



Market Update

June 2019

PFM Asset
Management LLC

555 Briarwood Circle
Suite 333
Ann Arbor, MI 48108

734.994.9700
pfm.com



Current Market Themes



Capital markets – interest rates plummet

- Interest rates trended significantly lower amid slowing growth and trade concerns, with the 10-year dropping close to 2.00%, a level that has not been breached since the Q4 2016. The 3-month to 10-year part of the yield curve inverted further, renewing concerns about a possible recession in coming months.
- Equity markets, credit spreads, and volatility all reversed their sharp moves from the 4th quarter, ending the 1st quarter nearly back to where they were 6 months prior. The S&P 500 returned 13.6% in the first quarter, the best quarterly return since the 3rd quarter of 2009, and moved to new all-time highs in April. But, escalating trade tensions sent stocks 7% lower in May.

The Fed pivots from “patient” to dovish

- At the January, March, and May meetings, the FOMC kept the Fed Funds target rate unchanged at 2.25% to 2.50% and its formal projections show no rate changes in 2019.
- At a conference in early June, Federal Reserve Chair Powell acknowledged the consequences of escalating trade tensions and affirmed that the Fed will “act as appropriate to sustain the expansion.”
- As a result of slowing growth expectations and increasing risks, the market now expects two to three rate cuts by the end of 2019.



U.S. economic growth expected to slow

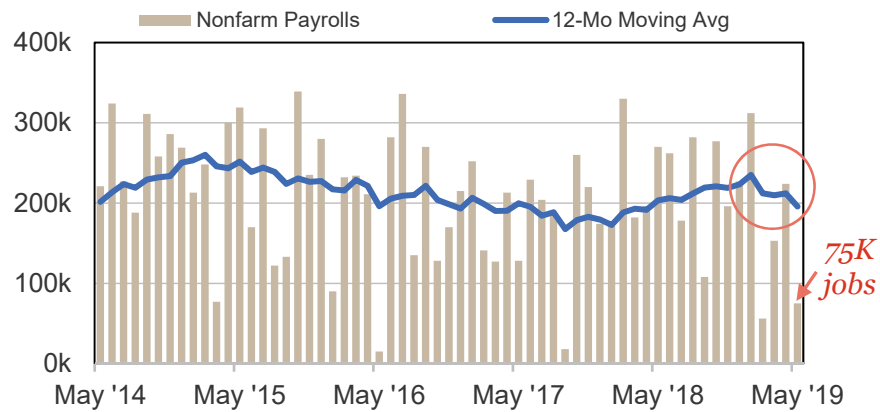


- U.S. GDP grew 3.1% in Q1 of 2019, up from 2.2% in the 4th quarter; however, the headline number may mask underlying weakness. Growth was driven in large part by an unusual improvement in net exports and outsized growth in inventories, both factors which are likely unsustainable. Forecasts for Q2 are substantially lower, with the New York and Atlanta Federal Reserve Banks projecting growth of just 1.0% and 1.4%, respectively.
- Recent economic data has been softening, highlighted by a disappointing May jobs report, a decrease in durable goods orders, and declines in several manufacturing indices.
- The International Monetary Fund recently estimated that the retaliatory tariffs proposed and already in place between the U.S. and China, if implemented, could cost approximately \$455 billion in global GDP over the next 12 months, cutting global economic output by 0.5% in 2020.

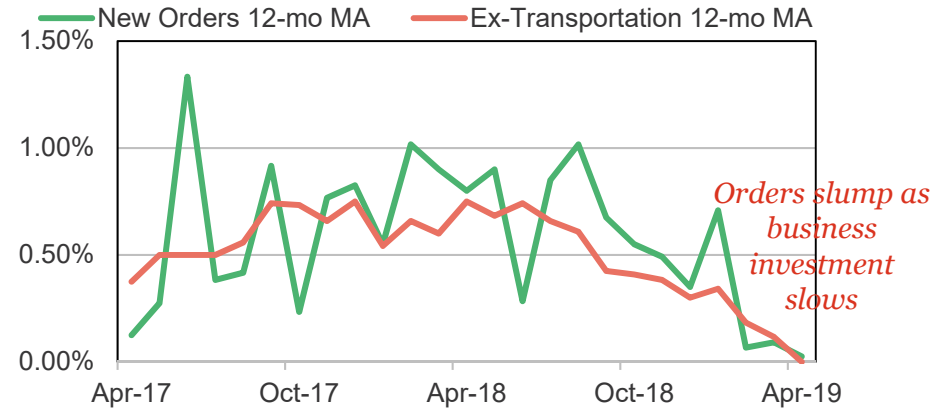


Market Jitters over Weakening Economic Data

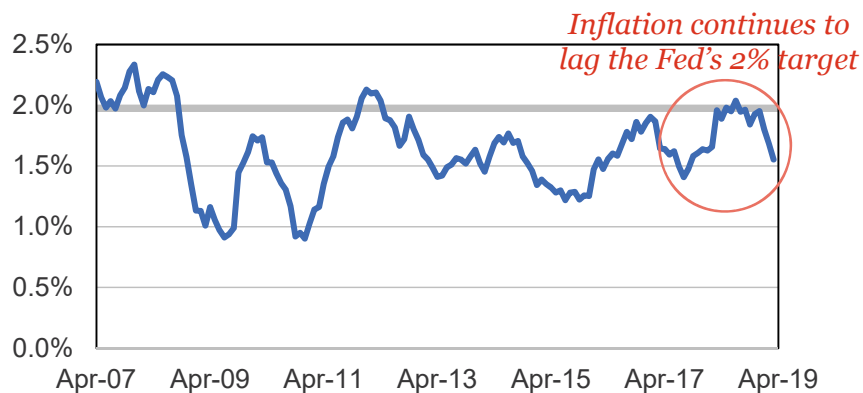
Monthly Change in Nonfarm Payrolls



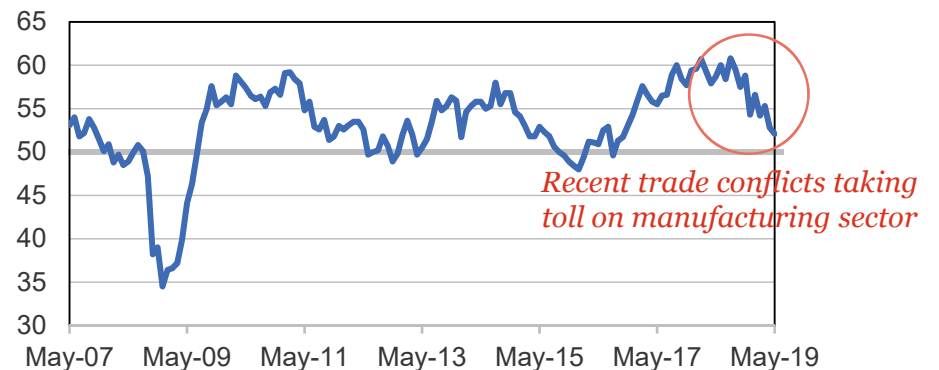
Durable Goods Orders



Inflation (Core PCE YoY)



ISM Manufacturing

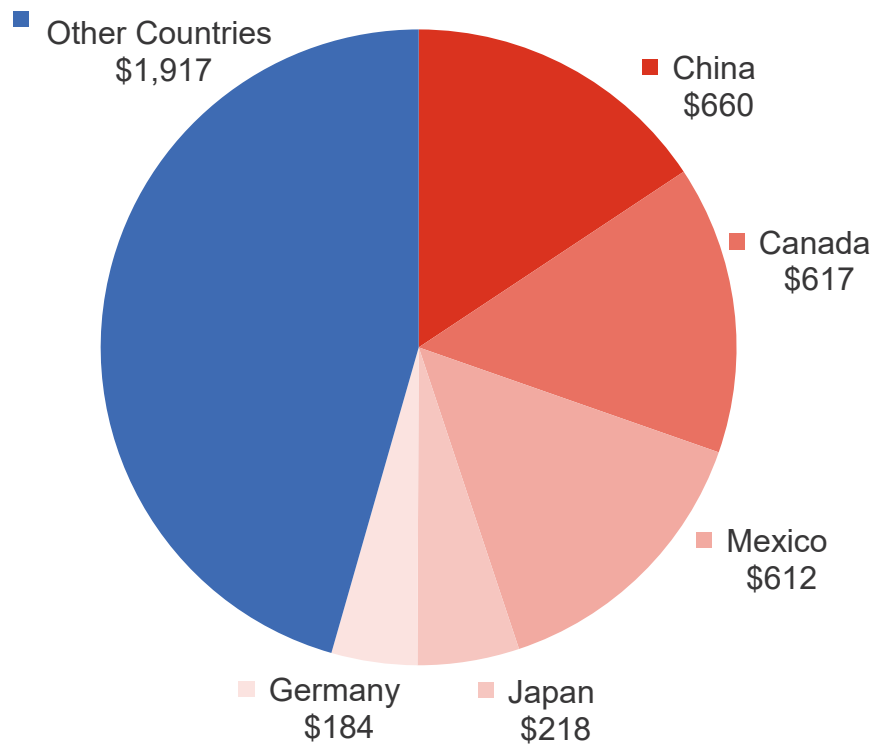


Source: Bloomberg, as of 6/10/2019.

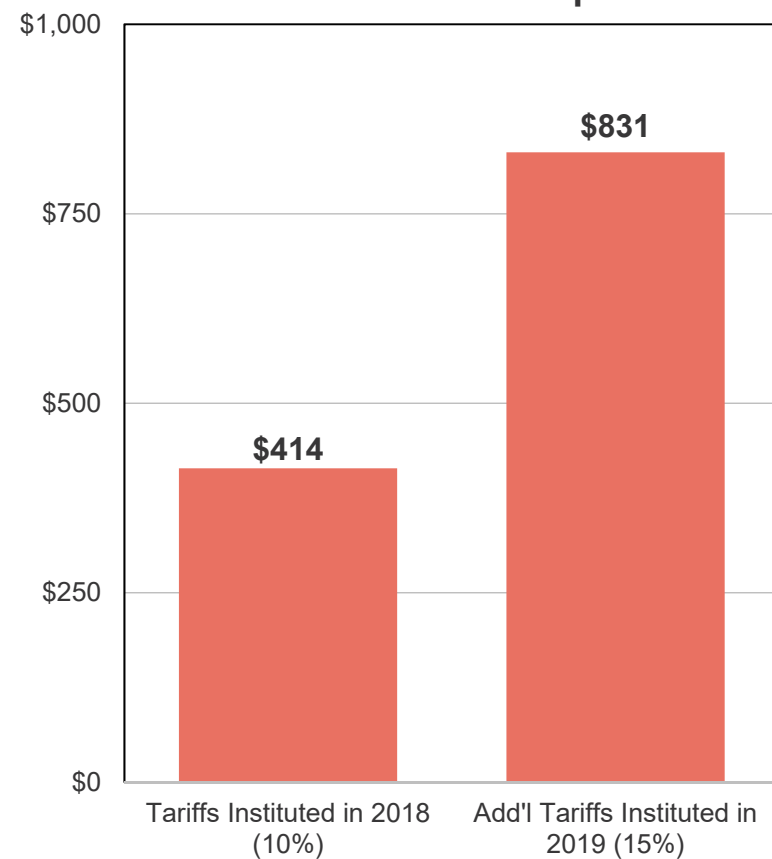


Trade Tensions with the U.S.'s Largest Trading Partners Increases

2018 U.S. Imports & Exports
(Billions)



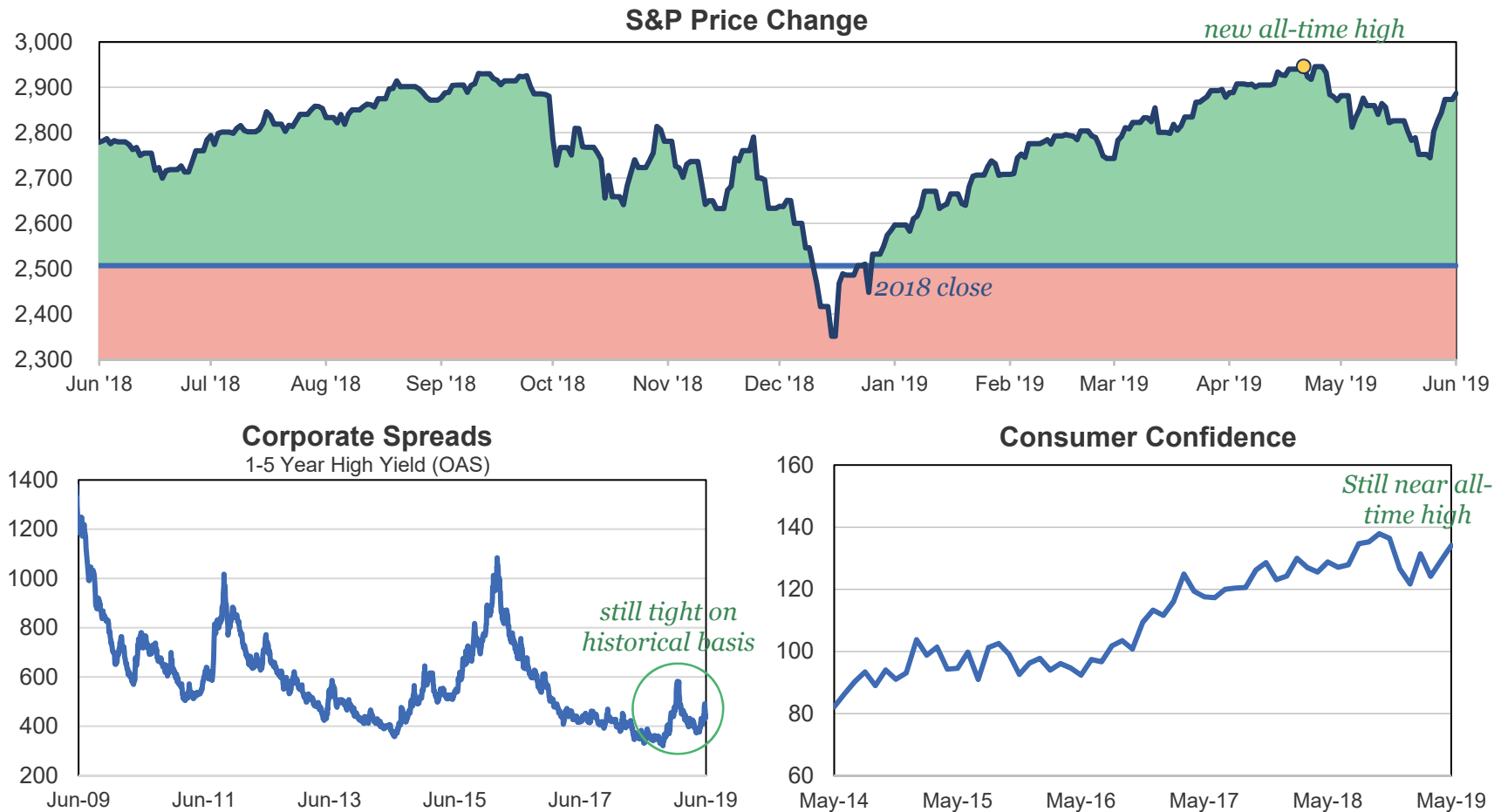
Total Annual Cost per Household of Tariffs on Chinese Imports



Source: U.S. Census Bureau.



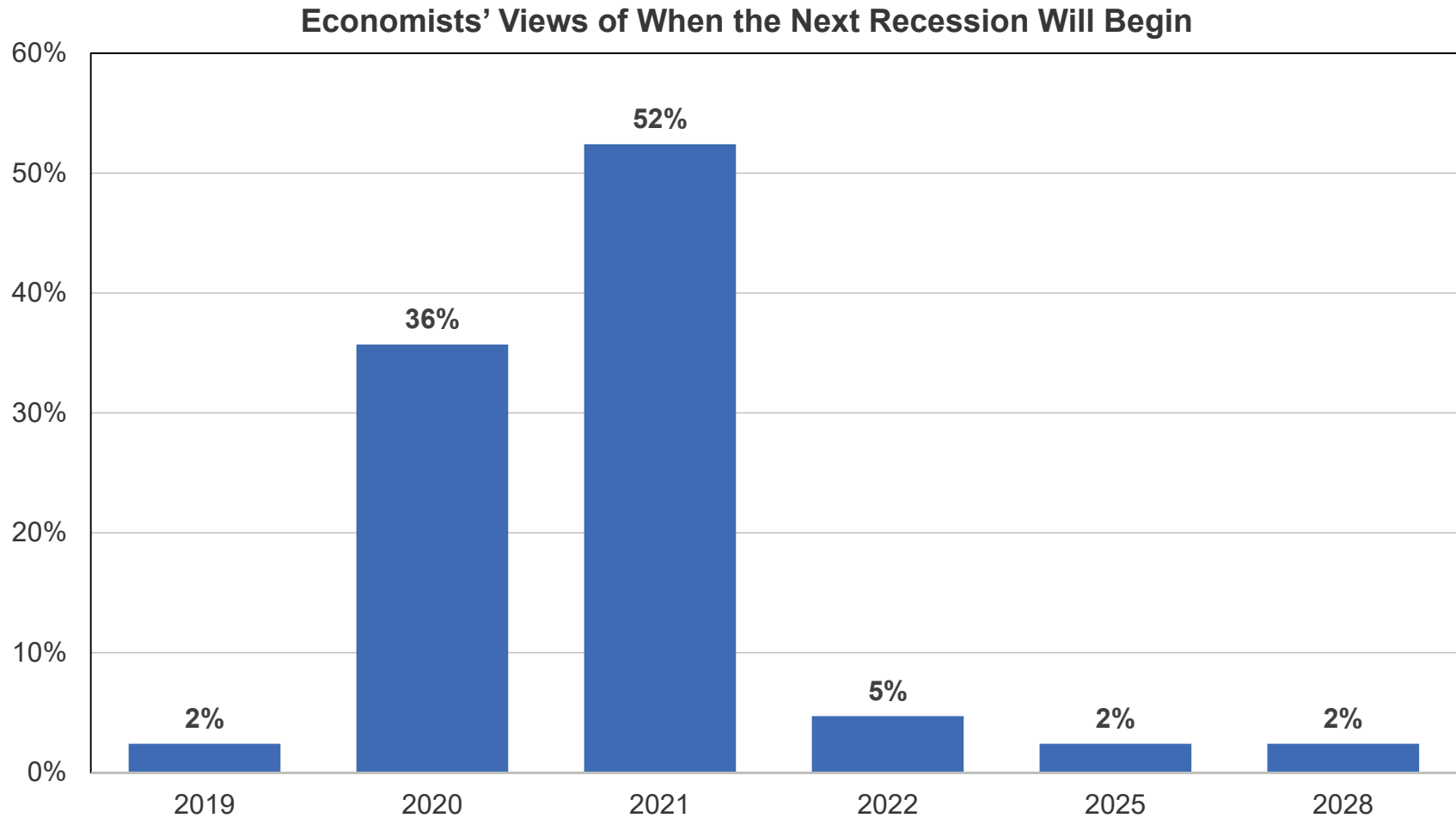
On the Other Hand, Key Economic Metrics Remain Strong



Source: Bloomberg, as of 6/10/2019.



When is the Next Recession?



Source: Wall Street Journal, as of 5/31/19.



Global Growth Outlooks Weaker

World Bank GDP Growth Projections
June 2019

Region	2019	2020
World	3.3% ↓	3.6%
U.S.	2.3% ↓	1.9% ↑
Euro area	1.3% ↓	1.5% ↓
China	6.3% ↑	6.1% ↓
Emerging Markets	4.4% ↓	4.8% ↓

IMF GDP Growth Projections
April 2019

Region	2019	2020
World	2.6% ↓	2.7% ↓
U.S.	1.7% ↓	1.5% ↓
Euro area	1.2% ↓	1.4% ↓
China	6.2%	6.1% ↓
Emerging Markets	4.0% ↓	4.6%

“Emerging and developing economy growth is constrained by **sluggish investment**, and risks are tilted to the downside. These risks include rising **trade** barriers, renewed **financial stress**, and sharper-than-expected **slowdowns** in several major economies...”

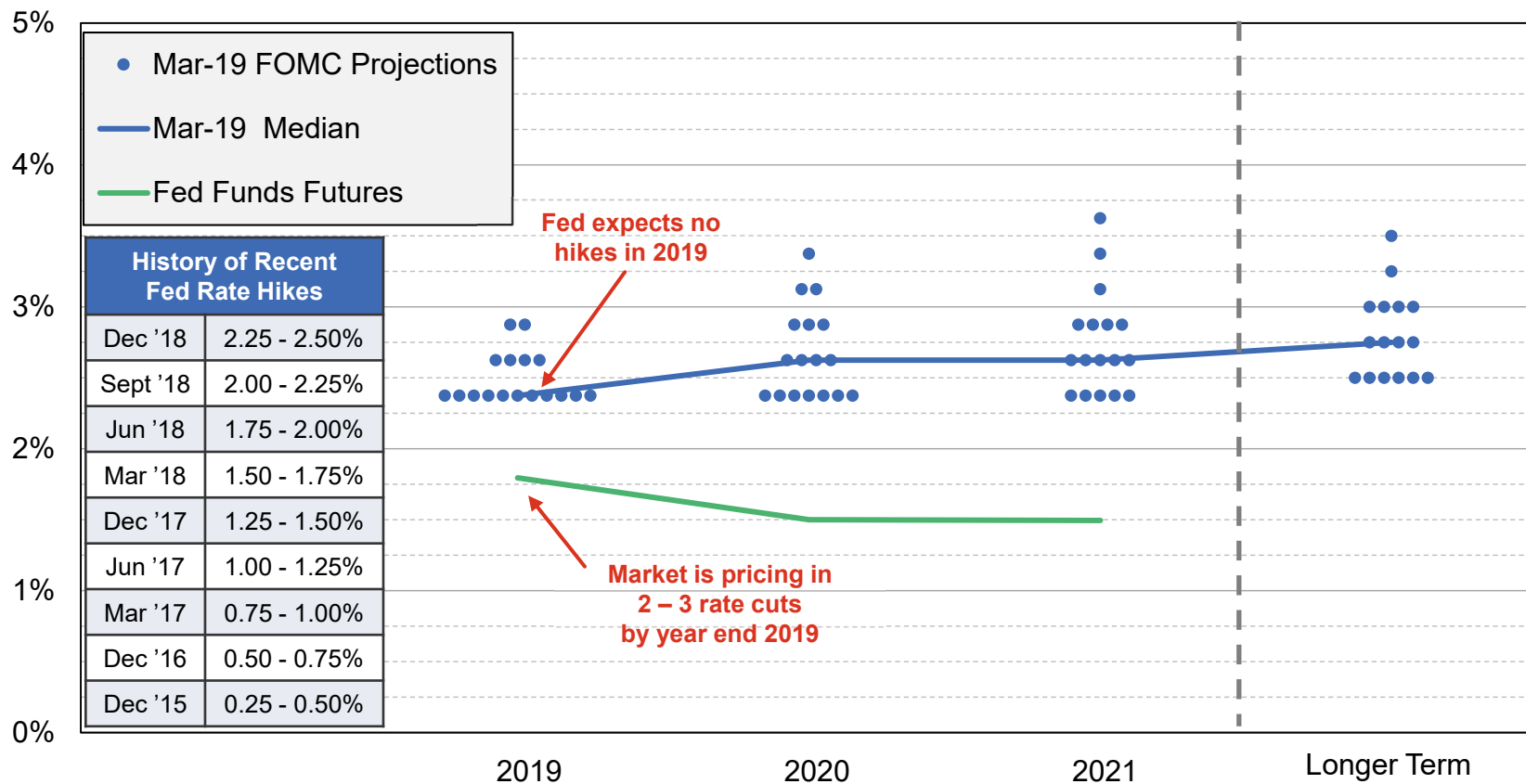
-The World Bank, June 2019 *Global Economic Prospects: Heightened Tensions, Subdued Investment*

Source: World Bank and IMF. Arrows indicate change from prior projection.



Market Now Projecting Multiple Rate Cuts by Year End

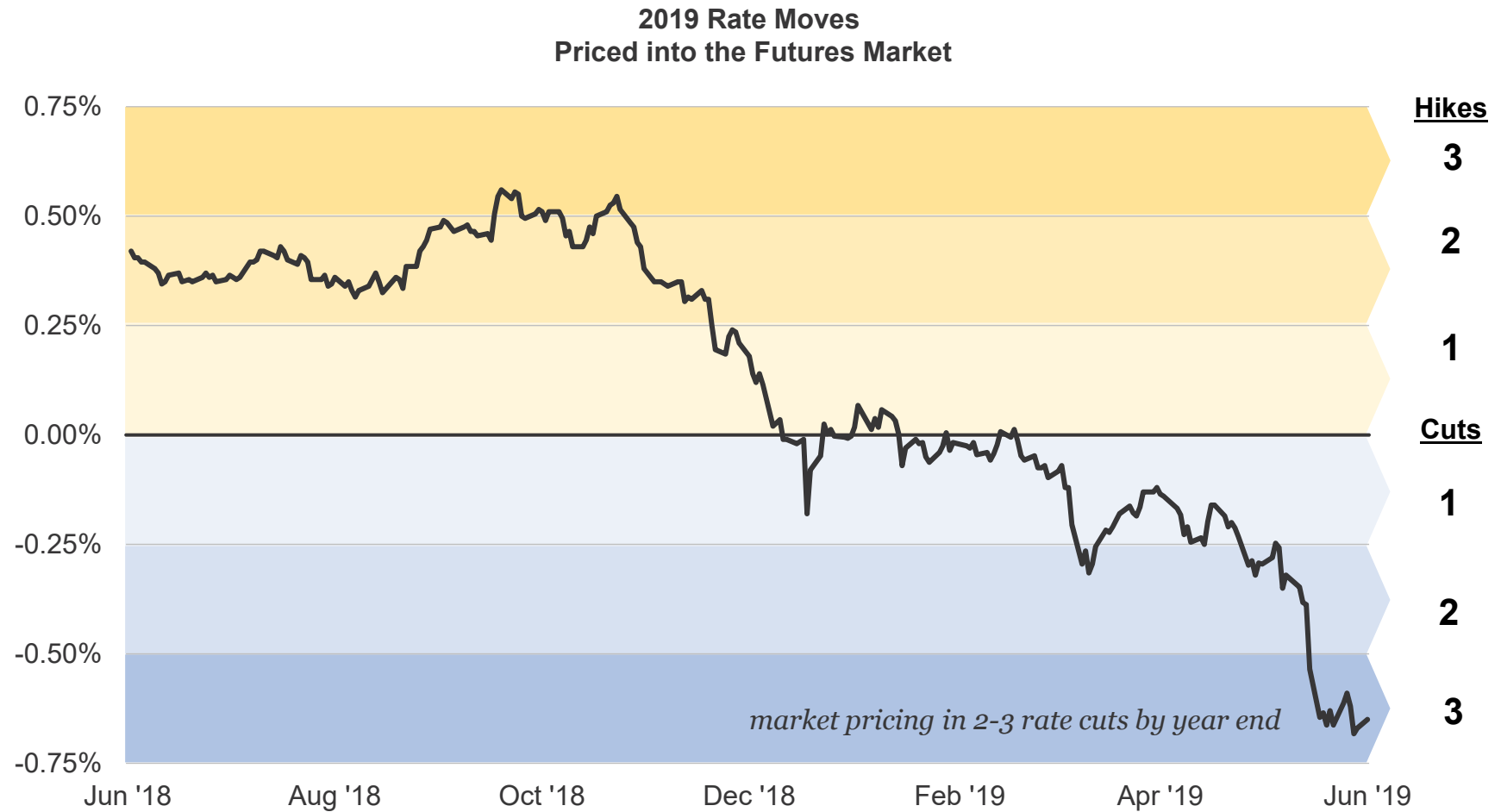
Fed Participants' Assessments of 'Appropriate' Monetary Policy



Source: Federal Reserve and Bloomberg. Individual dots represent each Fed members' judgement of the midpoint of the appropriate target range for the Federal Funds rate at each year-end. Fed funds futures as of 6/10/19.



The Market Expects 2-3 Rate Cuts by Year End



Source: Bloomberg, as of 6/17/2019.



Treasury Yields Continue to Plummet

2-Year Treasury



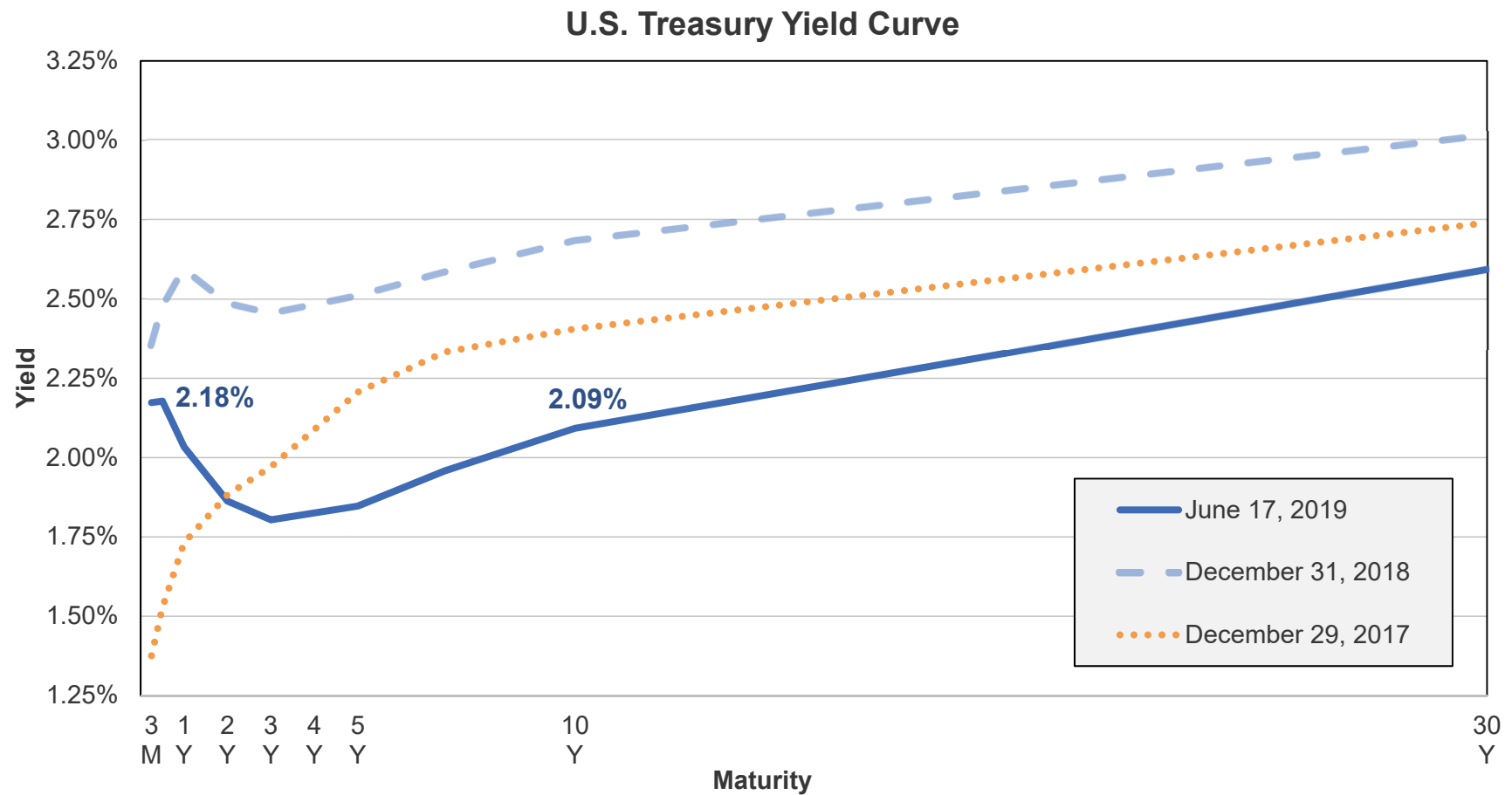
10-Year Treasury



Source: Bloomberg, as of 6/10/19.



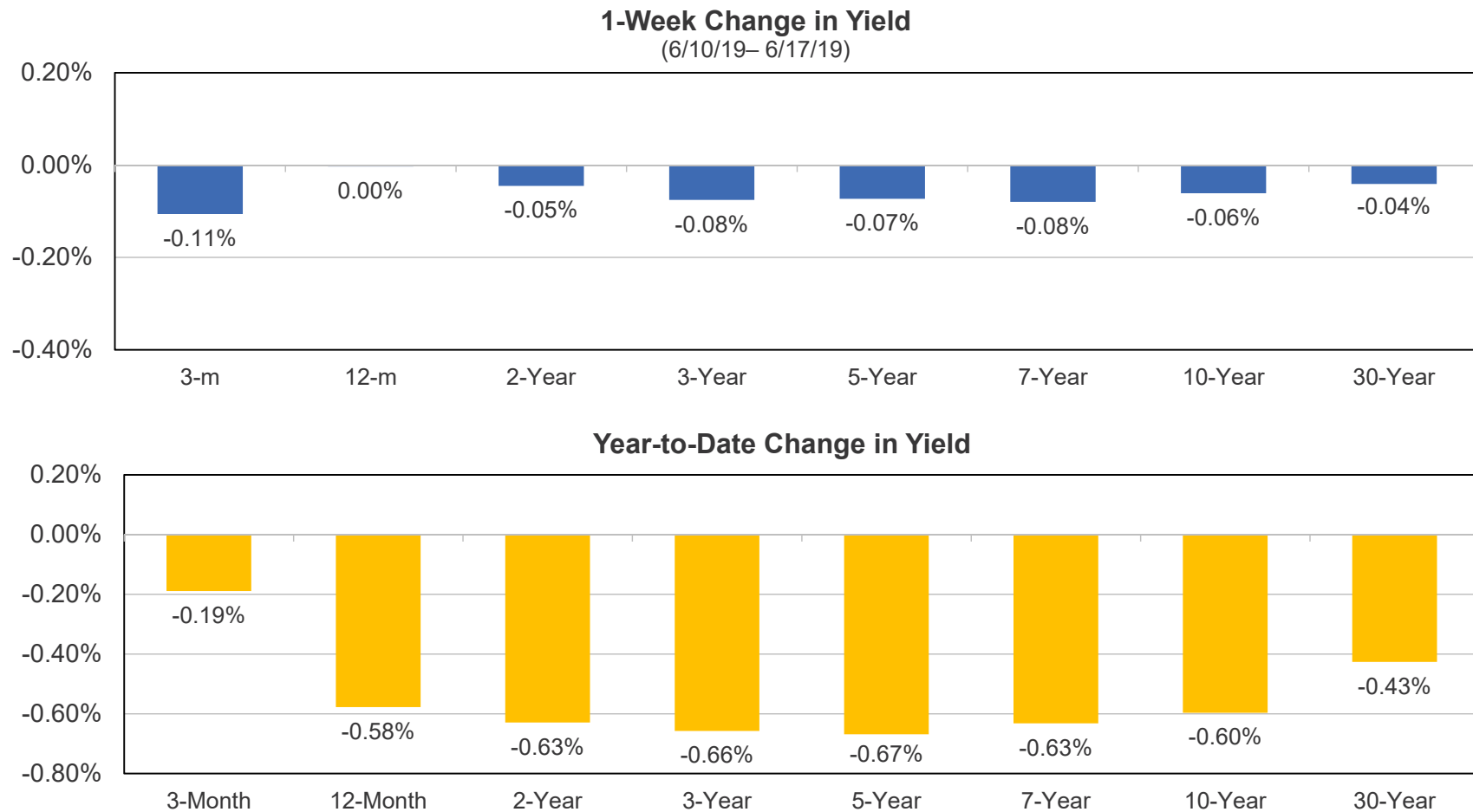
U.S. Treasury Yield Curve Still Inverted



Source: Bloomberg, as of 6/17/2019.



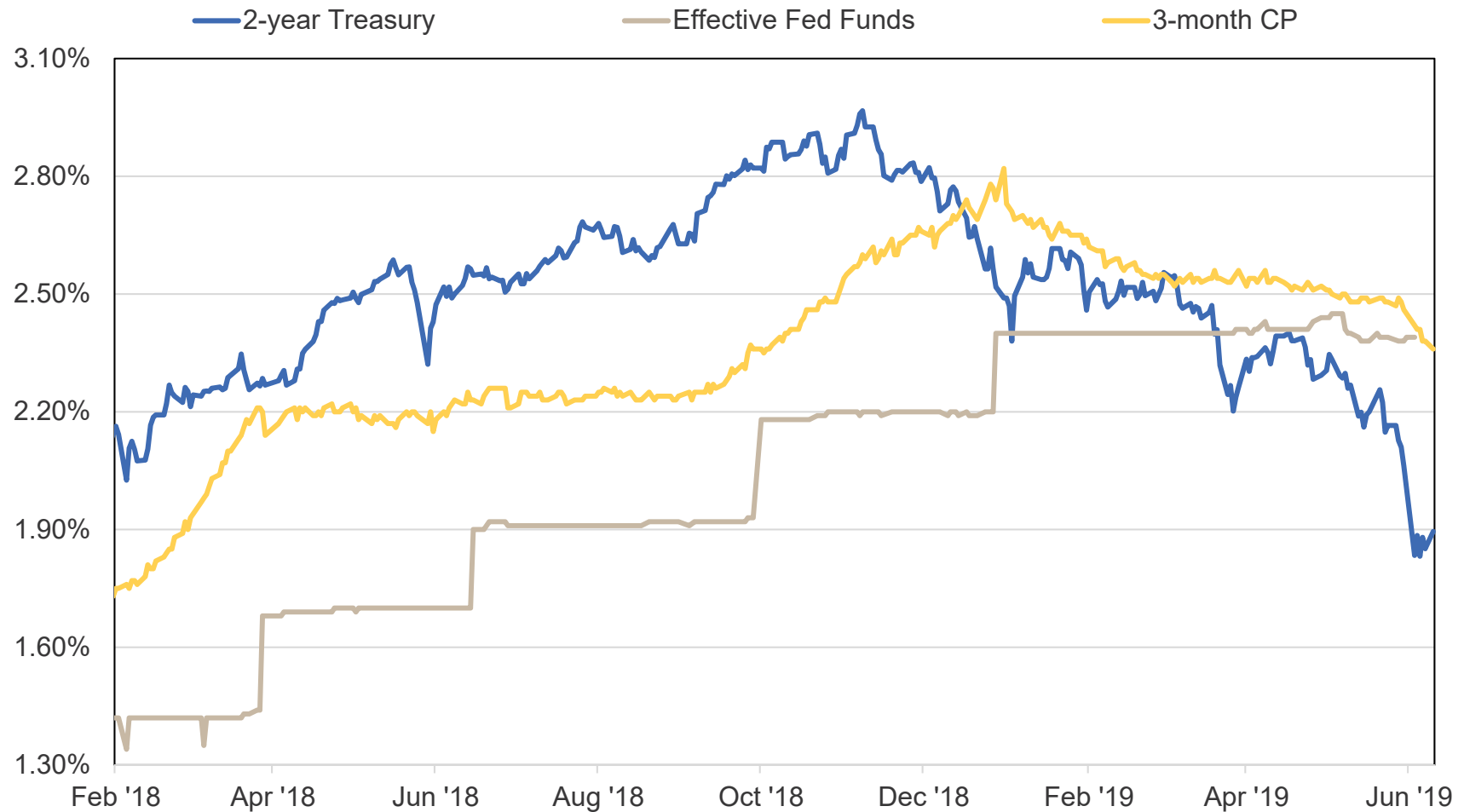
Treasury Yields Have Fallen



Source: Bloomberg, as of 6/17/2019.



Short-Term Yield Relationships Reflect Inverted Curve

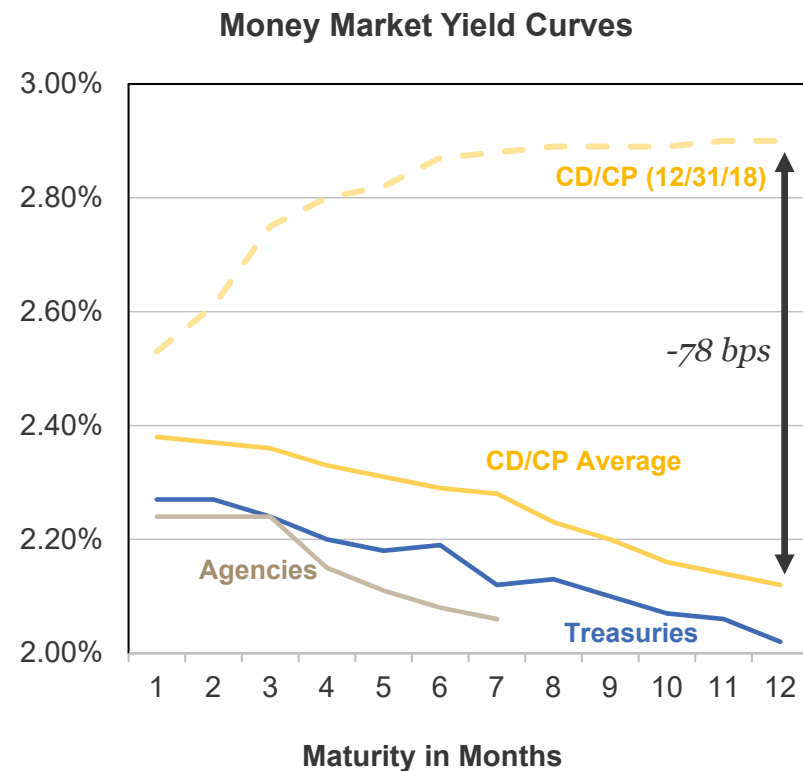
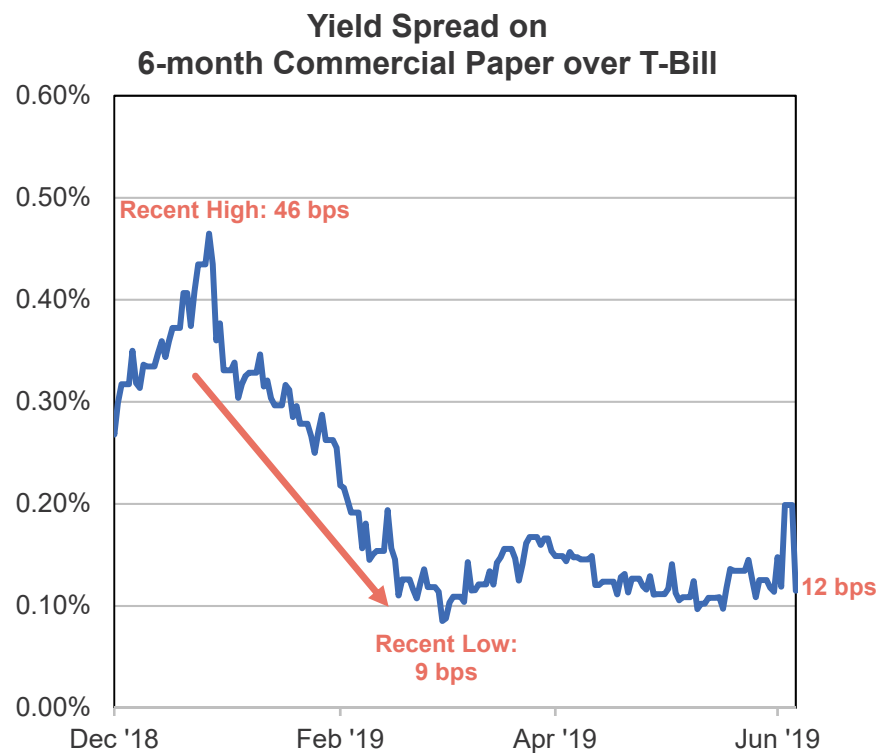


Source: Bloomberg, PFM Trading Desk, as of 6/10/2019. Not a specific recommendation. 3-mo CP yield spread based on A1/P1 rated CP index.



Credit Spreads Remain Tight as Rates Continue to Fall

- After widening significantly in December, credit spreads contracted in the 1st quarter; spreads have stayed tight while the short-term credit curve has flattened further



Source: Bloomberg, as of 6/10/2019. Yields are for indicative purposes only; actual yields may vary by issue.



Interest Earnings Forecast

- To illustrate the impact of the current market conditions to the GLWA portfolio, the January 2019 average yield forecast and the current yield forecast were applied to the 12-month average balances.
- In January of 2019, the average projected yield for Fiscal Year 2020 ranged from 2% to 2.5% based on the investment type. Using the 12-month average balances, the overall yield for the portfolio would have been 2.2% with estimated earnings of \$23.2 million.
- The current yield projection now ranges from 1.5% to 1.75%. Using the same 12-month average balances, the overall yield forecast is now 1.64% with estimated earnings of \$17.4 million.
- The estimated earnings have decreased by \$5.8 million, or 25%.
- For Fiscal Year 2020, GLWA has budgeted interest income of \$19.3 million. A 25% reduction would result in estimated earnings of \$14.5 million.

Earnings Estimate with Original Interest Rate Forecast

<u>Investment Type</u>	<u>Average 12-Month Balance</u>	<u>Average Yield (FY 2020)</u>	<u>Approximate Earnings</u>
Cash / Money Market	\$447,777,915	2.00%	\$8,955,558
Cash-Flow Driven Managed Funds	\$392,714,691	2.25%	\$8,836,081
Benchmarked Managed Funds	\$216,863,701	2.50%	\$5,421,593
Total	\$1,057,356,307	2.20%	\$23,213,231

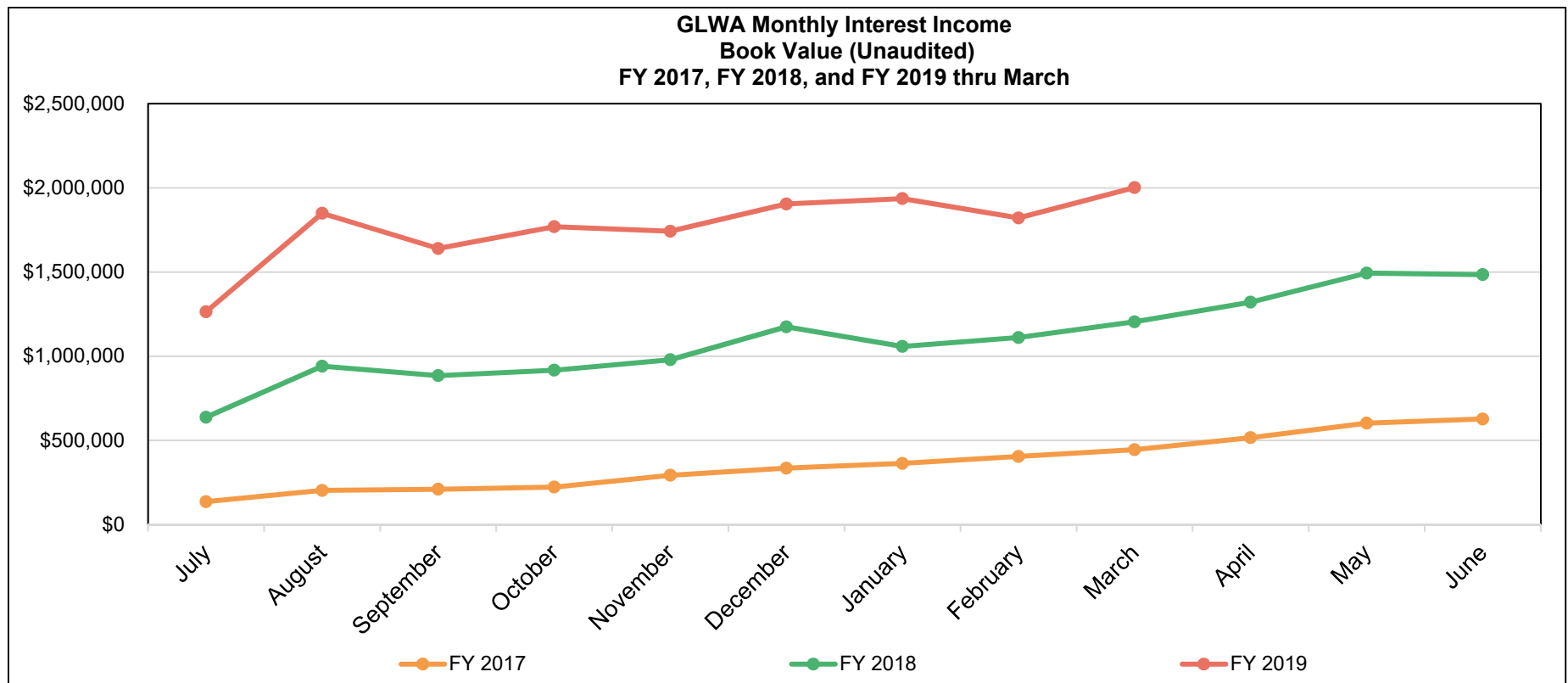
Earnings Estimate with Current Interest Rate Forecast

<u>Investment Type</u>	<u>Average 12-Month Balance</u>	<u>Average Yield (FY 2020)</u>	<u>Approximate Earnings</u>
Cash / Money Market	\$447,777,915	1.50%	\$6,716,669
Cash-Flow Driven Managed Funds	\$392,714,691	1.75%	\$6,872,507
Benchmarked Managed Funds	\$216,863,701	1.75%	\$3,795,115
Total	\$1,057,356,307	1.64%	\$17,384,291



Great Lakes Water Authority Monthly Investment Income

- The Authority has earned \$15,928,947 in investment income through March for fiscal year 2019 on a book value basis compared to \$8,907,945 for the first nine months of fiscal year 2018.
- The monthly investment earnings continue on an upward trend. Investment earnings for both April and May 2019 were over \$2 million.
- Despite the current market outlook, GLWA investment strategy has yielded positive results year over year. GLWA and PFM will continue to work together to identify strategies to maximize future investment income while meeting the objectives of safety and liquidity.





Important Disclosures

This material is based on information obtained from sources generally believed to be reliable and available to the public, however PFM Asset Management LLC cannot guarantee its accuracy, completeness or suitability. This material is for general information purposes only and is not intended to provide specific advice or a specific recommendation. All statements as to what will or may happen under certain circumstances are based on assumptions, some but not all of which are noted in the presentation. Assumptions may or may not be proven correct as actual events occur, and results may depend on events outside of your or our control. Changes in assumptions may have a material effect on results. Past performance does not necessarily reflect and is not a guaranty of future results. The information contained in this presentation is not an offer to purchase or sell any securities.

The views expressed within this material constitute the perspective and judgment of PFMAM at the time of distribution and are subject to change. Any forecast, projection, or prediction of the market, the economy, economic trends, and equity or fixed-income markets are based upon current opinion as of the date of issue, and are also subject to change. Opinions and data presented are not necessarily indicative of future events or expected performance. Information contained herein is based on data obtained from recognized statistical services, issuer reports or communications, or other sources, believed to be reliable. No representation is made as to its accuracy or completeness.



pfm