



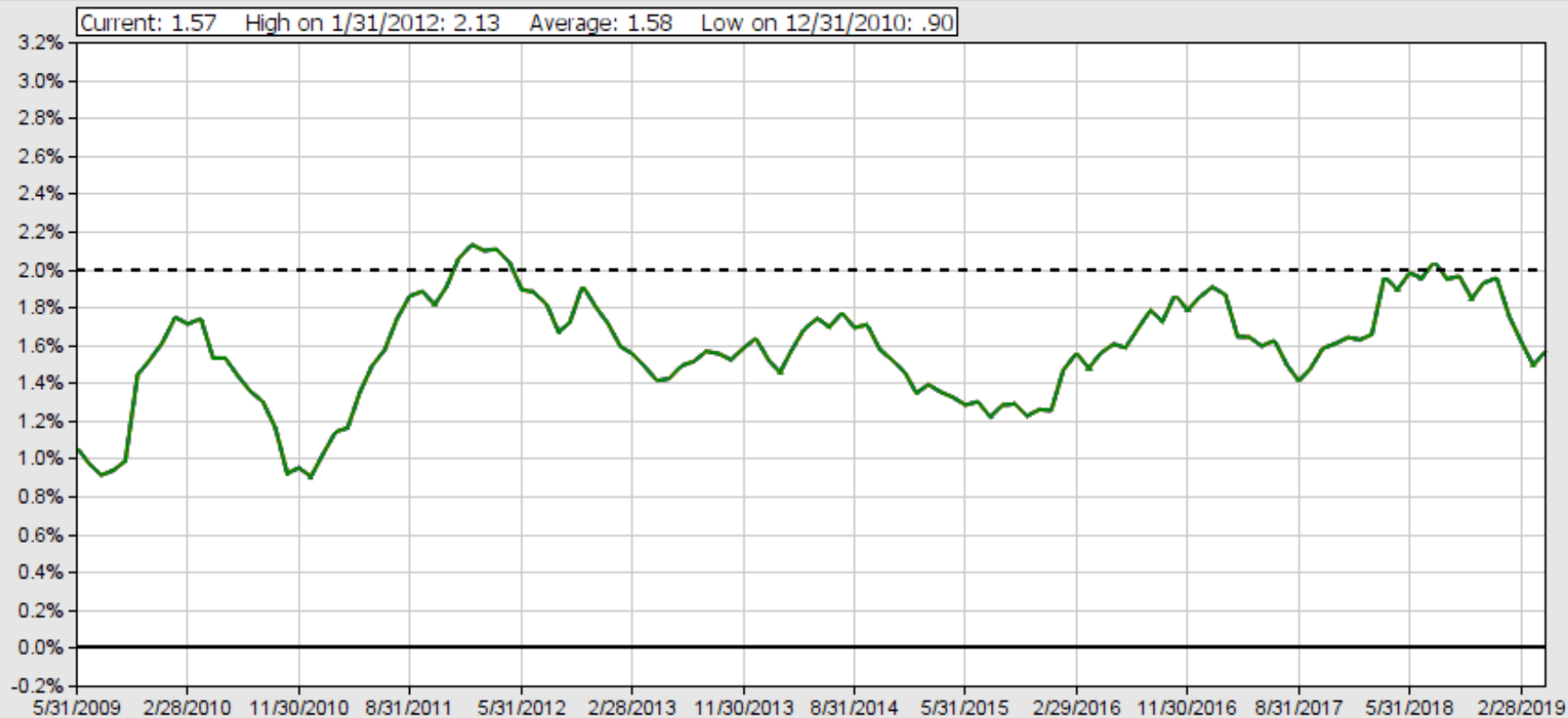
Contribution to GDP by Component: 2019 (I) vs. 2018 (IV)

	Contribution to 3.1% growth 1Q19*	Contribution to 2.2% growth 4Q18
Consumer	0.90	1.66
<p>A decrease in goods spending of -0.3% was offset by a 2.1% growth in services spending.</p>		
Investment	0.78	0.66
<p>The 1st qtr saw growth in nonresidential fixed investments, while residential fixed investments continued to fall. Inventories replenishment contributed 60 bps.</p>		
Government	0.42	-0.07
<p>Growth in state spending increased in the 1Q by 4%, while federal spending was fell by -0.1%.</p>		
Export - Import	0.96	-0.08
<p>Growth in exports was compounded by a declined in imports.</p>		

Source: U.S. Department of Commerce Bureau of Economic Analysis

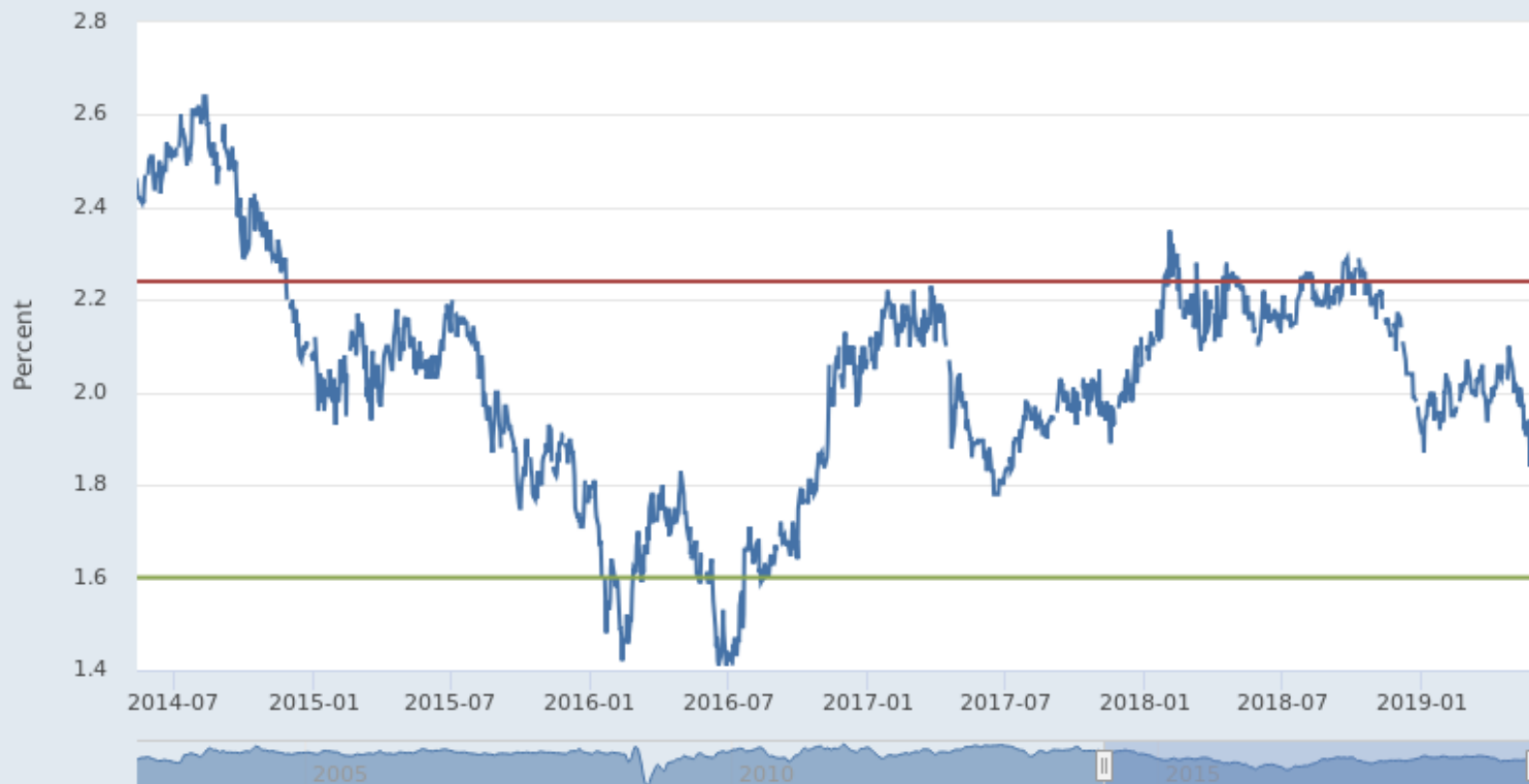
* Second Estimate

Core PCE Year-over-Year Change (5/31/2009 to 4/30/2019)



Source: Bureau of Economic Analysis

FRED — 5-Year, 5-Year Forward Inflation Expectation Rate



Shaded areas indicate U.S. recessions

Source: Federal Reserve Bank of St. Louis

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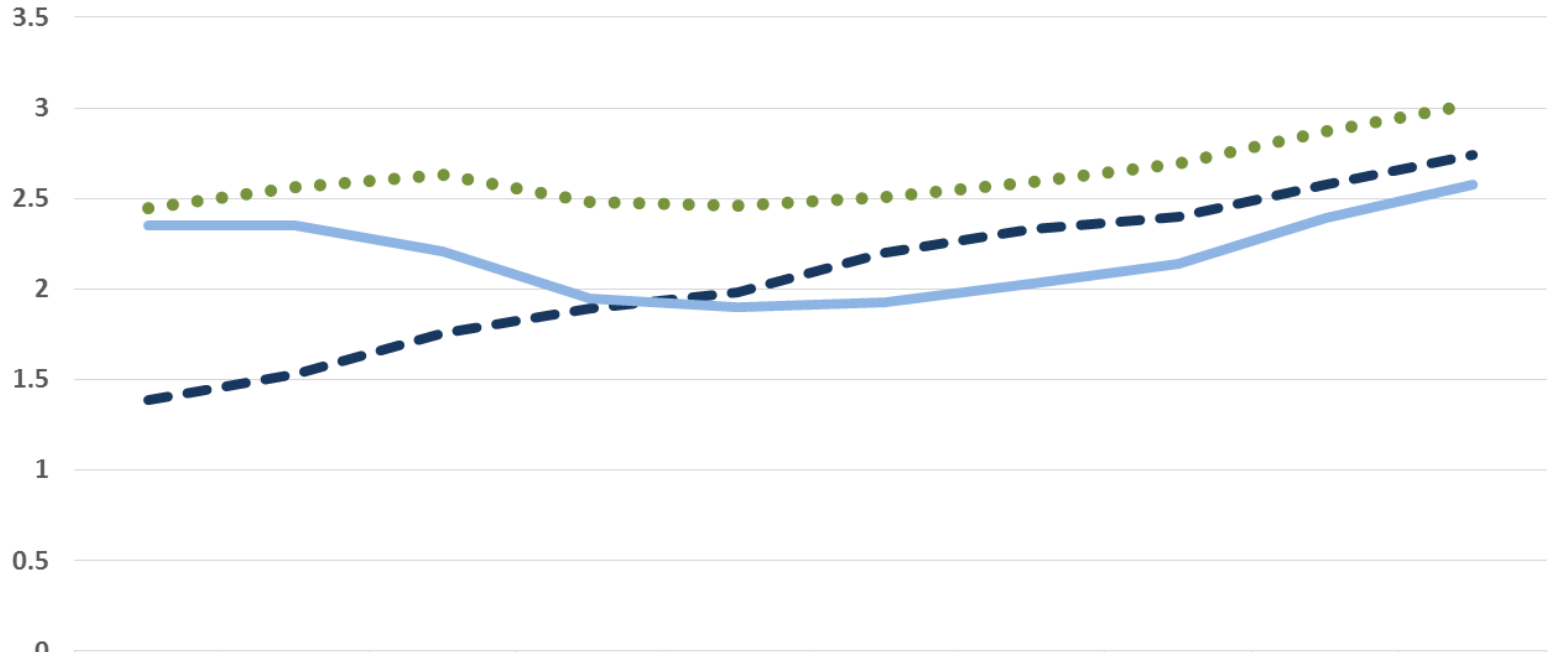
10 Year Treasury Note (7/1/2011 to 5/31/2019)

Current: 2.174 High on 11/8/2018: 3.24 Average: 2.28 Low on 7/8/2016: 1.36



Source: Bloomberg, LP

US Treasury Curve



	3 mo	6 mo	1 yr	2 yr	3 yr	5 yr	7 yr	10 yr	20 yr	30 yr
12/29/2017	1.39	1.53	1.76	1.89	1.98	2.2	2.33	2.4	2.58	2.74
12/31/2018	2.45	2.56	2.63	2.48	2.46	2.51	2.59	2.69	2.87	3.02
5/31/2019	2.35	2.35	2.21	1.95	1.9	1.93	2.03	2.14	2.39	2.58

99) Export

World Interest Rate Probability

United States Instrument Futures: Fed Funds - Effective Fed Effective Rate 2.39

1) Overview

2) Future Implied Probability

Current Implied Probabilities

3) Add/Remove Rates

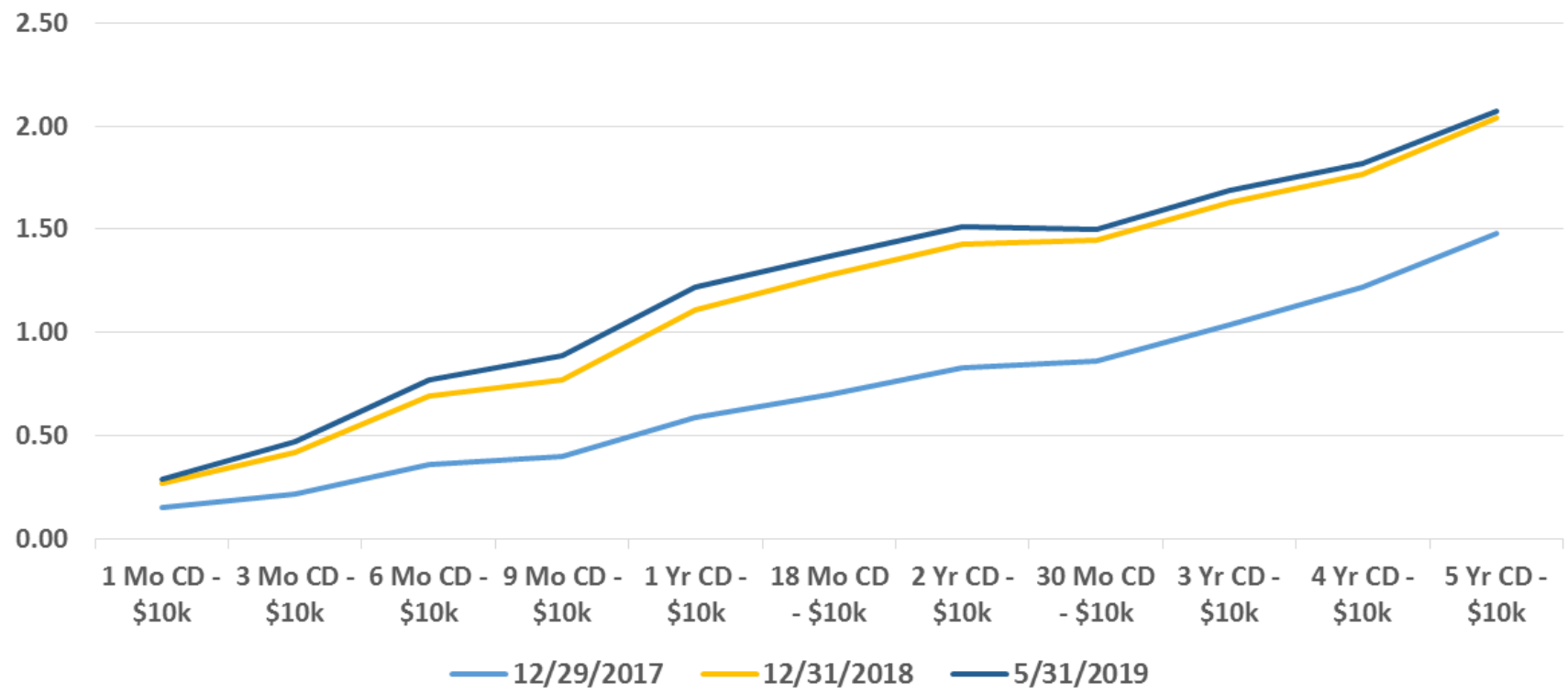
Dates Meeting Calculation

Calculated 06/03/2019

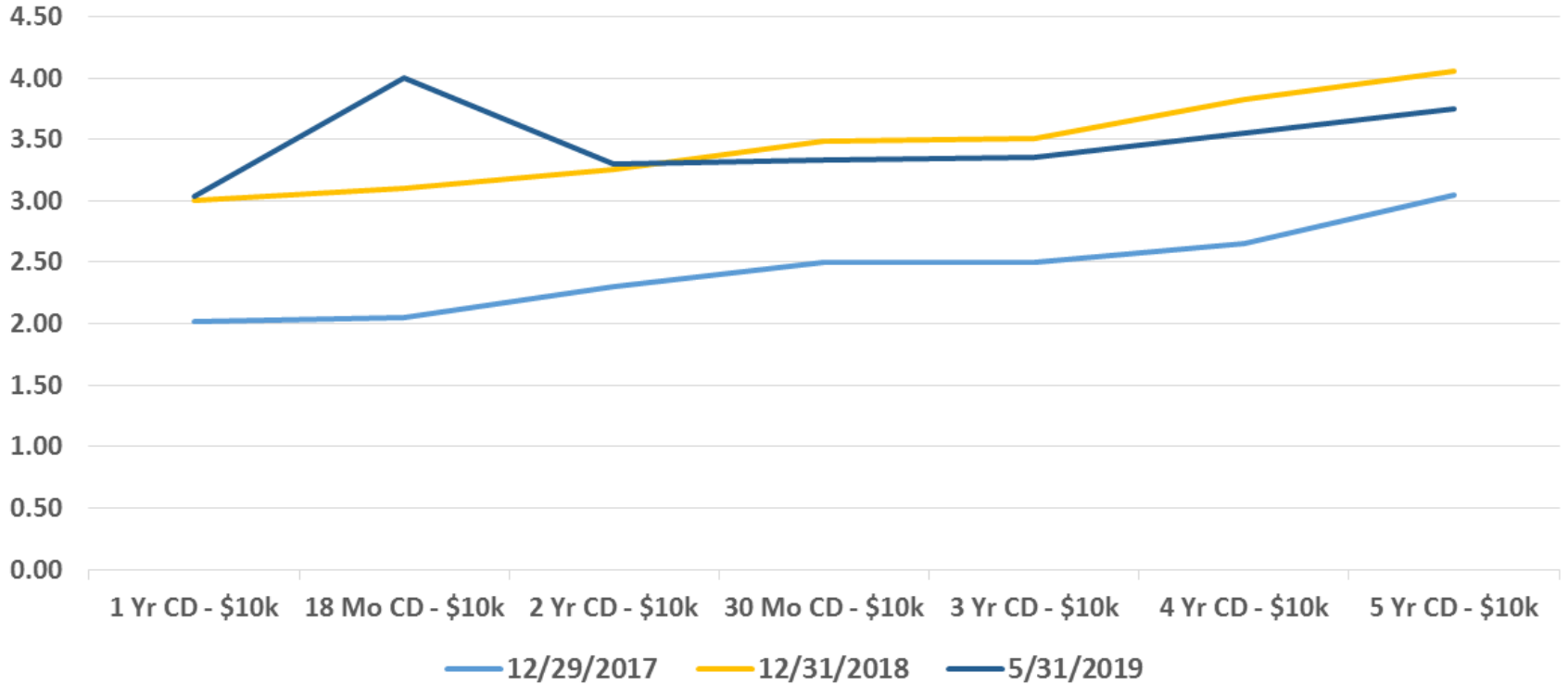
Based on rate 2.25-2.50

Meeting	Hike Prob	Cut Prob	1.25-1.5	1.5-1.75	1.75-2	2-2.25	2.25-2.5	Fwd Rate
06/19/2019	0.0%	19.7%	0.0%	0.0%	0.0%	19.7%	80.3%	2.35
07/31/2019	0.0%	55.1%	0.0%	0.0%	8.7%	46.4%	44.9%	2.24
09/18/2019	0.0%	88.0%	0.0%	6.4%	36.3%	45.3%	12.0%	2.05
10/30/2019	0.0%	93.5%	2.9%	20.1%	40.4%	30.1%	6.5%	1.94
12/11/2019	0.0%	97.4%	13.2%	32.2%	34.2%	16.0%	2.6%	1.79
01/29/2020	0.0%	98.3%	19.9%	32.9%	27.8%	11.3%	1.7%	1.70
03/18/2020	0.0%	98.9%	24.1%	31.3%	22.5%	8.2%	1.1%	1.62
04/29/2020	0.0%	99.1%	25.4%	29.6%	19.8%	6.9%	0.9%	1.57
06/10/2020	0.0%	99.3%	26.4%	27.5%	16.9%	5.6%	0.7%	1.52

Avg National Aggregate Rate (%)



High National Aggregate Rate (%)



Cash-Type Deposit Rates – National Average

