	2.2	-4.7	42.8	44.5	3	48.3	40.1	1.5	1.398
Feb 15, 2041	P	912803DQ3	777	4.527	4.678	-15.076	2.3	15.87	1.5	77	-14.6	-21.8	29.7	28.3	67	34.8	23.1	1.5	1.366
May 15, 2041	C	912834KH0	0	4.891	4.690	20.195	2.7	16.09	2.7	98	20.2	12.7	66.3	63.8	75	70.4	59.1	1.3	
May 15, 2041	P	912803DS9	277	4.551	4.690	-13.804	2.7	16.12	1.9	98	-13.8	-21.3	32.3	30.7	78	36.4	25.1	1.3	1.366
May 15, 2041	P	912803FZ1	530	4.649	4.690	-4.009	2.1	16.11	-2.3	12	1.7	-6.7	42.1	44.6	6	47.5	38.9	1.3	1.391
Aug 15, 2041	C	912834KP2	0	4.895	4.704	19.196	2.6	16.33	2.1	98	19.2	12.3	66.7	65.0	73	71.2	60.1	1.4	

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, 2041	P	912803GB3	97	4.685	4.704	-1.865	2.5	16.35	-1.7	16	1.8	-4.9	45.6	47.7	6	50.8	42.7	1.4	1.393
Aug 15, 2041	P	912803DT7	436	4.585	4.704	-11.805	2.6	16.36	0.8	75	-10.5	-18.7	35.7	35.3	53	40.2	29.3	1.4	1.368
Nov 15, 2041	C	912834KV9	0	4.908	4.717	19.098	2.7	16.58	2.2	98	19.1	11.8	67.9	66.4	75	72.4	61.4	1.2	
Nov 15, 2041	P	912803GD9	19	4.697	4.717	-1.951	2.4	16.59	-1.4	8	1.0	-4.7	46.9	48.9	6	52.4	44.2	1.2	1.389
Nov 15, 2041	P	912803DU4	375	4.613	4.717	-10.393	2.8	16.60	0.4	69	-8.4	-16.7	38.4	38.6	47	42.9	32.9	1.2	1.368
Feb 15, 2042	C	912834LB2	0	4.923	4.730	19.034	2.6	16.82	2.2	95	19.1	10.7	69.4	68.0	70	74.7	62.1	1.3	
Feb 15, 2042	P	912803DV2	571	4.643	4.730	-8.953	2.6	16.84	0.3	66	-6.7	-16.3	41.4	41.9	39	46.2	35.1	1.3	1.368
Feb 15, 2042	P	912803GF4	741	4.700	4.730	-3.238	2.4	16.84	-1.8	5	0.4	-6.0	47.1	49.7	3	53.1	44.8	1.3	1.382
May 15, 2042	C	912834LK2	0	4.920	4.739	18.087	2.7	17.06	-0.1	30	20.5	10.9	69.3	70.4	33	76.6	63.4	1.1	
May 15, 2042	P	912803GJ6	102	4.668	4.739	-7.123	1.8	17.08	-1.9	3	-2.4	-10.8	44.1	47.1	3	50.9	41.6	1.1	1.368
May 15, 2042	P	912803DX8	1049	4.680	4.739	-5.909	2.7	17.08	0.4	59	-3.8	-13.6	45.3	45.9	42	50.1	38.9	1.1	1.371
Aug 15, 2042	C	912834LR7	0	4.932	4.751	18.168	2.5	17.31	0.8	80	18.5	12.1	70.6	71.0	38	76.0	65.9	1.2	
Aug 15, 2042	P	912803GL1	4	4.678	4.751	-7.223	1.7	17.33	-1.6	2	-3.1	-11.4	45.2	47.9	6	51.7	42.4	1.2	1.363
Aug 15, 2042	P	912803DY6	1208	4.697	4.751	-5.324	2.5	17.33	0.1	58	-3.1	-11.9	47.1	48.2	33	52.0	41.9	1.2	1.368
Nov 15, 2042	C	912834LX4	0	4.936	4.762	17.244	2.6	17.55	0.5	67	18.2	11.7	71.0	71.8	27	76.6	66.4	1.0	
Nov 15, 2042	P	912803GN7	0	4.650	4.762	-11.307	2.3	17.57	-0.7	48	-6.9	-16.1	42.5	44.5	23	49.4	38.8	1.0	1.349
Nov 15, 2042	P	912803DZ3	2956	4.711	4.762	-5.240	2.6	17.57	0.1	56	-4.2	-11.3	48.5	49.7	22	53.1	44.0	1.0	1.364
Feb 15, 2043	C	912834MD7	0	4.938	4.772	16.407	2.4	17.79	0.7	89	16.8	11.7	71.3	72.0	30	76.2	66.6	1.0	
Feb 15, 2043	P	912803GQ0	5	4.671	4.772	-10.227	1.9	17.82	-1.0	28	-6.6	-14.4	44.7	47.1	12	51.5	41.2	1.0	1.346
Feb 15, 2043	P	912803EA7	5030	4.713	4.772	-6.088	2.4	17.81	-0.1	50	-4.1	-10.8	48.8	50.4	31	54.4	45.1	1.0	1.357
May 15, 2043	C	912834MM7	0	4.944	4.780	16.470	2.3	18.04	1.3	84	17.0	10.3	72.2	72.5	44	77.1	68.0	0.9	
May 15, 2043	P	912803GT4	2	4.679	4.780	-10.096	2.2	18.06	-1.7	2	-6.2	-13.1	45.6	48.9	6	53.2	43.1	0.9	1.341
May 15, 2043	P	912803EC3	4135	4.729	4.780	-5.021	2.3	18.06	0.1	47	-3.7	-10.2	50.7	52.1	27	55.4	47.5	0.9	1.354
Aug 15, 2043	C	912834MT2	0	4.925	4.789	13.425	2.4	18.28	0.3	70	14.0	9.0	70.4	71.7	17	74.8	66.5	0.9	
Aug 15, 2043	P	912803GV9	1	4.662	4.789	-12.878	1.8	18.31	-1.8	2	-8.6	-15.9	44.1	47.4	6	52.1	41.0	0.9	1.329
Aug 15, 2043	P	912803ED1	3290	4.715	4.789	-7.570	2.4	18.30	-1.0	25	-5.1	-11.0	49.4	52.0	9	55.4	45.5	0.9	1.342
Nov 15, 2043	C	912834MZ8	0	4.915	4.798	11.618	2.2	18.53	-0.4	8	13.4	8.4	69.5	71.6	11	74.8	66.3	0.8	
Nov 15, 2043	P	912803GX5	0	4.648	4.798	-14.997	1.6	18.55	-1.2	6	-11.4	-18.3	42.9	45.8	11	50.6	39.6	0.8	1.317
Nov 15, 2043	P	912803EE9	2871	4.715	4.798	-8.377	2.2	18.55	-1.1	2	-6.1	-11.1	49.5	52.3	9	55.5	46.3	0.8	1.333
Feb 15, 2044	C	912834NF1	0	4.931	4.806	12.426	2.3	18.77	0.5	88	12.8	7.8	71.3	72.5	30	76.1	67.5	0.8	
Feb 15, 2044	P	912803GZ0	17	4.678	4.806	-12.831	2.2	18.79	-1.2	11	-9.7	-16.4	46.1	49.0	11	53.4	42.3	0.8	1.316

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, 2044	P	912803EF6	5364	4.731	4.806	-7.573	2.3	18.79	-0.4	27	-6.2	-11.2	51.3	53.4	14	56.5	47.5	0.8	1.329
May 15, 2044	C	912834NP9	0	4.920	4.812	10.781	2.6	19.02	-0.3	36	12.2	7.5	70.6	72.6	9	75.3	66.7	0.7	
May 15, 2044	P	912803HC0	0	4.676	4.812	-13.625	2.2	19.04	-1.3	8	-10.5	-17.1	46.2	49.2	11	53.3	42.5	0.7	1.307
May 15, 2044	P	912803EH2	3693	4.730	4.812	-8.222	2.6	19.03	-0.3	33	-6.9	-12.0	51.6	53.6	14	57.0	47.7	0.7	1.321
Aug 15, 2044	C	912834NV6	0	4.926	4.819	10.729	2.5	19.26	-0.3	39	12.3	7.6	71.4	73.3	11	76.3	68.2	0.7	
Aug 15, 2044	P	912803HE6	2	4.688	4.819	-13.032	2.5	19.28	-0.9	32	-0.8	-16.6	47.6	50.1	16	63.7	43.9	0.7	1.301
Aug 15, 2044	P	912803EJ8	3613	4.746	4.819	-7.263	2.5	19.28	0.2	55	-6.6	-11.4	53.4	54.8	17	58.2	50.2	0.7	1.316
Nov 15, 2044	C	912834PB8	0	4.932	4.825	10.683	2.6	19.50	0.1	55	11.8	8.0	72.2	73.7	11	76.4	68.4	0.5	
Nov 15, 2044	P	912803EK5	6864	4.752	4.825	-7.323	2.6	19.52	0.6	88	-7.1	-9.0	54.2	55.2	25	58.4	50.4	0.5	1.308
Feb 15, 2045	C	912834PH5	0	4.915	4.831	8.382	2.2	19.75	-0.9	17	10.9	6.8	70.8	73.1	8	75.7	67.5	0.6	
Feb 15, 2045	P	912803EL3	5173	4.750	4.831	-8.112	2.2	19.76	0.4	55	-7.3	-10.1	54.3	55.4	20	59.0	51.0	0.6	1.298
May 15, 2045	C	912834KB3	0	4.907	4.835	7.280	1.9	19.99	-1.1	9	10.0	6.2	70.4	72.8	8	76.0	67.2	0.4	
May 15, 2045	P	912803EN9	2546	4.742	4.835	-9.217	1.9	20.01	0.0	42	-8.3	-10.3	53.9	55.3	12	58.6	50.7	0.4	1.286
Aug 15, 2045	C	912834PM4	0	4.908	4.839	6.891	2.2	20.24	-0.8	12	9.1	5.2	70.8	72.8	8	75.7	66.7	0.5	
Aug 15, 2045	P	912803EP4	3701	4.743	4.839	-9.602	2.2	20.25	0.3	59	-9.1	-10.8	54.3	55.2	22	58.6	50.2	0.5	1.276
Nov 15, 2045	C	912834PT9	0	4.909	4.844	6.563	2.6	20.48	-0.4	39	8.6	5.1	71.2	72.7	16	75.5	66.8	0.3	
Nov 15, 2045	P	912803EQ2	3174	4.744	4.844	-9.943	2.6	20.50	0.7	84	-9.8	-11.5	54.7	55.1	41	58.7	50.3	0.3	1.265
Feb 15, 2046	C	912834PZ5	0	4.913	4.847	6.624	2.3	20.72	-0.6	39	8.7	5.1	72.0	73.4	17	76.3	67.8	0.4	
Feb 15, 2046	P	912803ER0	5516	4.758	4.847	-8.870	2.3	20.74	0.5	77	-8.5	-10.4	56.5	56.8	39	60.0	52.3	0.3	1.256
May 15, 2046	C	912834QH4	0	4.908	4.848	5.948	2.4	20.97	-1.1	12	8.2	5.4	71.8	73.5	11	76.1	67.2	0.2	
May 15, 2046	P	912803ET6	5435	4.763	4.848	-8.552	2.4	20.98	0.4	64	-8.2	-9.9	57.3	57.6	34	60.4	52.7	0.2	1.246
Aug 15, 2046	C	912834QP6	0	4.903	4.850	5.222	2.7	21.21	-1.9	14	8.8	4.7	71.7	74.0	12	76.9	66.6	0.2	
Aug 15, 2046	P	912803EU3	4738	4.768	4.850	-8.273	2.7	21.23	0.6	81	-7.8	-10.0	58.2	58.0	52	61.0	53.1	0.2	1.234
Nov 15, 2046	C	912834QV3	0	4.909	4.852	5.676	2.4	21.46	-1.2	6	8.5	5.4	72.7	74.0	19	76.9	67.7	0.1	
Nov 15, 2046	P	912803EV1	2966	4.764	4.852	-8.830	2.4	21.47	0.3	69	-8.3	-10.1	58.2	58.1	42	61.1	53.2	0.1	1.219
Feb 15, 2047	C	912834RB6	0	4.909	4.853	5.648	2.6	21.70	-1.6	22	9.2	4.4	73.1	74.6	17	78.7	66.7	0.1	
Feb 15, 2047	P	912803EW9	4329	4.779	4.853	-7.350	2.6	21.71	0.9	97	-7.3	-9.0	60.1	59.2	77	62.2	53.7	0.1	1.208
May 15, 2047	C	912834RK6	0	4.906	4.851	5.490	2.6	21.95	-1.5	17	8.4	4.8	73.3	74.4	17	77.7	67.5	-0.1	
May 15, 2047	P	912803EY5	5343	4.776	4.851	-7.510	2.6	21.96	0.3	88	-7.1	-8.6	60.3	59.6	64	62.3	54.5	-0.1	1.193
Aug 15, 2047	C	912834RR1	0	4.908	4.851	5.712	2.7	22.19	-1.6	19	9.0	5.1	73.8	74.9	16	77.8	68.0	-0.1	
Aug 15, 2047	P	912803EZ2	9322	4.778	4.851	-7.280	2.7	22.20	0.2	66	-6.5	-8.8	60.8	60.1	64	62.3	55.0	-0.1	1.177

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, 2047	C	912834SZ2	0	4.903	4.850	5.313	2.6	22.43	-1.8	20	9.0	4.7	73.7	74.7	27	78.1	67.6	-0.2	
Nov 15, 2047	P	912803FA6	9611	4.777	4.850	-7.303	2.6	22.45	0.1	47	-6.1	-8.7	61.1	60.3	59	63.1	55.0	-0.2	1.160
Feb 15, 2048	C	912834TF5	0	4.902	4.848	5.300	2.8	22.68	-2.5	14	10.3	4.9	74.1	75.6	19	78.7	68.3	-0.2	
Feb 15, 2048	P	912803FB4	9182	4.778	4.848	-7.189	2.8	22.69	-0.5	44	-5.4	-8.1	61.6	61.1	52	63.7	55.8	-0.2	1.143
May 15, 2048	C	912834TP3	0	4.900	4.844	5.601	2.6	22.92	-2.9	0	10.5	5.6	74.3	76.1	17	79.8	68.4	-0.4	
May 15, 2048	P	912803FD0	5934	4.775	4.844	-6.897	2.6	22.94	-0.7	30	-4.3	-7.7	61.8	61.4	55	64.5	55.9	-0.4	1.125
Aug 15, 2048	C	912834TV0	0	4.900	4.841	5.893	2.7	23.17	-3.0	6	11.3	5.6	74.7	76.5	17	79.7	69.0	-0.4	
Aug 15, 2048	P	912803FE8	12155	4.776	4.841	-6.600	2.7	23.18	-0.7	38	-4.0	-7.3	62.2	61.7	61	64.4	56.5	-0.4	1.106
Nov 15, 2048	C	912834UB2	0	4.899	4.836	6.222	2.5	23.41	-3.8	0	12.7	6.2	75.0	77.3	17	80.8	69.5	-0.5	
Nov 15, 2048	P	912803FF5	9663	4.773	4.836	-6.364	2.8	23.42	-0.7	39	-3.6	-7.5	62.4	61.7	58	64.3	56.5	-0.5	1.085
Feb 15, 2049	C	912834UH9	0	4.903	4.831	7.189	2.8	23.65	-2.5	11	11.9	6.9	75.8	76.8	20	79.9	69.5	-0.5	1.097
Feb 15, 2049	P	912803FG3	14264	4.766	4.831	-6.509	2.5	23.67	-0.8	17	-3.8	-7.5	62.1	61.4	61	63.9	56.2	-0.5	1.063
May 15, 2049	C	912834UR7	0	4.893	4.824	6.843	2.8	23.90	-2.4	14	11.6	5.9	75.3	76.1	22	79.8	68.2	-0.7	1.074
May 15, 2049	P	912803FJ7	16920	4.761	4.824	-6.367	2.5	23.91	-0.7	30	-4.1	-7.1	62.1	61.2	67	64.1	55.5	-0.7	1.041
Aug 15, 2049	C	912834UY2	0	4.887	4.817	7.010	2.5	24.14	-2.7	9	12.0	6.7	75.1	76.2	22	79.6	68.7	-0.7	1.050
Aug 15, 2049	P	912803FK4	7773	4.752	4.817	-6.509	2.4	24.16	-0.9	8	-4.2	-7.2	61.6	60.9	69	63.4	55.5	-0.7	1.016
Nov 15, 2049	C	912834VE5	0	4.879	4.809	6.987	3.1	24.39	-1.6	20	10.8	5.4	74.7	74.7	44	78.2	67.4	-0.9	1.025
Nov 15, 2049	P	912803FL2	8593	4.743	4.809	-6.594	2.1	24.40	-1.0	8	-4.2	-7.2	61.1	60.5	61	63.2	55.4	-0.8	0.991
Feb 15, 2050	C	912834VM7	0	4.874	4.801	7.312	2.8	24.63	-0.4	38	9.9	5.4	74.6	73.5	67	77.2	66.9	-0.9	1.000
Feb 15, 2050	P	912803FM0	11679	4.732	4.801	-6.858	2.4	24.65	-0.7	31	-4.4	-7.8	60.4	59.5	67	62.7	54.4	-0.9	0.965
May 15, 2050	C	912834VV7	0	4.871	4.790	8.071	2.7	24.88	1.0	81	8.6	5.5	74.8	72.3	92	76.2	66.9	-1.0	0.978
May 15, 2050	P	912803FP3	11829	4.697	4.790	-9.385	2.5	24.90	-0.9	5	-6.4	-9.9	57.4	56.8	61	60.3	51.4	-1.0	0.935
Aug 15, 2050	C	912834WC8	0	4.849	4.780	6.871	2.7	25.12	-0.7	28	8.9	5.6	73.0	72.3	61	76.5	65.7	-1.0	0.952
Aug 15, 2050	P	912803FR9	16267	4.712	4.780	-6.815	2.6	25.14	-0.6	9	-4.9	-7.1	59.3	58.5	77	62.0	53.2	-1.0	0.918
Nov 15, 2050	C	912834WJ3	0	4.840	4.769	7.040	2.4	25.37	-0.3	23	8.5	5.4	72.5	71.5	69	75.5	64.9	-1.1	0.932
Nov 15, 2050	P	912803FT5	22260	4.712	4.769	-5.720	2.9	25.39	0.1	61	-4.6	-7.4	59.8	58.4	81	61.9	53.2	-1.1	0.900
Feb 15, 2051	C	912834WR5	0	4.829	4.758	7.060	2.8	25.62	-0.8	33	9.2	6.0	71.8	71.5	47	76.0	64.7	-1.1	0.912
Feb 15, 2051	P	912803FV0	20785	4.688	4.758	-6.991	2.5	25.63	-0.7	2	-5.3	-7.5	57.8	57.4	62	61.2	51.8	-1.1	0.877
May 15, 2051	C	912834WZ7	0	4.816	4.745	7.084	3.1	25.86	0.2	56	8.7	5.3	71.1	69.9	64	74.6	62.7	-1.2	0.896
May 15, 2051	P	912803FY4	14581	4.672	4.745	-7.281	2.2	25.88	-0.6	14	-5.5	-8.5	56.7	56.4	55	60.3	50.5	-1.2	0.860
Aug 15, 2051	C	912834XG8	0	4.807	4.733	7.353	3.0	26.11	0.5	53	8.0	5.1	70.6	69.3	66	74.1	62.5	-1.2	0.881

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, 2051	P	912803GA5	20597	4.671	4.733	-6.234	2.2	26.12	-0.3	14	-5.2	-7.5	57.0	56.5	61	60.5	50.9	-1.2	0.847
Nov 15, 2051	C	912834A65	0	4.776	4.721	5.544	2.8	26.35	0.9	95	5.7	3.6	68.0	66.4	77	71.1	59.8	-1.3	0.863
Nov 15, 2051	P	912803GC1	21604	4.666	4.721	-5.541	2.4	26.37	0.4	80	-4.9	-7.4	56.9	55.8	75	60.0	50.6	-1.3	0.836
Feb 15, 2052	C	912834B56	0	4.739	4.709	3.060	2.8	26.60	0.3	47	4.0	0.3	64.7	63.8	53	69.1	57.0	-1.3	0.846
Feb 15, 2052	P	912803GE7	23168	4.654	4.709	-5.470	2.4	26.61	0.7	95	-5.4	-7.3	56.1	55.0	75	59.4	49.3	-1.3	0.825
May 15, 2052	C	912834C55	0	4.710	4.695	1.507	2.9	26.85	0.3	55	2.7	-0.2	62.3	61.6	61	67.0	54.6	-1.3	0.834
May 15, 2052	P	912803GH0	16520	4.627	4.695	-6.830	2.3	26.86	0.0	55	-6.1	-8.5	53.9	53.5	61	58.3	47.8	-1.3	0.813
Aug 15, 2052	C	912834D47	0	4.674	4.683	-0.832	3.0	27.10	-0.2	27	0.4	-1.8	59.1	59.0	52	64.1	52.1	-1.3	0.822
Aug 15, 2052	P	912803GK3	13199	4.609	4.683	-7.390	2.2	27.11	0.1	58	-6.8	-9.1	52.6	52.2	58	56.9	46.4	-1.3	0.805
Nov 15, 2052	C	912834F29	0	4.626	4.670	-4.390	2.8	27.35	0.1	48	-3.0	-6.3	54.8	54.4	50	59.5	48.8	-1.3	0.809
Nov 15, 2052	P	912803GM9	9867	4.541	4.670	-12.926	2.6	27.36	-0.1	42	-11.5	-15.5	46.2	46.1	58	49.5	40.3	-1.3	0.788
Feb 15, 2053	C	912834F94	0	4.582	4.658	-7.649	2.8	27.60	-1.1	5	-5.3	-8.1	50.8	51.7	39	55.9	45.0	-1.2	0.800
Feb 15, 2053	P	912803GP2	16641	4.559	4.658	-9.954	2.3	27.60	0.2	70	-9.3	-11.4	48.5	48.1	55	51.9	42.5	-1.2	0.794
May 15, 2053	C	912834G93	0	4.553	4.645	-9.184	2.7	27.85	-1.5	3	-5.9	-9.5	48.4	49.7	22	54.1	43.0	-1.3	0.797
May 15, 2053	P	912803GS6	22261	4.548	4.645	-9.718	2.4	27.85	0.4	83	-8.7	-11.5	47.9	47.2	58	51.2	41.6	-1.3	0.796
Aug 15, 2053	C	912834H84	0	4.529	4.634	-10.419	2.5	28.10	-1.7	2	-6.9	-10.4	46.4	47.9	22	51.6	41.5	-1.2	0.798
Aug 15, 2053	P	912803GU1	1410	4.513	4.634	-12.024	2.6	28.10	0.1	55	-10.7	-13.8	44.8	44.5	56	47.8	39.2	-1.2	0.794
Nov 15, 2053	C	912834J66	0	4.514	4.622	-10.906	2.3	28.34	-0.8	16	-8.5	-11.6	45.3	45.8	41	49.1	39.5	-1.2	0.804
Nov 15, 2053	P	912803GW7	11007	4.471	4.622	-15.181	2.7	28.35	0.4	58	-14.4	-17.7	41.1	40.3	61	43.2	35.1	-1.2	0.793
Feb 15, 2054	C	912834K56	0	4.514	4.611	-9.767	2.7	28.59	-2.6	2	-3.9	-9.8	45.9	47.9	14	51.1	41.6	-1.1	0.817
Feb 15, 2054	P	912803GY3	15801	4.481	4.611	-13.101	2.2	28.59	-1.2	11	-8.8	-13.8	42.5	43.1	31	46.2	37.2	-1.1	0.808
May 15, 2054	C	912834XP8	0	4.480	4.601	-12.068	2.4	28.84	-1.9	0	-6.6	-12.1	42.9	44.0	22	47.4	37.7	-1.1	0.823
May 15, 2054	P	912803HB2	10091	4.459	4.601	-14.197	2.5	28.84	-1.2	16	-9.6	-15.1	40.8	41.2	41	44.4	35.2	-1.1	0.817
Aug 15, 2054	C	912834XW3	0	4.496	4.591	-9.572	2.4	29.08	-3.1	0	-0.5	-9.6	45.0	46.9	12	50.3	41.1	-0.9	0.845
Aug 15, 2054	P	912803HD8	10806	4.465	4.591	-12.676	2.4	29.08	-1.4	14	-8.1	-13.3	41.9	42.1	45	44.9	36.6	-0.9	0.837
Nov 15, 2054	C	912834YC6	0	4.480	4.583	-10.290	2.4	29.33	-2.6	0	-6.7	-10.3	43.9	44.2	22	46.5	41.1	-0.9	0.863
Nov 15, 2054	P	912803HF3	1	4.436	4.583	-14.713	2.3	29.33	-1.0	11	-12.9	-14.9	39.4	38.2	67	40.0	34.9	-0.9	0.851

STRIPS Spread to Treasuries Report

	Crv	Lev	Crv*Lev	Fed Expect	Const	R-Square	SE	Residual	Z-Score
5-year CSTRIPS	Beta	-0.20	1.32	0.09	0.02	7.19	0.90	0.9	2.1
	T-Stat	-2.9	2.8	5.4	1.2	3.7	-	-	-
10-year PSTRIPS	Beta	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	0.02	-1.71	-0.00	0.09	9.37	0.55	0.7	-1.0
	T-Stat	0.6	-7.2	-0.0	6.7	8.8	-	-	-
20-year PSTRIPS	Beta	0.17	-4.96	-0.04	0.02	23.76	0.69	0.9	-1.2
	T-Stat	3.8	-16.3	-3.4	1.4	17.5	-	-	-

Levels

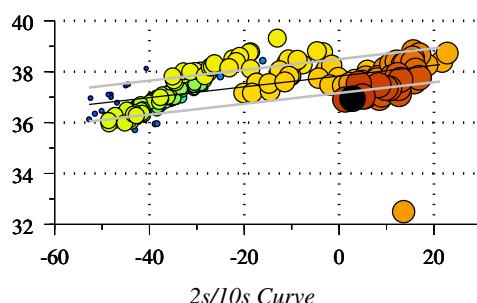
5-year CSTRIPS	12.3	5s	4.11	5s*2s/5s	-40.4
10-year PSTRIPS	N/A	10s	4.24	10s*2s/10s	12.0
15-year PSTRIPS	-1.6	2s/5s	-9.8	Fed Expectation	N/A
20-year PSTRIPS	0.7	2s/10s	2.8		

Sensitivity

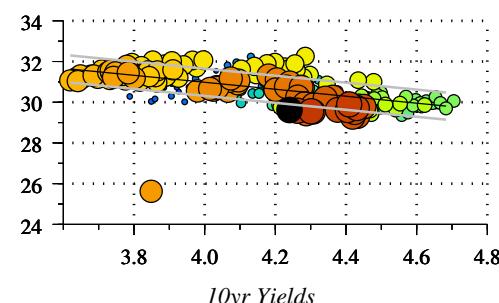
	5y	10y	15y	20y
10bp curve steepening	1.8	N/A	0.2	0.2
10bp rise in yields	0.0	N/A	-0.2	-0.5
10bp steepening in Fed Expectations	3.5	N/A	9.4	-0.0

15 Year PSTRIPS Regression

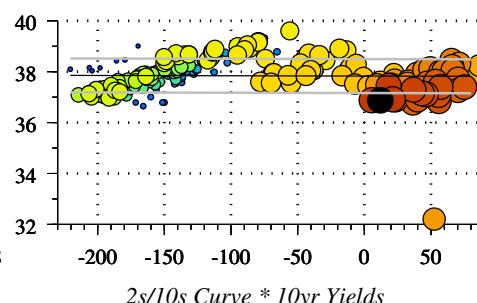
Adjusted Spread



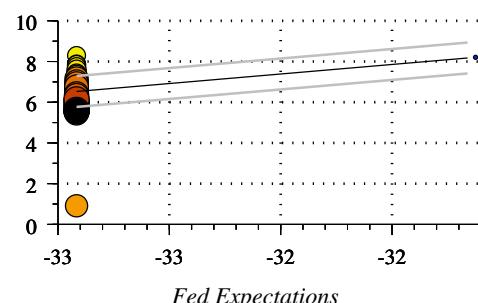
Adjusted Spread



Adjusted Spread

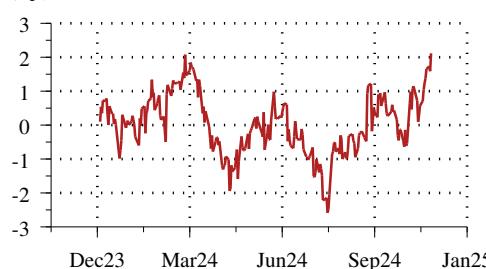


Adjusted Spread



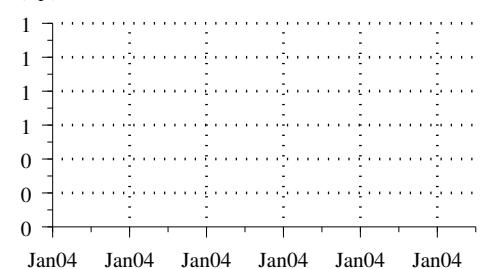
5 Year CSTRIPS Residual

(bp)



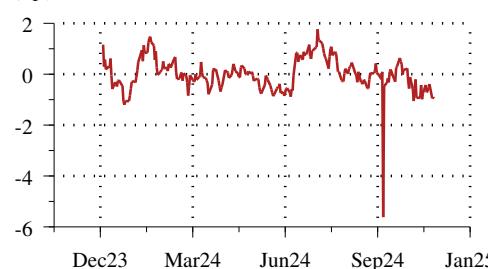
10 Year PSTRIPS Residual

(bp)



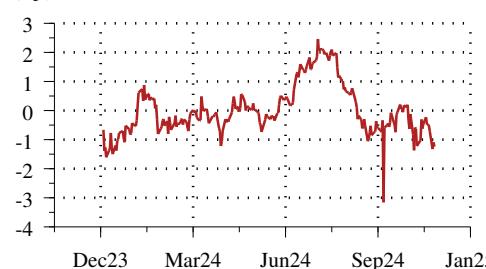
15 Year PSTRIPS Residual

(bp)



20 Year PSTRIPS Residual

(bp)

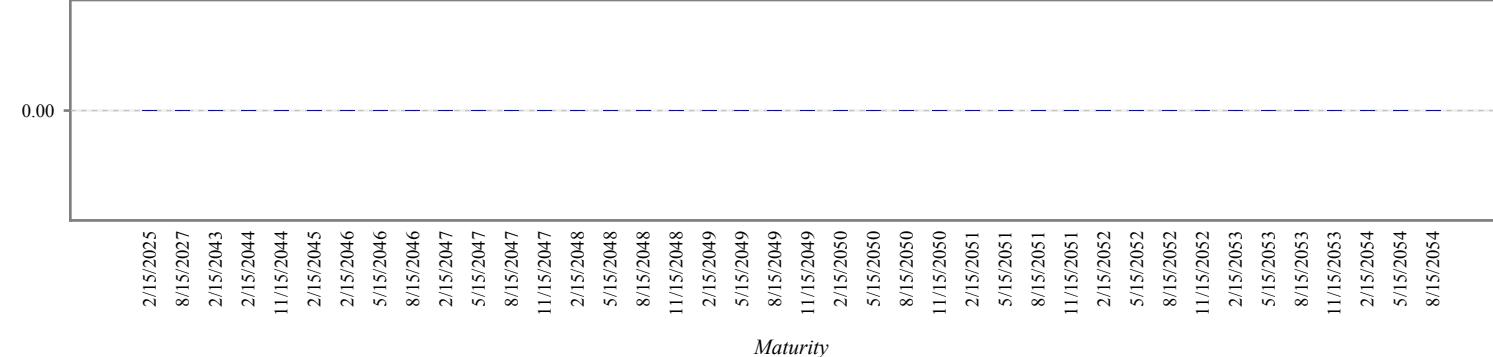


Notes:

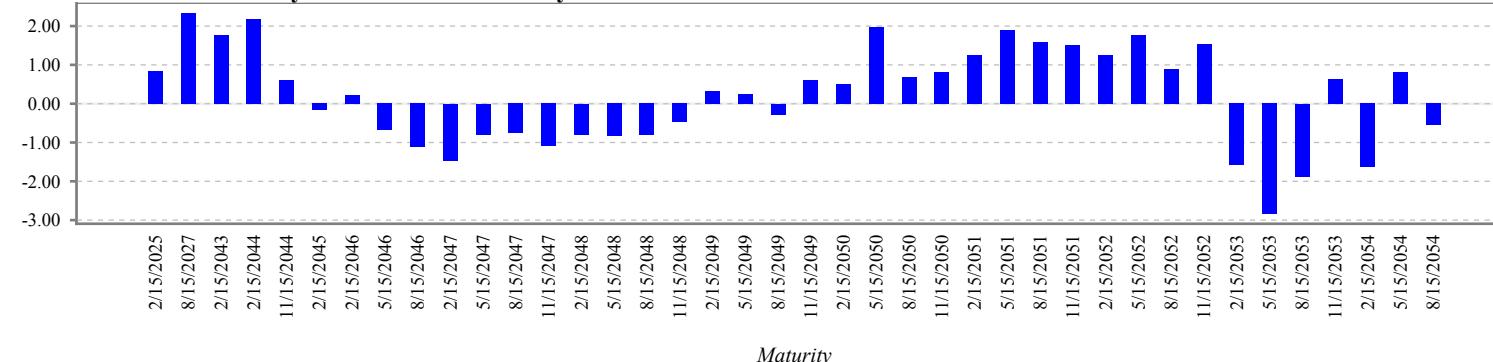
- Regression uses 1 year of data. Hot-run 2s/5s curve used in 5-year regression; hot-run 2s/10s used in 10-, 15-, and 20-year regressions. Fed expectations defined as the difference between the expected Fed funds rate 3 meetings ahead and the current funds rate.
- STRIPS spreads are calculated as the difference between averages of a bucket of STRIPS' yields and average of a bucket of whole bonds yields.
- 5-year buckets(5Y+/6M): STRIPS: 20290815 20291115 20300215 20300515; BONDS: 4-20300228 6.25-20300515 3.25-20290630 3.875-20291130 3.125-20290831 3.5-20300430 1.75-20291115 3.875-20291231 3.875-20290930 0.625-20300515 4-20291031 1.625-20290815 2.75-20290531 2.625-20290731 6.125-20290815 1.5-20300215 3.5-20300331
- 10-year buckets(10Y+/1-1Y): STRIPS: BONDS:
- 15-year buckets(15Y+/1-1Y): STRIPS: 20390215 20390515 20390815 20391115 20400215 20400515 20400815 20401115 20401115; BONDS: 3.875-20400815 4.25-20390515 4.5-20390815 4.375-20391115 1.125-20400515 3.5-20390215 4.375-20400515 4.625-20400215 1.375-20401115 1.125-20400815 4.25-20401115
- 20-year buckets(20Y+/2-1Y): STRIPS: 20430215 20430515 20430815 20431115 20431115 20440215 20440515 20440815 20441115 20450215 20450515 20450815 20451115 20451115 20460215 2.25-20460815 2.875-20461115 3.375-20460515 3.25-20460815 2.875-20461115 3.125-20460515 3.075-20460815 3.125-20461115 3.075-20460515 3.75-20461115 3.2-20460815 2.875-20461115 3.2-20460515 3.425-20460815 4.375-20461115 3.125-20460515 3.2-20460815 3.425-20460815 4.375-20461115

C-P Spreads Snapshot

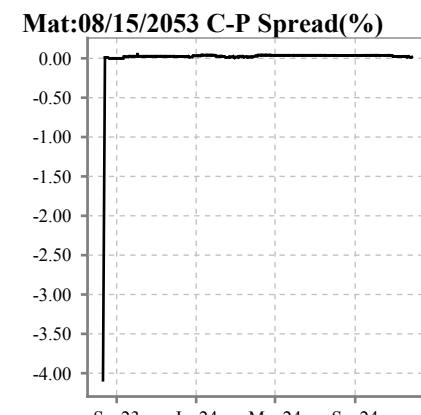
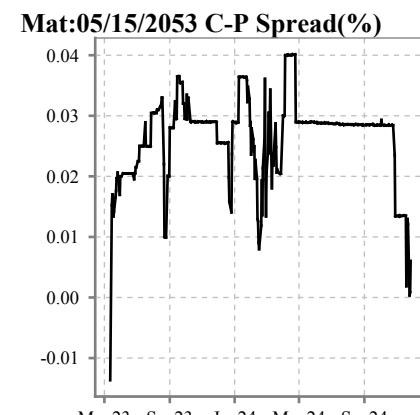
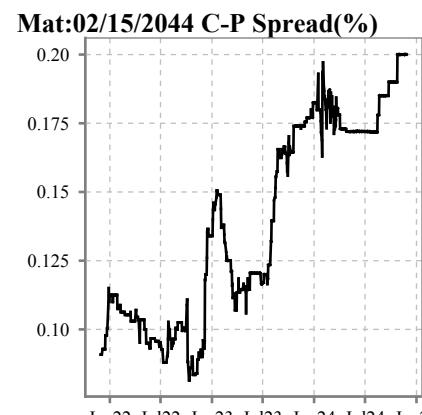
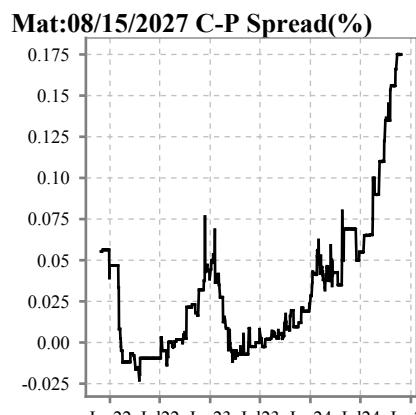
Current C-STRIPS yield minus P-STRIPS yield; bp



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



Most mis-priced trades



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)	CSTRIP amt o/s (\$mn)		
Coupon Maturity	Stripped (P-STRIP)										
912803BE2	7.625	02/15/2025	0	11	0.00	912833LU2	0	0.8	5.0	77.4	0
912803BL6	6.375	08/15/2027	0	14	0.00	912833PE4	0	2.3	1.9	17.5	0
912803EA7	3.125	02/15/2043	0	12	0.00	912834MD7	0	1.8	16.8	23.5	0
912803EF6	3.625	02/15/2044	0	13	0.00	912834NF1	0	2.2	16.3	20.0	0
912803EK5	3.000	11/15/2044	0	17	0.00	912834PB8	0	0.6	15.5	19.4	0
912803EL3	2.500	02/15/2045	0	12	0.00	912834PH5	0	-0.2	15.5	19.1	0
912803ER0	2.500	02/15/2046	0	14	0.00	912834PZ5	0	0.2	14.0	18.2	0
912803ET6	2.500	05/15/2046	0	13	0.00	912834QH4	0	-0.7	13.1	17.6	0
912803EU3	2.250	08/15/2046	0	12	0.00	912834QP6	0	-1.1	13.5	18.0	0
912803EW9	3.000	02/15/2047	0	11	0.00	912834RB6	0	-1.5	12.5	17.3	0
912803EY5	3.000	05/15/2047	0	12	0.00	912834RK6	0	-0.8	12.4	17.1	0
912803EZ2	2.750	08/15/2047	0	21	0.00	912834RR1	0	-0.8	12.4	16.5	0
912803FA6	2.750	11/15/2047	0	23	0.00	912834SZ2	0	-1.1	12.0	16.7	0
912803FB4	3.000	02/15/2048	0	20	0.00	912834TF5	0	-0.8	11.0	16.5	0
912803FD0	3.125	05/15/2048	0	12	0.00	912834TP3	0	-0.8	11.0	16.8	0
912803FE8	3.000	08/15/2048	0	24	0.00	912834TV0	0	-0.8	11.0	16.4	0
912803FF5	3.375	11/15/2048	0	18	0.00	912834UB2	0	-0.5	11.0	18.0	0
912803FG3	3.000	02/15/2049	0	26	0.00	912834UH9	0	0.3	11.0	16.9	0
912803FJ7	2.875	05/15/2049	0	30	0.00	912834UR7	0	0.2	11.0	17.0	0
912803FK4	2.250	08/15/2049	0	12	0.00	912834UY2	0	-0.3	11.0	17.1	0
912803FL2	2.375	11/15/2049	0	14	0.00	912834VE5	0	0.6	11.0	16.0	0
912803FM0	2.000	02/15/2050	0	19	0.00	912834VM7	0	0.5	11.0	15.8	0
912803FP3	1.250	05/15/2050	0	16	0.00	912834VV7	0	2.0	11.0	17.5	0
912803FR9	1.375	08/15/2050	0	18	0.00	912834WC8	0	0.7	11.0	15.3	0
912803FT5	1.625	11/15/2050	0	26	0.00	912834WJ3	0	0.8	10.9	14.9	0
912803FV0	1.875	02/15/2051	0	23	0.00	912834WR5	0	1.3	9.1	15.8	0
912803FY4	2.375	05/15/2051	0	15	0.00	912834WZ7	0	1.9	9.6	15.0	0
912803GA5	2.000	08/15/2051	0	23	0.00	912834XG8	0	1.6	6.9	14.3	0
912803GC1	1.875	11/15/2051	0	24	0.00	912834A65	0	1.5	5.8	12.4	0
912803GE7	2.250	02/15/2052	0	27	0.00	912834B56	0	1.2	4.8	11.0	0
912803GH0	2.875	05/15/2052	0	21	0.00	912834C55	0	1.8	1.5	9.6	0
912803GK3	3.000	08/15/2052	0	19	0.00	912834D47	0	0.9	2.4	8.4	0

US Fixed Income Strategy

Cusip (P-STRIP)	P STRIPS Coupon	%ge o/s (\$mn)	Yield	Mat. matched Stripped (P-STRIP)	C-STRIP cusip	C minus P yield (bp)	1y zscore	1y min. of C-P Spread	1y max of C-P sprd (bp)	CSTRIP amt sprd (bp)	o/s (\$mn)
Coupon	Maturity										
912803GM9	4.000	11/15/2052	0	15	0.00	912834F29	0	1.5	3.8	11.4	0
912803GP2	3.625	02/15/2053	0	25	0.00	912834F94	0	-1.6	1.6	5.2	0
912803GS6	3.625	05/15/2053	0	36	0.00	912834G93	0	-2.8	0.0	4.0	0
912803GU1	4.125	08/15/2053	0	16	0.00	912834H84	0	-1.9	0.6	4.0	0
912803GW7	4.750	11/15/2053	0	17	0.00	912834J66	0	0.6	3.9	7.5	0
912803GY3	4.250	02/15/2054	0	22	0.00	912834K56	0	-1.6	0.0	15.9	0
912803HB2	4.625	05/15/2054	0	13	0.00	912834XP8	0	0.8	-0.0	4.9	0
912803HD8	4.250	08/15/2054	0	15	0.00	912834XW3	0	-0.6	0.0	10.0	0

Most Mispriced STRIPS Pairs

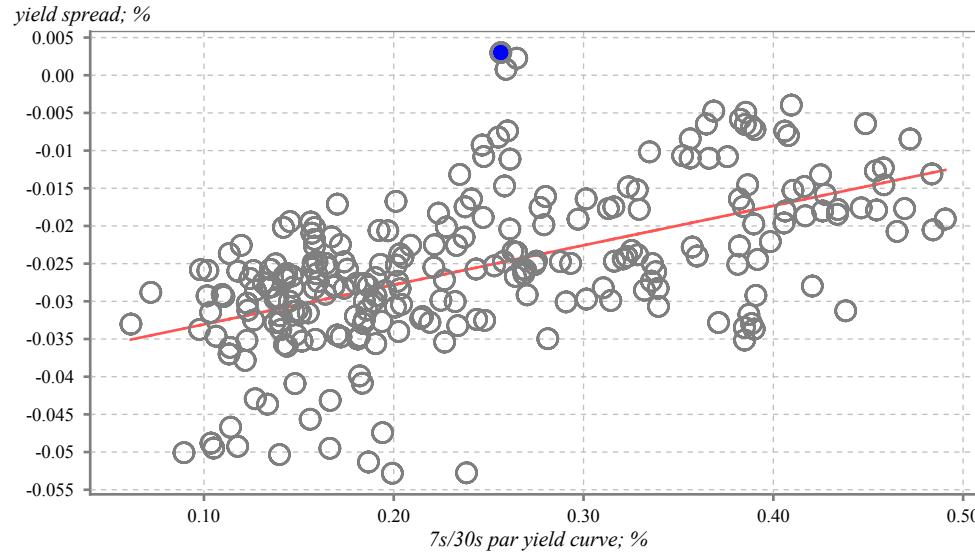
Pairs that look too steep relative to 7s/30s curve

Trades	Strips	Maturities	Z-Score	Res	Beta	R-Sqr	Size (\$bn)
912834TV0/912834UR7	C/C	08/15/2048-05/15/2049	3.3	2.8	0.052	0.308	0.0/0.0
912803EA7/912803EK5	P/P	3.125% 02/15/2043-3.000% 11/15/2044	2.9	3.9	0.123	0.481	5.0/6.9
912803EA7/912803EW9	P/P	3.125% 02/15/2043-3.000% 02/15/2047	2.8	5.1	0.236	0.663	5.0/4.3
912803EA7/912803EY5	P/P	3.125% 02/15/2043-3.000% 05/15/2047	2.8	5.3	0.255	0.678	5.0/5.3
912834TP3/912834UR7	C/C	05/15/2048-05/15/2049	2.8	3.3	0.089	0.403	0.0/0.0
912803EA7/912803ERO	P/P	3.125% 02/15/2043-2.500% 02/15/2046	2.7	3.9	0.164	0.605	5.0/5.5
912803EA7/912803EU3	P/P	3.125% 02/15/2043-2.250% 08/15/2046	2.7	4.5	0.196	0.617	5.0/4.7
912803EA7/912834NF1	P/C	3.125% 02/15/2043-02/15/2044	2.7	3.7	0.122	0.479	5.0/0.0
912803EA7/912803ET6	P/P	3.125% 02/15/2043-2.500% 05/15/2046	2.7	4.2	0.184	0.613	5.0/5.4
912803EA7/912803EZ2	P/P	3.125% 02/15/2043-2.750% 08/15/2047	2.6	5.0	0.269	0.689	5.0/9.3

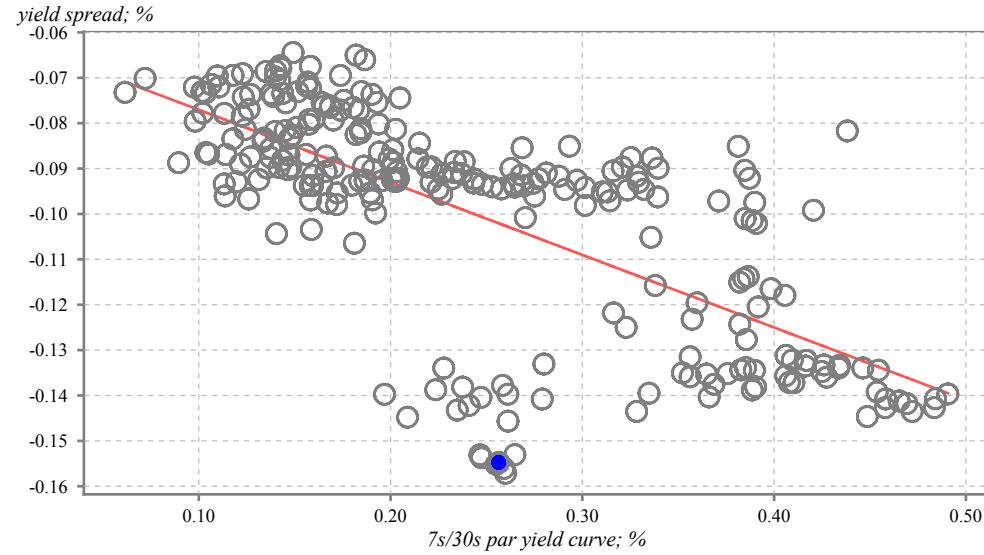
Pairs that look too flat relative to 7s/30s curve

Trades	Strips	Maturities	Z-Score	Res	Beta	R-Sqr	Size (\$bn)
912834C55/912834G93	C/C	05/15/2052-05/15/2053	-3.0	-5.3	-0.160	0.483	0.0/0.0
912834C55/912834F94	C/C	05/15/2052-02/15/2053	-2.9	-4.5	-0.145	0.506	0.0/0.0
912834A65/912803GH0	C/P	11/15/2051-2.875% 05/15/2052	-2.7	-2.9	-0.083	0.404	0.0/16.5
912834XG8/912803GH0	C/P	08/15/2051-2.875% 05/15/2052	-2.6	-3.2	-0.097	0.426	0.0/16.5
912834A65/912803GK3	C/P	11/15/2051-3.000% 08/15/2052	-2.6	-3.2	-0.094	0.404	0.0/13.2
912834XG8/912834G93	C/C	08/15/2051-05/15/2053	-2.6	-6.0	-0.158	0.359	0.0/0.0
912834XG8/912803GK3	C/P	08/15/2051-3.000% 08/15/2052	-2.6	-3.5	-0.108	0.433	0.0/13.2
912834C55/912803GP2	C/P	05/15/2052-3.625% 02/15/2053	-2.6	-3.5	-0.161	0.618	0.0/16.6
912834C55/912834H84	C/C	05/15/2052-08/15/2053	-2.6	-5.2	-0.158	0.414	0.0/0.0
912834A65/912834G93	C/C	11/15/2051-05/15/2053	-2.6	-5.7	-0.144	0.326	0.0/0.0

C:05/15/2049+912834TV0 - : regressed against Treasury curve



C:05/15/2053+912834C55 - : regressed against Treasury curve



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.

This document is being provided for the exclusive use of CHRISTOPHER Lee at JPMorgan Chase & Co. and clients of J.P. Morgan.

U.S. Fixed Income Strategy

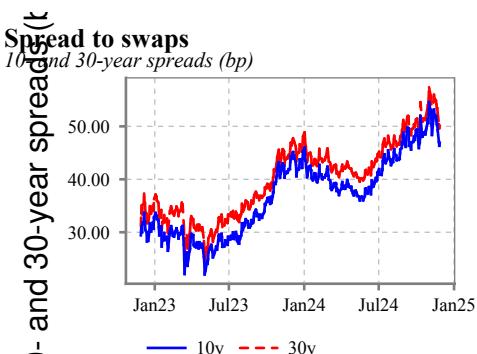
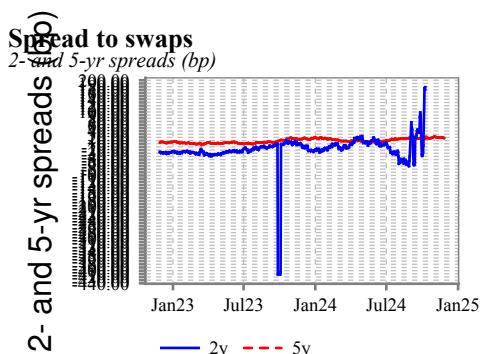
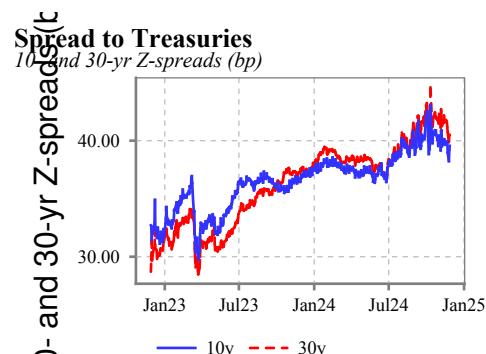
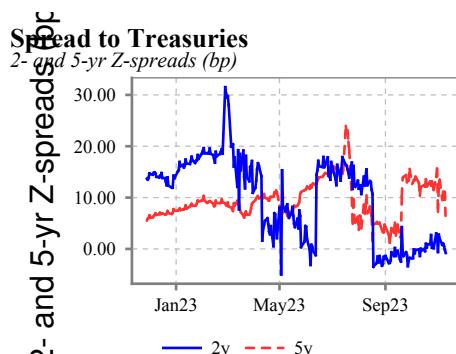
morganmarkets.jpmorgan.com

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						108.8	224.1	46.2					22.9	178.1	-70.4	
3y	0.500	Nov 7, 2025	4.756	.9				26.2	45.1	12.0		19.6	-.2	-4.2	13.2	28.0	-.5	69.8
5y	0.750	Oct 8, 2027	4.386	2.8				21.2	26.5	20.1		18.0	.7	-1.1	18.6	23.1	15.5	39.7
10y	0.875	Aug 5, 2030	4.534	5.4				39.0	42.0	37.4		46.9	.5	-3.5	49.0	54.6	45.6	20.6
30y	6.625	Nov 15, 2030	4.563	5.0				43.9	47.4	41.7		50.2	.6	-3.2	51.7	57.4	48.3	30.2

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	0.250	Dec 4, 2023																
3y	0.250	Dec 4, 2023																
5y	0.375	Sep 23, 2025	4.751	.8				19.6	40.2	2.7		15.8	-.6	-4.3	6.8	24.7	-9.1	69.8
10y	0.375	Sep 23, 2025	4.751	.8				19.6	40.2	2.7		15.8	-.6	-4.3	6.8	24.7	-9.1	69.8
30y	6.250	Jul 15, 2032	4.711	6.0				65.4	70.6	58.5		66.7	.8	-2.6	69.9	74.9	65.8	4.8

FNMA/FHLMC on-the-run spread curves

Curve	Yield Curve (bp)						Nominal Spread						Matched Maturity Asset Swap Spread					
	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	.2	.3	.1	22.2	28.7	-.1	28.5	31.0	24.4	33.3	46.6	-.9	46.7	50.5	41.1	39.7
3s/30s	.4	.0	.5	.6	.4	9.5	40.1	-.1	42.2	46.1	38.4	17.5	66.4	-.6	67.6	69.9	64.9	14.3
5s/10s																		
5s/30s																		
10s/30s	.2	.0	.2	.3	.2	20.6	11.4	.0	13.7	18.7	9.7	25.4	19.8	.3	20.9	25.5	17.4	39.7



Note: All averages, high/low and percentiles calculated over 3-month history.

This document is being provided for the exclusive use of CHRISTOPHER Lee at JPMorgan Chase & Co. and clients of J.P. Morgan.

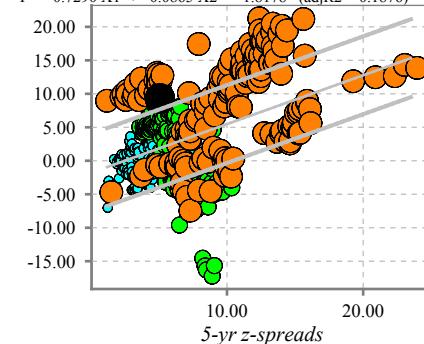
U.S. Fixed Income Strategy

Agencies Spread to Treasuries Report

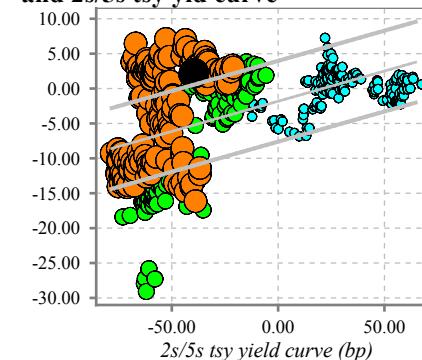
2s/5s off the run tsy z-spread (bp)



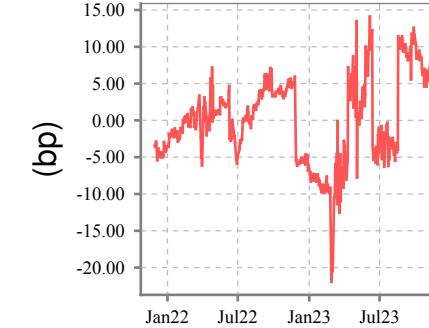
Regressed vs. 5yr z-spread



and 2s/5s tsy yld curve



Residual (bp)

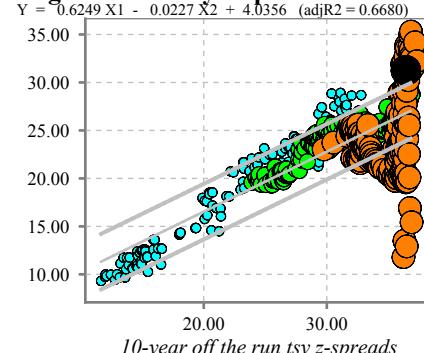


Residual	7.4
Std. Err.	5.9
Z-score	1.3
Mean Rev** (m)	0.0
3m Carry*	1.8
3m Roll*	3.4
Carry+Roll*	-1.6

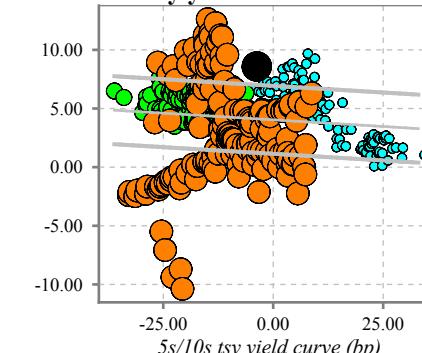
5s/10s off the run tsy z-spread (bp)



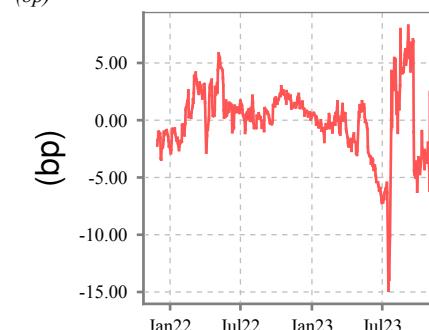
Regressed vs. 10y z-spreads



and 5s/10s tsy yield curve

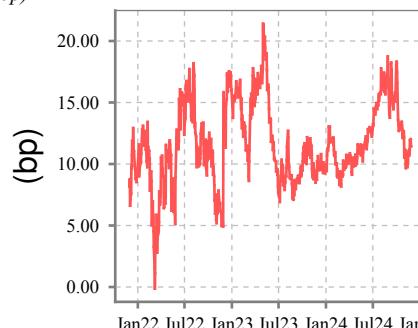


Residual (bp)

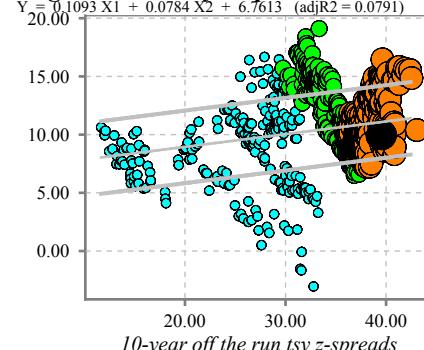


Residual	4.5
Std. Err.	3.0
Z-score	1.5
Mean Rev** (m)	1.3
3m Carry*	0.0
3m Roll*	168.8
Carry+Roll	168.8

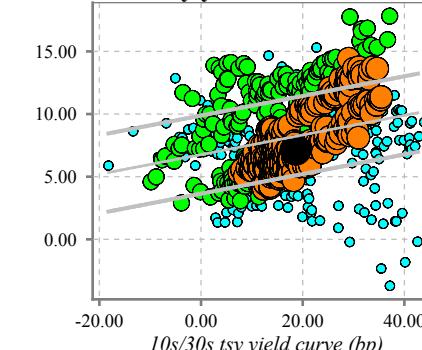
10s/30s off the run tsy z-spread (bp)



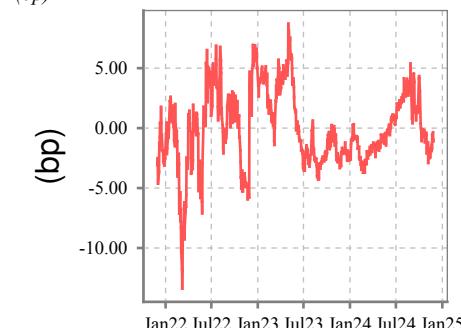
Regressed vs. 30y z-spreads



and 10s/30s tsy yield curve



Residual (bp)



Residual	-1.1
Std. Err	3.2
Z-score	-0.3
Mean Rev** (m)	2.2
3m Carry*	0.8
3m Roll*	-167.0
Carry+Roll*	-166.2

*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)

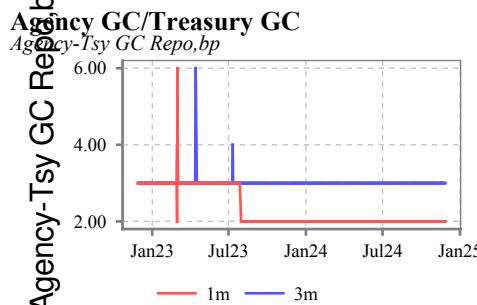
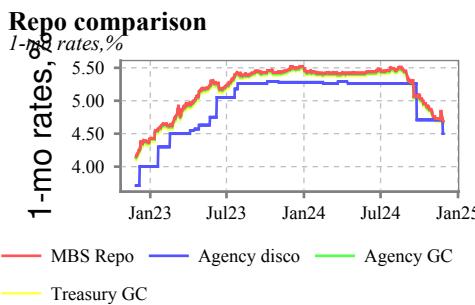
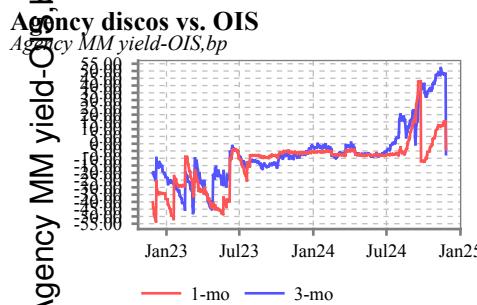
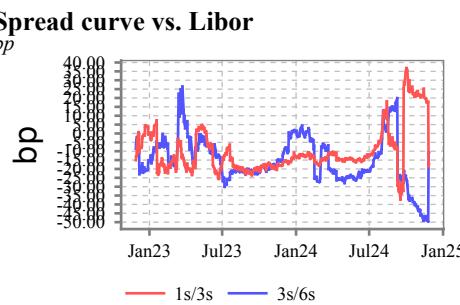
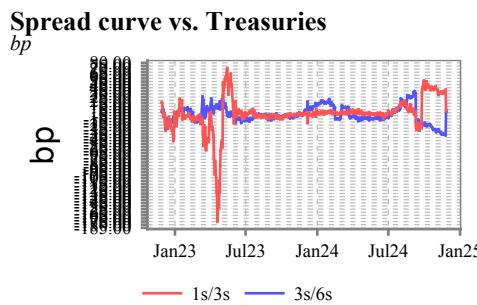
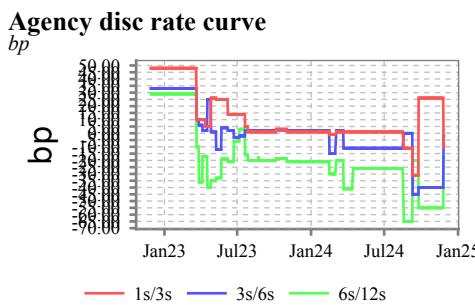
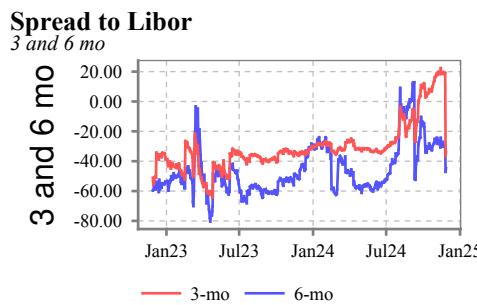
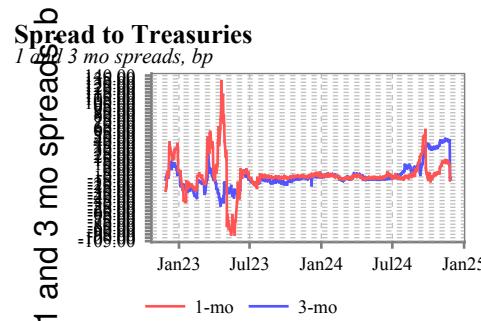
This document is being provided for the exclusive use of CHRISTOPHER Lee at JPMorgan Chase & Co. and clients of J.P. Morgan.

U.S. Fixed Income Strategy

jpmorganmarkets.com

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	4.50	4.500	-14	1	-26	6	59	-16	-1.2	-17	1	-16	-5	36	-27	-0.8
2m	4.45	4.450	-11	1	-20	0	30	-18	-0.9	-34	2	-53	4	22	-36	-2.6
3m	4.40	4.400	-11	0	-55	28	46	-11	-2.4	-45	2	-14	-25	13	-52	-1.4
4m	4.40	4.400	-11	1	-23	9	32	-12	-2.4	-78	2	21	-68	-21	-103	-0.4
5m	4.40	4.400	-10	2	-20	5	36	-32	-1.1	-	-	-	-	-	-	-
6m	4.38	4.380	-8	2	-18	12	45	-24	-1.5	-	-	-	-	-	-	-
7m	4.32	4.320	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8m	4.30	4.300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9m	4.28	4.280	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10m	4.28	4.280	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11m	4.25	4.250	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12m	4.20	4.200	-17	4	21	-10	37	-43	6.4	-78	2	21	-68	-21	-103	-0.4



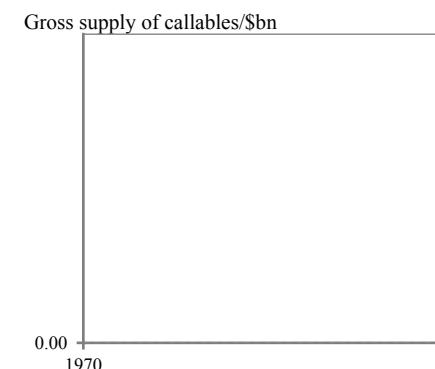
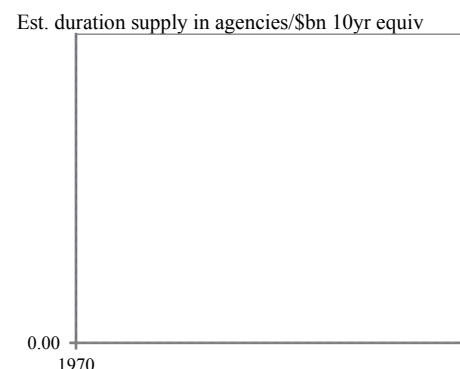
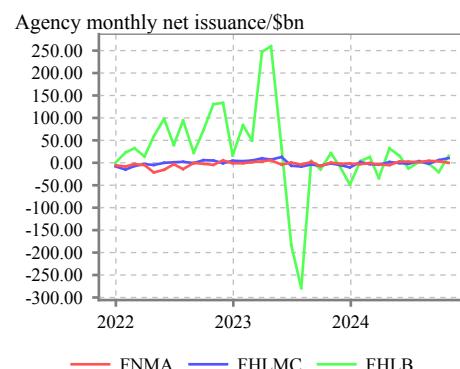
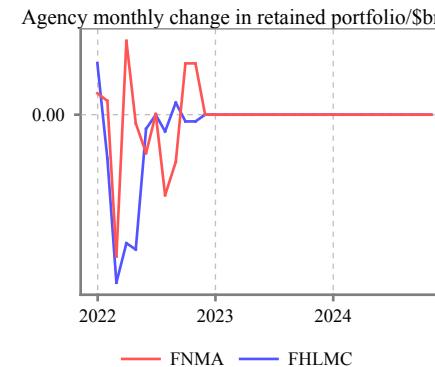
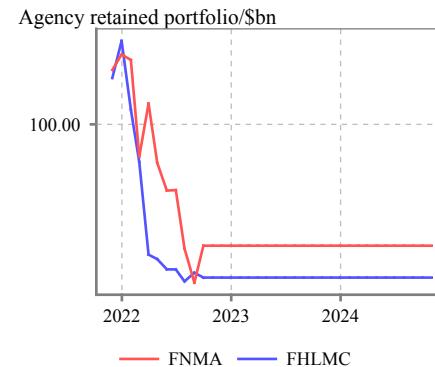
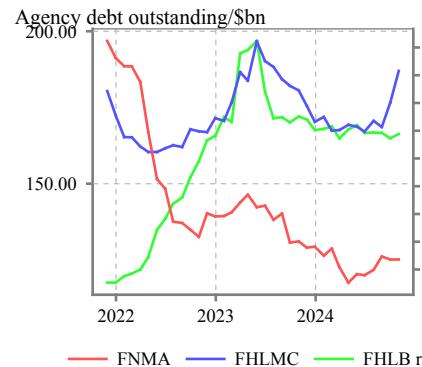
*Money market yield differential. Note: All averages, high/low and Z-scores are calculated over 3-month history.
All rates are reflective of FHLB discount notes.

bp	1m	2m	3m	bp	1m	2m	3m
MBS,GC %	4.67	4.67	4.67	Agy GC, %	4.67	4.67	4.65
MBS-Disco	19.00	24.00	27.00	Agy-Tsy GC	2.00	3.00	3.00
Avg	12.62	19.78	-6.37	Avg	2.00	3.00	3.00
High	38.00	38.00	28.00	High	2.00	3.00	3.00
Low	-19.00	-1.00	-29.00	Low	2.00	3.00	3.00

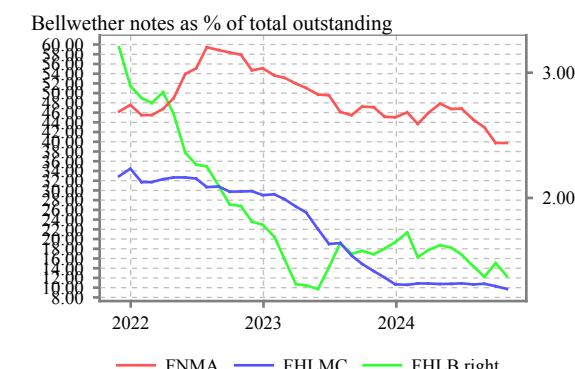
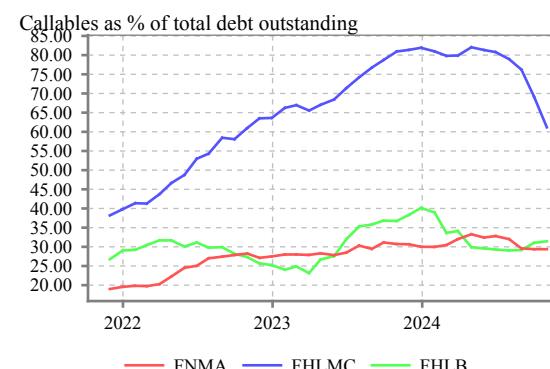
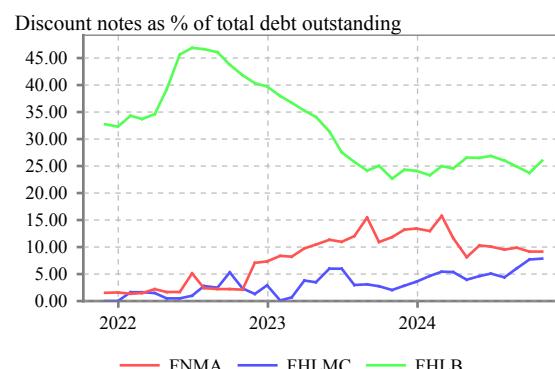
Fixed Income Strategy

jpmorganmarkets.com

Agency Issuance Summary



Changes in Debt Outstanding				
	FNMA	FHLMC	FHLB	Total
1m change				
Net debt issuance	-1.0	8.0	-19.2	-12.2
Discount notes	-1.0	3.4	-18.7	-16.3
Long-Term	.0	4.6	-.5	4.2
Callables	-.5	-6.4	16.2	9.3
Bullets	.6	11.0	-16.7	-5.1
6m change				
Net debt issuance	2.5	9.0	.5	12.0
Discount notes	-2.8	4.6	-9.8	-8.0
Long-Term	5.4	4.4	10.3	20.1
Callables	-2.5	-11.8	-35.9	-50.2
Bullets	7.8	16.2	46.2	70.3



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								

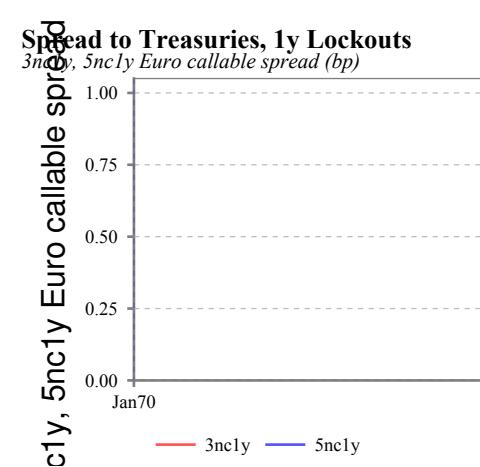
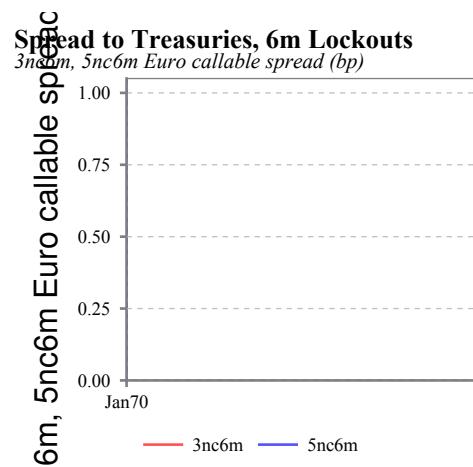
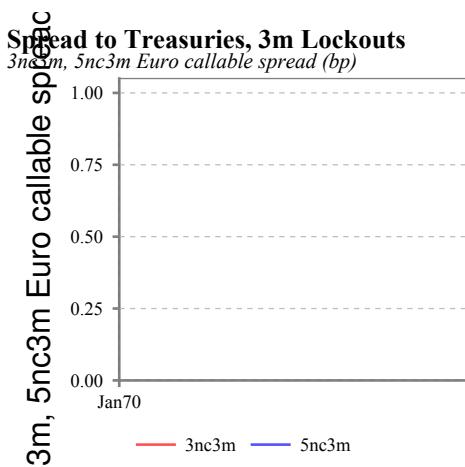


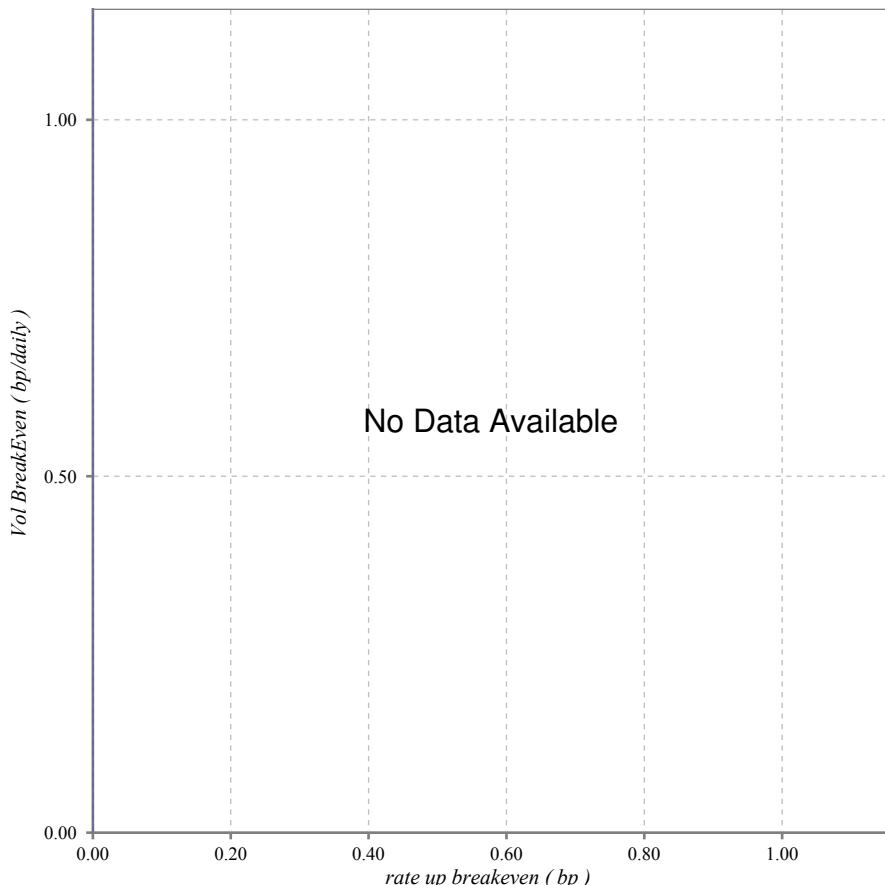
Table includes the higher of FNMA and FHLMC's callable spread level for each structure. Spreads are calculated using mid vol levels and do not reflect executable quotes. Calculations also assume a forward settlement date.

This document is being provided for the exclusive use of CHRISTOPHER Lee at JPMorgan Chase & Co. and clients of J.P. Morgan.

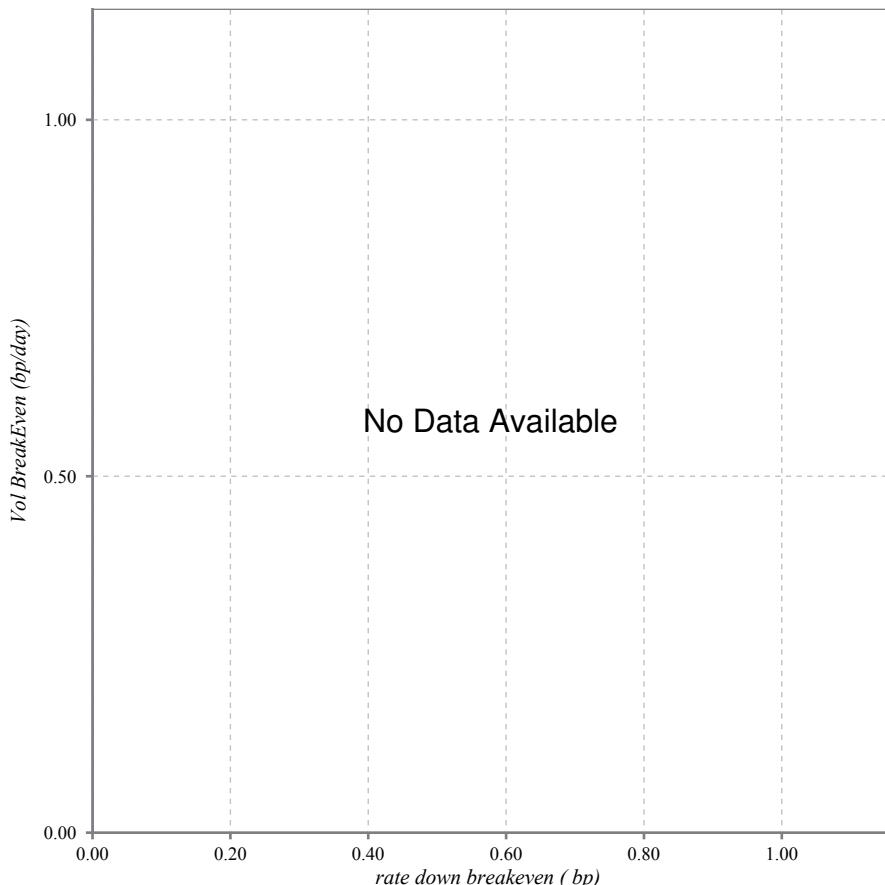
FHLMC Euro Callable 3M BreakEven Report

Structure	RateUp	VolUp	RateDown	Yield	Fltsprd	USTsprd	Bulletsprd	Delta	Gamma	Bpvega	Vslide
3Ync6M	0.0	0.0	0.0	0.0	0	0	0	0.2			
5Ync6M	0.0	0.0	0.0	0.0	0	0	0	0.1			
7Ync6M	0.0	0.0	0.0	0.0	0	0	0	0.1			
3Ync1Y	0.0	0.0	0.0	0.0	0	0	0	0.1			
5Ync1Y	0.0	0.0	0.0	0.0	0	0	0	0.0			
7Ync1Y	0.0	0.0	0.0	0.0	0	0	0	0.0			
3Ync2Y	0.0	0.0	0.0	0.0	0	0	0	-0.1			
5Ync2Y	0.0	0.0	0.0	0.0	0	0	0	-0.1			
7Ync2Y	0.0	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.

Analyst Certification: The Research Analyst(s) denoted by an “AC” on the cover of this report certifies (or, where multiple Research Analysts are primarily responsible for this report, the Research Analyst denoted by an “AC” on the cover or within the document individually certifies, with respect to each security or issuer that the Research Analyst covers in this research) that: (1) all of the views expressed in this report accurately reflect the Research Analyst’s personal views about any and all of the subject securities or issuers; and (2) no part of any of the Research Analyst’s compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the Research Analyst(s) in this report. For all Korea-based Research Analysts listed on the front cover, if applicable, they also certify, as per KOFIA requirements, that the Research Analyst’s analysis was made in good faith and that the views reflect the Research Analyst’s own opinion, without undue influence or intervention.

All authors named within this report are Research Analysts who produce independent research unless otherwise specified. In Europe, Sector Specialists (Sales and Trading) may be shown on this report as contacts but are not authors of the report or part of the Research Department.

Company-Specific Disclosures: Important disclosures, including price charts and credit opinion history tables, are available for compendium reports and all J.P. Morgan-covered companies, and certain non-covered companies, by visiting <https://www.jpmm.com/research/disclosures>, calling 1-800-477-0406, or e-mailing research.disclosure.inquiries@jpmorgan.com with your request.

A history of J.P. Morgan investment recommendations disseminated during the preceding 12 months can be accessed on the Research & Commentary page of <http://www.jpmorganmarkets.com> where you can also search by analyst name, sector or financial instrument.

Analysts' Compensation: The research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of research, client feedback, competitive factors, and overall firm revenues.

Other Disclosures

J.P. Morgan is a marketing name for investment banking businesses of JPMorgan Chase & Co. and its subsidiaries and affiliates worldwide.

UK MIFID FICC research unbundling exemption: UK clients should refer to [UK MIFID Research Unbundling exemption](#) for details of J.P. Morgan’s implementation of the FICC research exemption and guidance on relevant FICC research categorisation.

Any long form nomenclature for references to China; Hong Kong; Taiwan; and Macau within this research material are Mainland China; Hong Kong SAR (China); Taiwan (China); and Macau SAR (China).

J.P. Morgan Research may, from time to time, write on issuers or securities targeted by economic or financial sanctions imposed or administered by the governmental authorities of the U.S., EU, UK or other relevant jurisdictions (Sanctioned Securities). Nothing in this report is intended to be read or construed as encouraging, facilitating, promoting or otherwise approving investment or dealing in such Sanctioned Securities. Clients should be aware of their own legal and compliance obligations when making investment decisions.

Any digital or crypto assets discussed in this research report are subject to a rapidly changing regulatory landscape. For relevant regulatory advisories on crypto assets, including bitcoin and ether, please see <https://www.jpmorgan.com/disclosures/cryptoasset-disclosure>.

The author(s) of this research report may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so.

Exchange-Traded Funds (ETFs): J.P. Morgan Securities LLC (“JPMS”) acts as authorized participant for substantially all U.S.-listed ETFs. To the extent that any ETFs are mentioned in this report, JPMS may earn commissions and transaction-based compensation in connection with the distribution of those ETF shares and may earn fees for performing other trade-related services, such as securities lending to short sellers of the ETF shares. JPMS may also perform services for the ETFs themselves, including acting as a broker or dealer to the ETFs. In addition, affiliates of JPMS may perform services for the ETFs, including trust, custodial, administration, lending, index calculation and/or maintenance and other services.

Options and Futures related research: If the information contained herein regards options- or futures-related research, such information is available only to persons who have received the proper options or futures risk disclosure documents. Please contact your J.P. Morgan Representative or visit <https://www.theocc.com/components/docs/riskstoc.pdf> for a copy of the Option Clearing Corporation's Characteristics and Risks of Standardized Options or http://www.finra.org/sites/default/files/Security_Futures_Risk_Disclosure_Statement_2018.pdf for a copy of the Security Futures Risk Disclosure Statement.

Changes to Interbank Offered Rates (IBORs) and other benchmark rates: Certain interest rate benchmarks are, or may in the future become, subject to ongoing international, national and other regulatory guidance, reform and proposals for reform. For more information, please consult: https://www.jpmorgan.com/global/disclosures/interbank_offered_rates

Private Bank Clients: Where you are receiving research as a client of the private banking businesses offered by JPMorgan Chase & Co. and its subsidiaries (“J.P. Morgan Private Bank”), research is provided to you by J.P. Morgan Private Bank and not by any other division of J.P.

Morgan, including, but not limited to, the J.P. Morgan Corporate and Investment Bank and its Global Research division.

Legal entity responsible for the production and distribution of research: The legal entity identified below the name of the Reg AC

Research Analyst who authored this material is the legal entity responsible for the production of this research. Where multiple Reg AC Research Analysts authored this material with different legal entities identified below their names, these legal entities are jointly responsible for the production of this research. Research Analysts from various J.P. Morgan affiliates may have contributed to the production of this material but may not be licensed to carry out regulated activities in your jurisdiction (and do not hold themselves out as being able to do so). Unless otherwise stated below, this material has been distributed by the legal entity responsible for production. If you have any queries, please contact the relevant Research Analyst in your jurisdiction or the entity in your jurisdiction that has distributed this research material.

Page 103

Legal Entities Disclosures and Country-/Region-Specific Disclosures:

Argentina: JPMorgan Chase Bank N.A Sucursal Buenos Aires is regulated by Banco Central de la República Argentina ("BCRA"- Central Bank of Argentina) and Comisión Nacional de Valores ("CNV"- Argentinian Securities Commission - ALYC y AN Integral N°51). **Australia:** J.P. Morgan Securities Australia Limited ("JPMSAL") (ABN 61 003 245 234/AFS Licence No: 238066) is regulated by the Australian Securities and Investments Commission and is a Market Participant of ASX Limited, a Clearing and Settlement Participant of ASX Clear Pty Limited and a Clearing Participant of ASX Clear (Futures) Pty Limited. This material is issued and distributed in Australia by or on behalf of JPMSAL only to "wholesale clients" (as defined in section 761G of the Corporations Act 2001). A list of all financial products covered can be found by visiting <https://www.jpmm.com/research/disclosures>. J.P. Morgan seeks to cover companies of relevance to the domestic and international investor base across all Global Industry Classification Standard (GICS) sectors, as well as across a range of market capitalisation sizes. If applicable, in the course of conducting public side due diligence on the subject company(ies), the Research Analyst team may at times perform such diligence through corporate engagements such as site visits, discussions with company representatives, management presentations, etc. Research issued by JPMSAL has been prepared in accordance with J.P. Morgan Australia's Research Independence Policy which can be found at the following link: [J.P. Morgan Australia - Research Independence Policy](#). **Brazil:** Banco J.P. Morgan S.A. is regulated by the Comissao de Valores Mobiliarios (CVM) and by the Central Bank of Brazil. Ombudsman J.P. Morgan: 0800-7700847 / 0800-7700810 (For Hearing Impaired) / ouvidoria.jp.morgan@jpmorgan.com. **Canada:** J.P. Morgan Securities Canada Inc. is a registered investment dealer, regulated by the Canadian Investment Regulatory Organization and the Ontario Securities Commission and is the participating member on Canadian exchanges. This material is distributed in Canada by or on behalf of J.P.Morgan Securities Canada Inc. **Chile:** Inversiones J.P. Morgan Limitada is an unregulated entity incorporated in Chile. **China:** J.P. Morgan Securities (China) Company Limited has been approved by CSRC to conduct the securities investment consultancy business. **Dubai International Financial Centre (DIFC):** JPMorgan Chase Bank, N.A., Dubai Branch is regulated by the Dubai Financial Services Authority (DFSA) and its registered address is Dubai International Financial Centre - The Gate, West Wing, Level 3 and 9 PO Box 506551, Dubai, UAE. This material has been distributed by JP Morgan Chase Bank, N.A., Dubai Branch to persons regarded as professional clients or market counterparties as defined under the DFSA rules. **European Economic Area (EEA):** Unless specified to the contrary, research is distributed in the EEA by J.P. Morgan SE ("JPM SE"), which is authorised as a credit institution by the Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB). JPM SE is a company headquartered in Frankfurt with registered address at TaunusTurm, Taunustor 1, Frankfurt am Main, 60310, Germany. The material has been distributed in the EEA to persons regarded as professional investors (or equivalent) pursuant to Art. 4 para. 1 no. 10 and Annex II of MiFID II and its respective implementation in their home jurisdictions ("EEA professional investors"). This material must not be acted on or relied on by persons who are not EEA professional investors. Any investment or investment activity to which this material relates is only available to EEA relevant persons and will be engaged in only with EEA relevant persons. **Hong Kong:** J.P. Morgan Securities (Asia Pacific) Limited (CE number AAJ321) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission in Hong Kong, and J.P. Morgan Broking (Hong Kong) Limited (CE number AAB027) is regulated by the Securities and Futures Commission in Hong Kong. JP Morgan Chase Bank, N.A., Hong Kong Branch (CE Number AAL996) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission, is organized under the laws of the United States with limited liability. Where the distribution of this material is a regulated activity in Hong Kong, the material is distributed in Hong Kong by or through J.P. Morgan Securities (Asia Pacific) Limited and/or J.P. Morgan Broking (Hong Kong) Limited. **India:** J.P. Morgan India Private Limited (Corporate Identity Number - U67120MH1992FTC068724), having its registered office at J.P. Morgan Tower, Off. C.S.T. Road, Kalina, Santacruz - East, Mumbai – 400098, is registered with the Securities and Exchange Board of India (SEBI) as a 'Research Analyst' having registration number INH000001873. J.P. Morgan India Private Limited is also registered with SEBI as a member of the National Stock Exchange of India Limited and the Bombay Stock Exchange Limited (SEBI Registration Number – INZ000239730) and as a Merchant Banker (SEBI Registration Number - MB/INM000002970). Telephone: 91-22-6157 3000, Facsimile: 91-22-6157 3990 and Website: <http://www.jpmipl.com>. JPMorgan Chase Bank, N.A. - Mumbai Branch is licensed by the Reserve Bank of India (RBI) (Licence No. 53/ Licence No. BY.4/94; SEBI - IN/CUS/014/CDSL : IN-DP-CDSL-444-2008/ IN-DP-NSDL-285-2008/ INBI00000984/ INE231311239) as a Scheduled Commercial Bank in India, which is its primary license allowing it to carry on Banking business in India and other activities, which a Bank branch in India are permitted to undertake. For non-local research material, this material is not distributed in India by J.P. Morgan India Private Limited. Compliance Officer: Spurthi Gadamsetty; spurthi.gadamsetty@jpchase.com; +912261573225. Grievance Officer: Ramprasad K, jpmipl.research.feedback@jpmorgan.com; +912261573000.

Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

Registration granted by SEBI and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors.

Indonesia: PT J.P. Morgan Sekuritas Indonesia is a member of the Indonesia Stock Exchange and is registered and supervised by the Otoritas Jasa Keuangan (OJK). **Korea:** J.P. Morgan Securities (Far East) Limited, Seoul Branch, is a member of the Korea Exchange (KRX). JPMorgan Chase Bank, N.A., Seoul Branch, is licensed as a branch office of foreign bank (JPMorgan Chase Bank, N.A.) in Korea. Both entities are regulated by the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS). For non-macro research material, the material is distributed in Korea by or through J.P. Morgan Securities (Far East) Limited, Seoul Branch. **Japan:** JPMorgan Securities Japan Co., Ltd. and JPMorgan Chase Bank, N.A., Tokyo Branch are regulated by the Financial Services Agency in Japan. **Malaysia:** This material is issued and distributed in Malaysia by JPMorgan Securities (Malaysia) Sdn Bhd (18146-X), which is a Participating Organization of Bursa Malaysia Berhad and holds a Capital Markets Services License issued by the Securities Commission in Malaysia. **Mexico:** J.P. Morgan Casa de Bolsa, S.A. de C.V. and J.P. Morgan Grupo Financiero are members of the Mexican Stock Exchange and are authorized to act as a broker dealer by the National Banking and Securities Exchange Commission. **New Zealand:** This material is issued and distributed by JPMSAL in New Zealand only to "wholesale clients" (as defined in the Financial Markets Conduct Act 2013). JPMSAL is registered as a Financial Service

Provider under the Financial Service providers (Registration and Dispute Resolution) Act of 2008. **Philippines:** J.P. Morgan Securities Philippines Inc. is a Trading Participant of the Philippine Stock Exchange and a member of the Securities Clearing Corporation of the Philippines and the Securities Investor Protection Fund. It is regulated by the Securities and Exchange Commission. **Singapore:** This material is issued and distributed in Singapore by or through J.P. Morgan Securities Singapore Private Limited (JPMSS) [MDDI (P) 068/08/2024 and Co. Reg. No.: 199405335R], which is a member of the Singapore Exchange Securities Trading Limited, and/or JPMorgan Chase Bank, N.A., Singapore branch (JPMCB Singapore), both of which are regulated by the Monetary Authority of Singapore. This material is issued and distributed in Singapore only to accredited investors, expert investors and institutional investors, as defined in Section 4A of the Securities and Futures Act, Cap. 289 (SFA). This material is not intended to be issued or distributed to any retail investors or any other investors that do not fall into the classes of “accredited investors,” “expert investors” or “institutional investors,” as defined under Section 4A of the SFA. Recipients of this material in Singapore are to contact JPMSS or JPMCB Singapore in respect of any matters arising from, or in connection with, the material. **South Africa:** J.P. Morgan Equities South Africa Proprietary Limited and JPMorgan Chase Bank, N.A., Johannesburg Branch are members of the Johannesburg Securities Exchange and are regulated by the Financial Services Conduct Authority (FSCA). **Taiwan:** J.P. Morgan Securities (Taiwan) Limited is a participant of the Taiwan Stock Exchange (company-type) and regulated by the Taiwan Securities and Futures Bureau. Material relating to equity securities is issued and distributed in Taiwan by J.P. Morgan Securities (Taiwan) Limited, subject to the license scope and the applicable laws and the regulations in Taiwan. According to Paragraph 2, Article 7-1 of Operational Regulations Governing Securities Firms Recommending Trades in Securities to Customers (as amended or supplemented) and/or other applicable laws or regulations, please note that the recipient of this material is not permitted to engage in any activities in connection with the material that may give rise to conflicts of interests, unless otherwise disclosed in the “Important Disclosures” in this material. **Thailand:** This material is issued and distributed in Thailand by JPMorgan Securities (Thailand) Ltd., which is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission, and its registered address is 3rd Floor, 20 North Sathorn Road, Silom, Bangrak, Bangkok 10500. **UK:** Unless specified to the contrary, research is distributed in the UK by J.P. Morgan Securities plc (“JPMS plc”) which is a member of the London Stock Exchange and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. JPMS plc is registered in England & Wales No. 2711006, Registered Office 25 Bank Street, London, E14 5JP. This material is directed in the UK only to: (a) persons having professional experience in matters relating to investments falling within article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) (Order) 2005 (“the FPO”); (b) persons outlined in article 49 of the FPO (high net worth companies, unincorporated associations or partnerships, the trustees of high value trusts, etc.); or (c) any persons to whom this communication may otherwise lawfully be made; all such persons being referred to as “UK relevant persons”. This material must not be acted on or relied on by persons who are not UK relevant persons. Any investment or investment activity to which this material relates is only available to UK relevant persons and will be engaged in only with UK relevant persons. Research issued by JPMS plc has been prepared in accordance with JPMS plc's policy for prevention and avoidance of conflicts of interest related to the production of Research which can be found at the following link: [J.P. Morgan EMEA - Research Independence Policy](#). **U.S.:** J.P. Morgan Securities LLC (“JPMS”) is a member of the NYSE, FINRA, SIPC, and the NFA. JPMorgan Chase Bank, N.A. is a member of the FDIC. Material published by non-U.S. affiliates is distributed in the U.S. by JPMS who accepts responsibility for its content.

General: Additional information is available upon request. The information in this material has been obtained from sources believed to be reliable. While all reasonable care has been taken to ensure that the facts stated in this material are accurate and that the forecasts, opinions and expectations contained herein are fair and reasonable, JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) make no representations or warranties whatsoever to the completeness or accuracy of the material provided, except with respect to any disclosures relative to J.P. Morgan and the Research Analyst's involvement with the issuer that is the subject of the material. Accordingly, no reliance should be placed on the accuracy, fairness or completeness of the information contained in this material. There may be certain discrepancies with data and/or limited content in this material as a result of calculations, adjustments, translations to different languages, and/or local regulatory restrictions, as applicable. These discrepancies should not impact the overall investment analysis, views and/or recommendations of the subject company(ies) that may be discussed in the material. J.P. Morgan accepts no liability whatsoever for any loss arising from any use of this material or its contents, and neither J.P. Morgan nor any of its respective directors, officers or employees, shall be in any way responsible for the contents hereof, apart from the liabilities and responsibilities that may be imposed on them by the relevant regulatory authority in the jurisdiction in question, or the regulatory regime thereunder. Opinions, forecasts or projections contained in this material represent J.P. Morgan's current opinions or judgment as of the date of the material only and are therefore subject to change without notice. Periodic updates may be provided on companies/industries based on company-specific developments or announcements, market conditions or any other publicly available information. There can be no assurance that future results or events will be consistent with any such opinions, forecasts or projections, which represent only one possible outcome. Furthermore, such opinions, forecasts or projections are subject to certain risks, uncertainties and assumptions that have not been verified, and future actual results or events could differ materially. The value of, or income from, any investments referred to in this material may fluctuate and/or be affected by changes in exchange rates. All pricing is indicative as of the close of market for the securities discussed, unless otherwise stated. Past performance is not indicative of future results. Accordingly, investors may receive back less than originally invested. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. This material may include views on structured securities, options, futures and other derivatives. These are complex instruments, may involve a high degree of risk and may be appropriate investments only for sophisticated investors who are capable of understanding and assuming the risks involved. The recipients of this material must make their own independent decisions regarding any securities or financial instruments mentioned herein and should seek advice from such independent financial, legal, tax or other adviser as they deem necessary. J.P. Morgan may trade as a principal on the basis of the Research Analysts' views and research, and it may also engage in transactions for its own account or for its clients' accounts in a manner inconsistent with the views taken in this material, and J.P. Morgan is under no obligation to ensure that such other communication is brought to the attention of any recipient of this material. Others within J.P. Morgan, including Strategists, Sales staff and other Research Analysts, may take views that are inconsistent with those taken in this material. Employees of J.P. Morgan not involved in the preparation of this material may have investments in the securities (or derivatives of such securities) mentioned in this material and may trade them in ways different from those discussed in this material. This material is not an advertisement for or marketing of any issuer, its products or services, or its securities in any jurisdiction.

Confidentiality and Security Notice: This transmission may contain information that is privileged, confidential, legally privileged, and/or exempt from disclosure under applicable law. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution, or use of the information contained herein (including any reliance thereon) is STRICTLY PROHIBITED. Although this transmission and any attachments are believed to be free of any virus or other defect that might affect any computer system into which it is received and opened, it is the responsibility of the recipient to ensure that it is virus free and no responsibility is accepted by JPMorgan Chase &

Co., its subsidiaries and affiliates, as applicable, for any loss or damage arising in any way from its use. If you received this transmission in error, please immediately contact the sender and destroy the material in its entirety, whether in electronic or hard copy format. This message is subject to electronic monitoring: <https://www.jpmorgan.com/disclosures/email>

MSCI: Certain information herein ("Information") is reproduced by permission of MSCI Inc., its affiliates and information providers ("MSCI"). ©2024. No reproduction or dissemination of the Information is permitted without an appropriate license. MSCI MAKES NO EXPRESS OR IMPLIED WARRANTIES (INCLUDING MERCHANTABILITY OR FITNESS) AS TO THE INFORMATION AND DISCLAIMS ALL LIABILITY TO THE EXTENT PERMITTED BY LAW. No Information constitutes investment advice, except for any applicable Information from MSCI ESG Research. Subject also to msci.com/disclaimer

Page 105

Sustainalytics: Certain information, data, analyses and opinions contained herein are reproduced by permission of Sustainalytics and: (1) includes the proprietary information of Sustainalytics; (2) may not be copied or redistributed except as specifically authorized; (3) do not constitute investment advice nor an endorsement of any product or project; (4) are provided solely for informational purposes; and (5) are not warranted to be complete, accurate or timely. Sustainalytics is not responsible for any trading decisions, damages or other losses related to it or its use. The use of the data is subject to conditions available at <https://www.sustainalytics.com/legal-disclaimers>. ©2024 Sustainalytics. All Rights Reserved.

"Other Disclosures" last revised August 24, 2024.

Copyright 2024 JPMorgan Chase & Co. All rights reserved. This material or any portion hereof may not be reprinted, sold or redistributed without the written consent of J.P. Morgan. It is strictly prohibited to use or share without prior written consent from J.P. Morgan any research material received from J.P. Morgan or an authorized third-party ("J.P. Morgan Data") in any third-party artificial intelligence ("AI") systems or models when such J.P. Morgan Data is accessible by a third-party. It is permissible to use J.P. Morgan Data for internal business purposes only in an AI system or model that protects the confidentiality of J.P. Morgan Data so as to prevent any and all access to or use of such J.P. Morgan Data by any third-party.