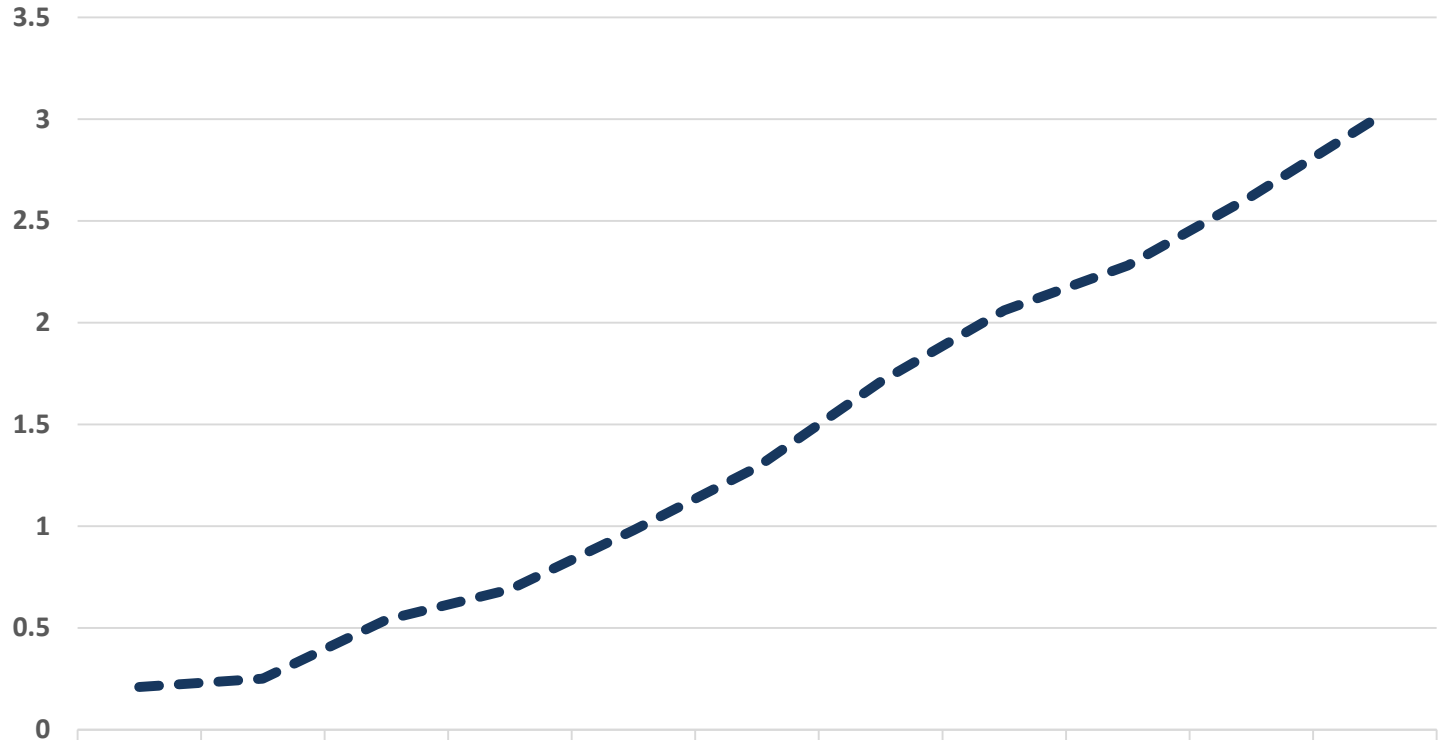


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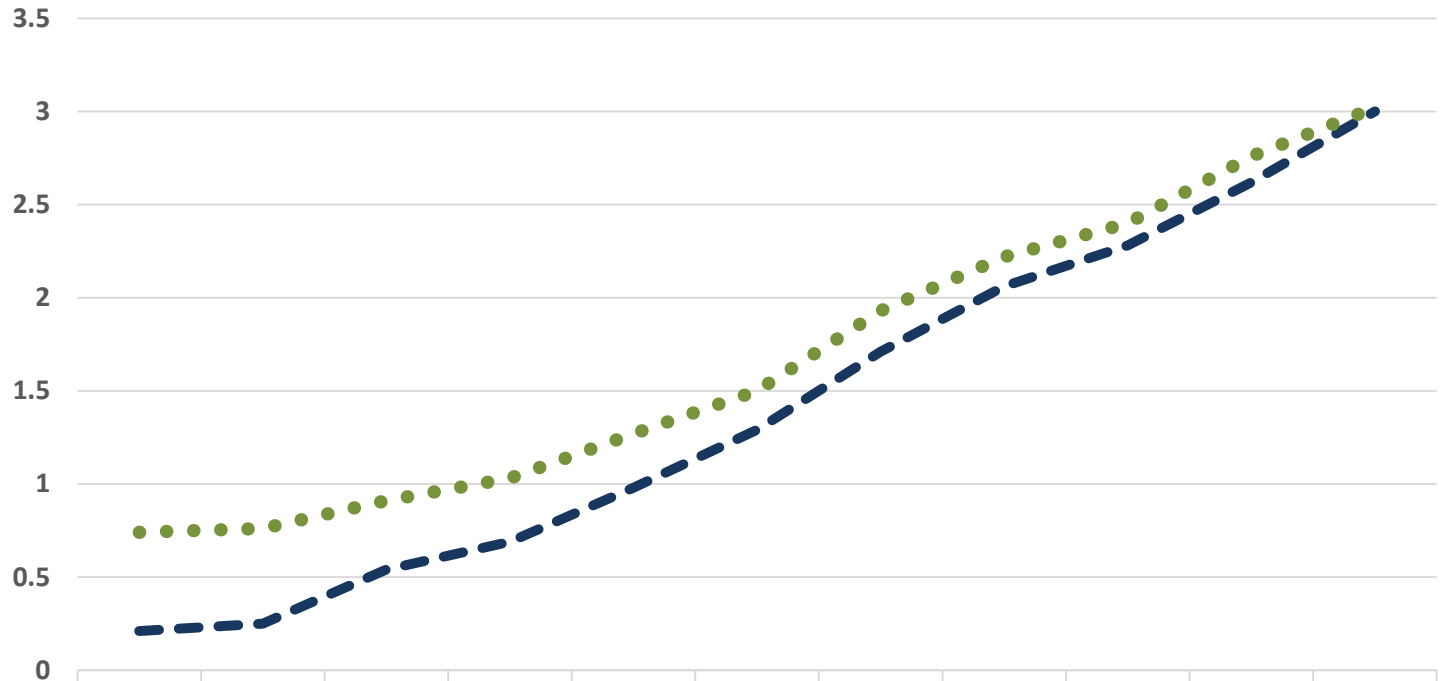
US Treasury Curve



— 12/15/2015

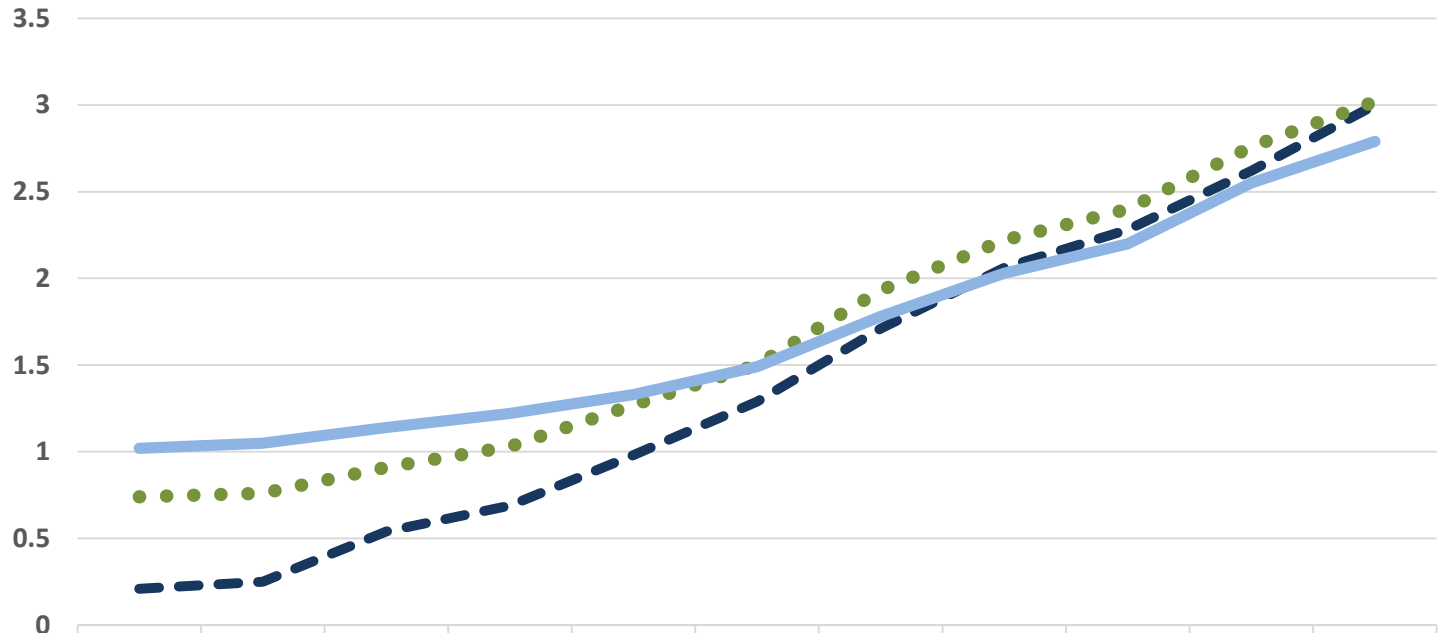
1 mo	3 mo	6 mo	1 yr	2 yr	3 yr	5 yr	7 yr	10 yr	20 yr	30 yr
0.21	0.25	0.54	0.69	0.98	1.29	1.71	2.06	2.28	2.62	3

US Treasury Curve



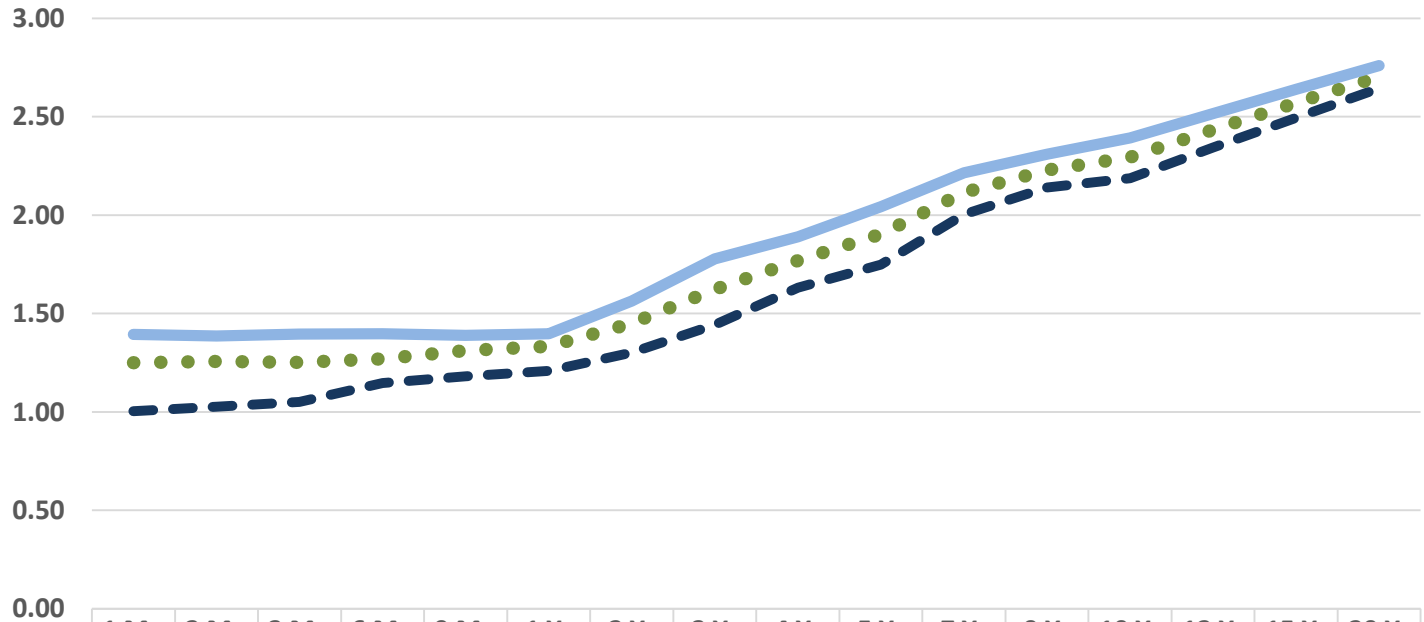
	1 mo	3 mo	6 mo	1 yr	2 yr	3 yr	5 yr	7 yr	10 yr	20 yr	30 yr
12/15/2015	0.21	0.25	0.54	0.69	0.98	1.29	1.71	2.06	2.28	2.62	3
3/31/2017	0.74	0.76	0.91	1.03	1.27	1.5	1.93	2.22	2.4	2.76	3.02

US Treasury Curve



	1 mo	3 mo	6 mo	1 yr	2 yr	3 yr	5 yr	7 yr	10 yr	20 yr	30 yr
12/15/2015	0.21	0.25	0.54	0.69	0.98	1.29	1.71	2.06	2.28	2.62	3
3/31/2017	0.74	0.76	0.91	1.03	1.27	1.5	1.93	2.22	2.4	2.76	3.02
8/10/2017	1.02	1.05	1.14	1.22	1.33	1.49	1.78	2.03	2.2	2.55	2.79

US Treasury Forward Curve



	1 Mo	2 Mo	3 Mo	6 Mo	9 Mo	1 Yr	2 Yr	3 Yr	4 Yr	5 Yr	7 Yr	9 Yr	10 Yr	12 Yr	15 Yr	20 Yr
Spot (8/11/17)	1.00	1.03	1.05	1.15	1.18	1.21	1.30	1.44	1.63	1.75	2.00	2.14	2.19	2.34	2.50	2.64
6 Mo (P)	1.25	1.26	1.25	1.27	1.31	1.33	1.45	1.62	1.77	1.90	2.12	2.23	2.29	2.43	2.57	2.70
08/11/2018 (P)	1.39	1.39	1.40	1.40	1.39	1.40	1.56	1.78	1.89	2.04	2.22	2.31	2.39	2.52	2.64	2.76

Source: Bloomberg LP Forwards Curve Analysis [FWCV]

			Projected					
	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18	Q3 18	Q4 18
Fed Funds Target Rate	1	1.25	1.25	1.5	1.6	1.85	2	2.15
3-month LIBOR	1.15	1.3	1.37	1.55	1.71	1.91	2.1	2.26
2-year UST	1.26	1.38	1.47	1.64	1.8	1.98	2.14	2.32
10-year UST	2.39	2.3	2.4	2.55	2.69	2.81	2.9	3.06
10Y-2Y spread	1.13	0.92	0.93	0.91	0.89	0.83	0.76	0.74

Source: Bloomberg LP; Updated 8/11/2017

United States		Instrument		Futures: Fed Funds - Effective		FED Effective Rat		
1) Overview		2) Future Implied Probability		3) Add/Remove Rates				
Current Implied Probabilities				Calculated 08/11/2017				
Dates	<input checked="" type="radio"/> Meeting	<input type="radio"/> Calculation	Based on rate 1.00-					
Meeting	Hike Prob	Cut Prob	0.5-0.75	0.75-1	1-1.25	1.25-1.5	1.5-1.75	1.75-2
09/20/2017	0.0%	0.4%	0.0%	0.4%	99.6%	0.0%	0.0%	0.0%
11/01/2017	0.8%	0.4%	0.0%	0.4%	98.9%	0.8%	0.0%	0.0%
12/13/2017	28.9%	0.3%	0.0%	0.3%	70.8%	28.7%	0.2%	0.0%
01/31/2018	29.5%	0.3%	0.0%	0.3%	70.3%	29.0%	0.5%	0.0%
03/21/2018	43.5%	0.2%	0.0%	0.2%	56.3%	37.3%	6.2%	0.1%
05/02/2018	45.1%	0.2%	0.0%	0.2%	44.7%	37.8%	7.0%	0.3%
06/13/2018	55.1%	0.2%	0.0%	0.2%	44.7%	40.9%	12.7%	1.5%
08/01/2018	55.4%	0.2%	0.0%	0.2%	44.4%	40.9%	12.9%	1.6%
09/26/2018	61.7%	0.1%	0.0%	0.1%	38.1%	41.4%	16.8%	3.2%

Source: Bloomberg LP [WIRP]

National Average CD Rates

SNL Financial

	12/15/2015	3/31/2017	8/8/2017
1 Mo CD - \$10k	NA	0.13	0.14
3 Mo CD - \$10k	0.16	0.18	0.20
6 Mo CD - \$10k	0.25	0.29	0.33
9 Mo CD - \$10k	NA	0.32	0.36
1 Yr CD - \$10k	0.41	0.48	0.54
18 Mo CD - \$10k	0.50	0.57	0.63
2 Yr CD - \$10k	0.63	0.71	0.77
30 Mo CD - \$10k	0.69	0.75	0.81
3 Yr CD - \$10k	0.86	0.92	0.98
4 Yr CD - \$10k	1.05	1.11	1.16
5 Yr CD - \$10k	1.30	1.37	1.42

www.Bankrate.com

8/11/2017

Nat. Avg

Best Rate

1.41	1.60
1.45	1.70
1.61	1.81
1.74	2.00
1.69	2.16
2.12	2.35

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