Yolo County
Investment Review Second Quarter 2019

Presented By

Lesley Murphy, Senior Managing Consultant

August 20, 2019

50 California Street
Suite 2300
San Francisco, CA 94111
415-982-5544

213 Market Street
Harrisburg, PA 17101
717-232-2723

PFM Asset
Management LLC
pfm.com

Economic and Interest Rate Update

Current Market Themes

Capital markets – interest rates plummet

- U.S. Treasury yields fell for a third consecutive quarter, with maturities beyond one year falling 40 to 50 basis points in Q2. As of June 30, yields on the majority of benchmark U.S. Treasury maturities were near 18-month lows. The yield curve remained inverted, with the inversion having spilled into the money market space.
- Equity markets climbed to new record highs upon expectations of rate cuts. S&P 500 returned 4.3% for the second quarter and 17.4% for the first half of 2019, marking its best first-half performance in over 20 years.

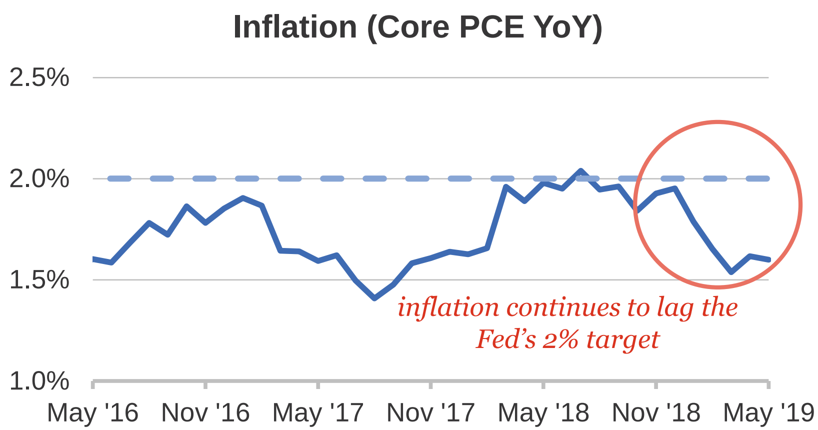
The Fed will “act… to sustain the expansion”

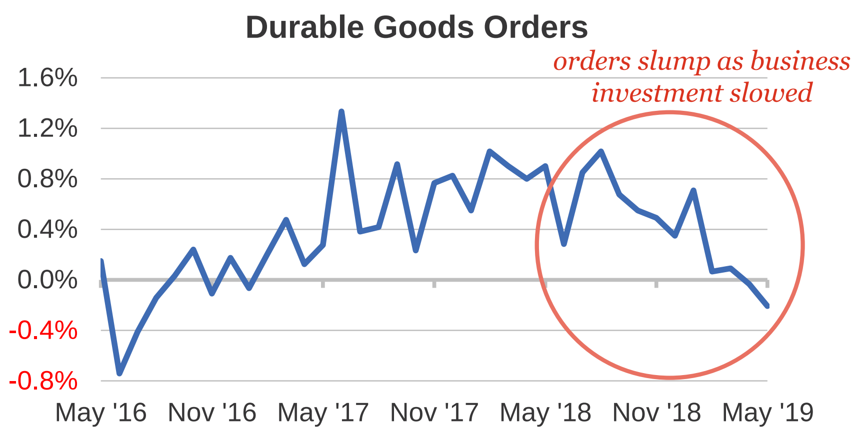
- The FOMC kept the fed funds rate unchanged at a target range of 2.25% to 2.50% at its May and June meetings but recently acknowledged multiple crosscurrents, such as trade tensions and slower global growth, that are likely to result in easier monetary policy. The market now widely expects multiple rate cuts in the second half of 2019.
- Fed Chair Jerome Powell affirmed that the Fed will “act as appropriate to sustain the expansion.” Powell also acknowledged that acting preemptively to cut rates in light of a possible slowdown may be best for the economy, stating that “an ounce of prevention is worth a pound of cure.”

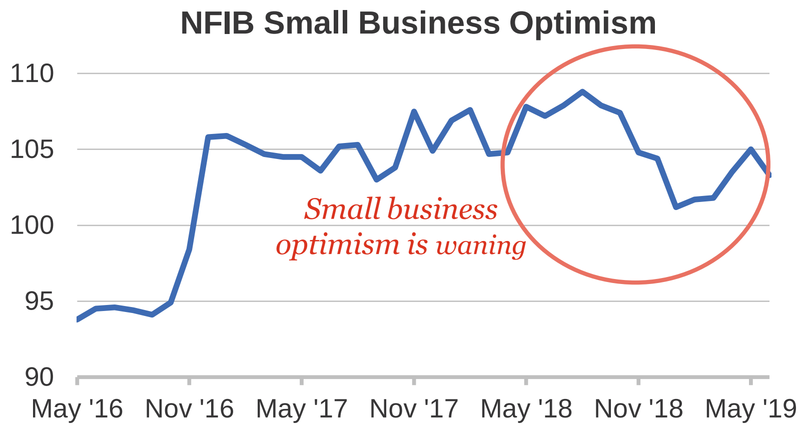
U.S. economic growth expected to slow from faster-than-expected first quarter

- After GDP growth of 3.1% in the first quarter, economists’ expectations for Q2 growth are lower, with economists projecting growth within the 1.5% to 2.0% range. Areas of weakness include recent slowdown in ISM manufacturing data and durable goods orders.
- President Trump increased tariffs on $200 billion of Chinese imports, and China retaliated by increasing tariffs on $60 billion of U.S. imports. Although both sides agreed to a truce at the June G-20 Summit, the recent upheaval triggered market volatility.
- Recent economic data has been mixed, with a 49-year low unemployment rate and a pickup in retail sales but a slowing of manufacturing activity and sub-target inflation.

Some Economic Data Shows Signs of Weakening

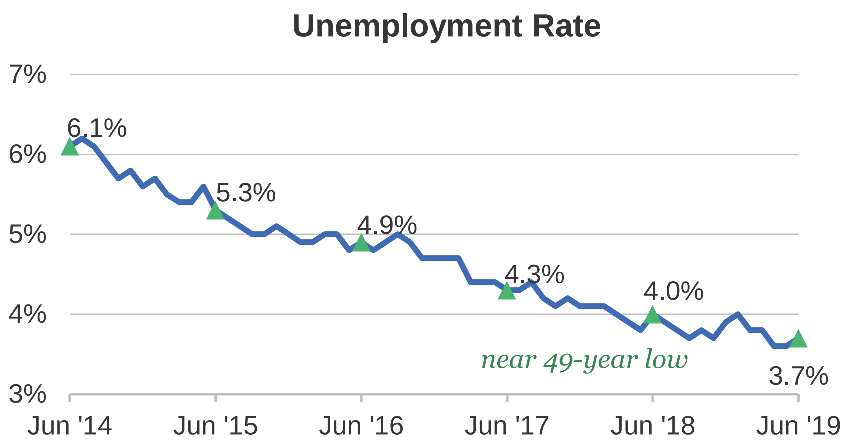


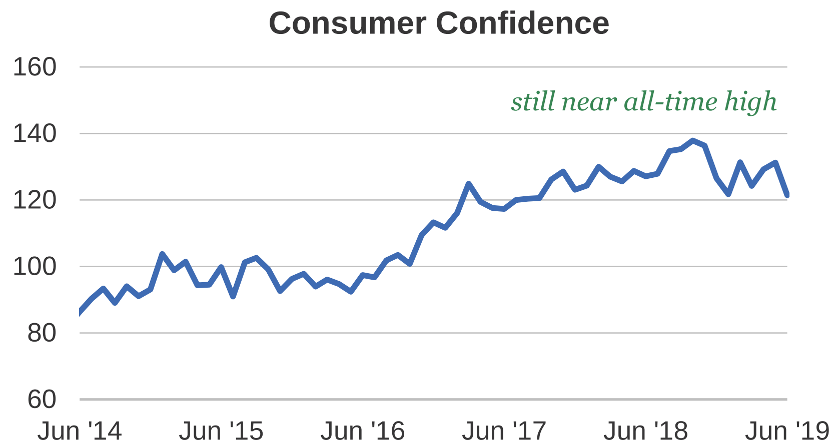


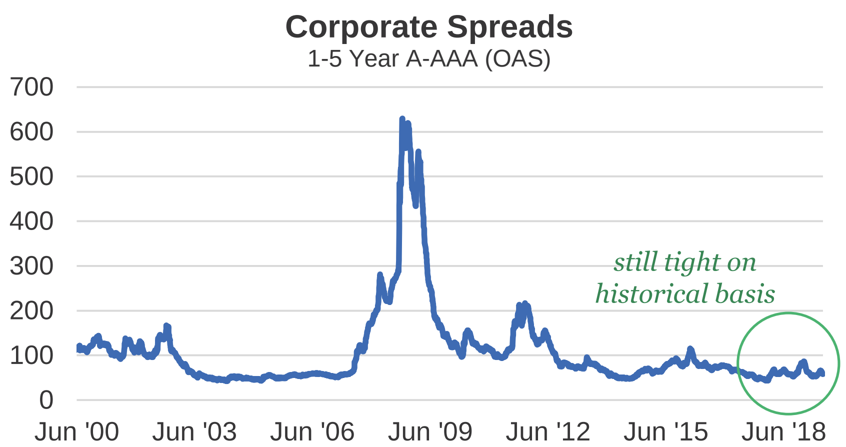


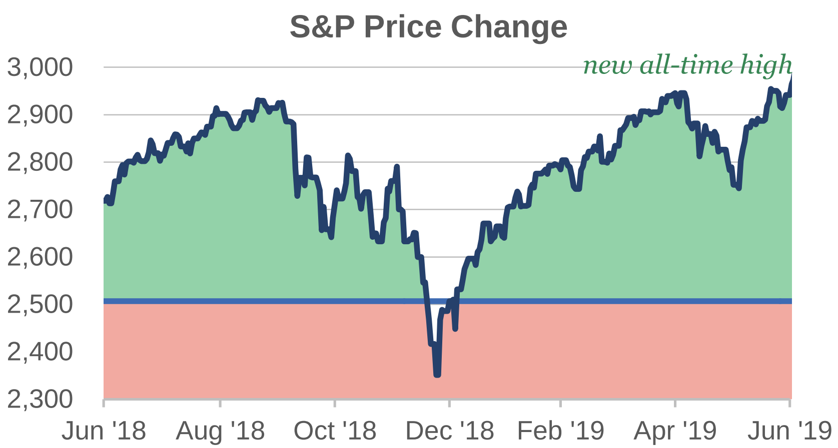
Source: Bloomberg, as of 6/30/2019.

However, Many Broad Metrics Are Still Strong



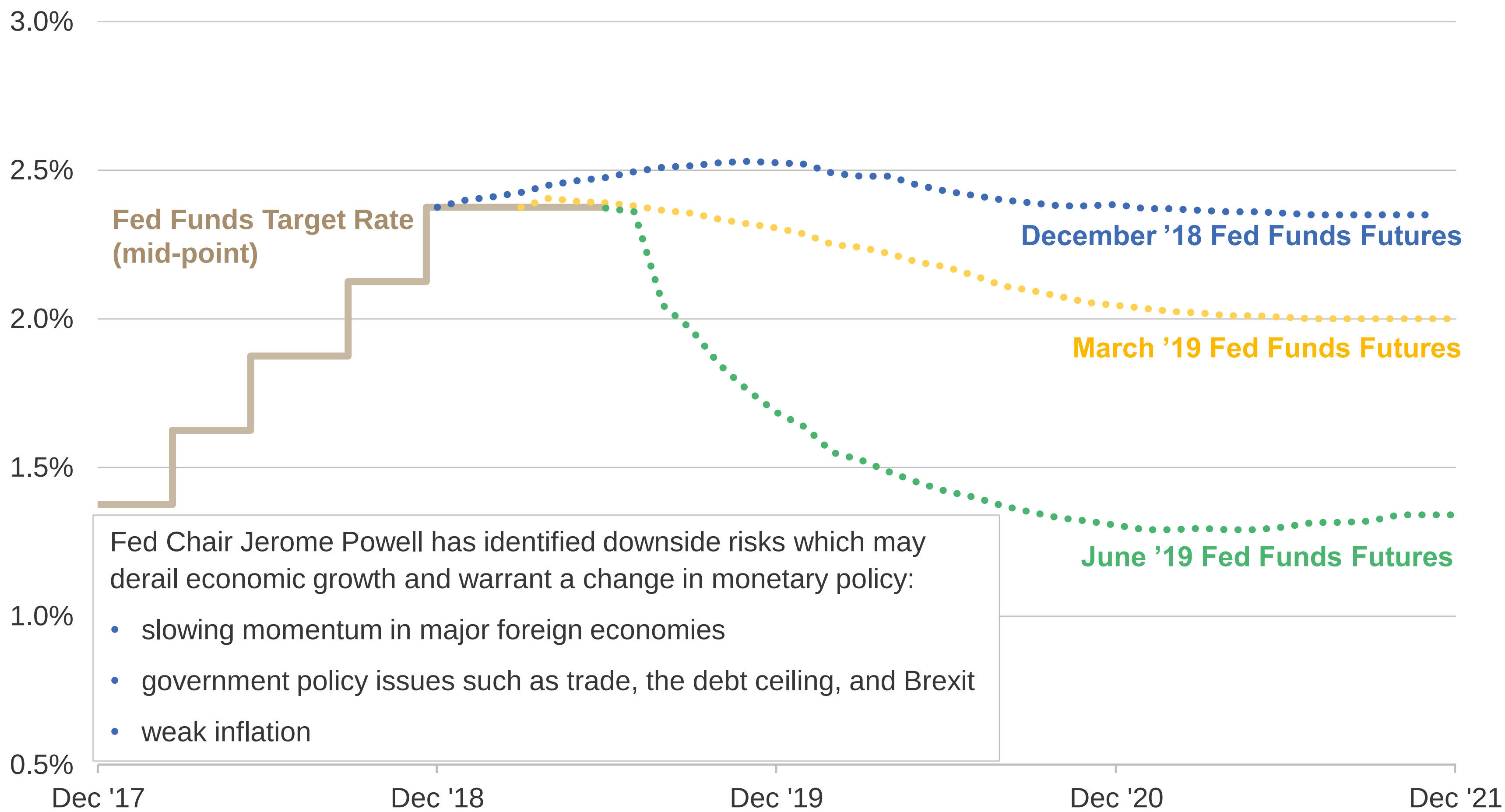






Source: Bloomberg, as of 6/30/2019.

Fed's Pivot on Monetary Policy Has Market Expecting Multiple Rate Cuts

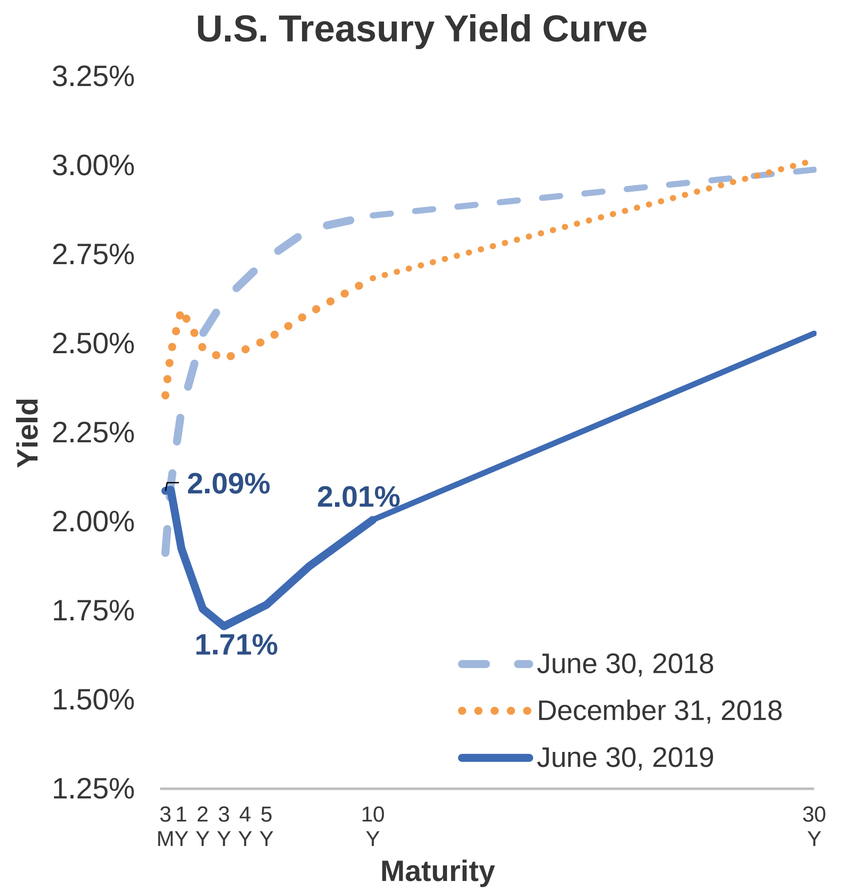


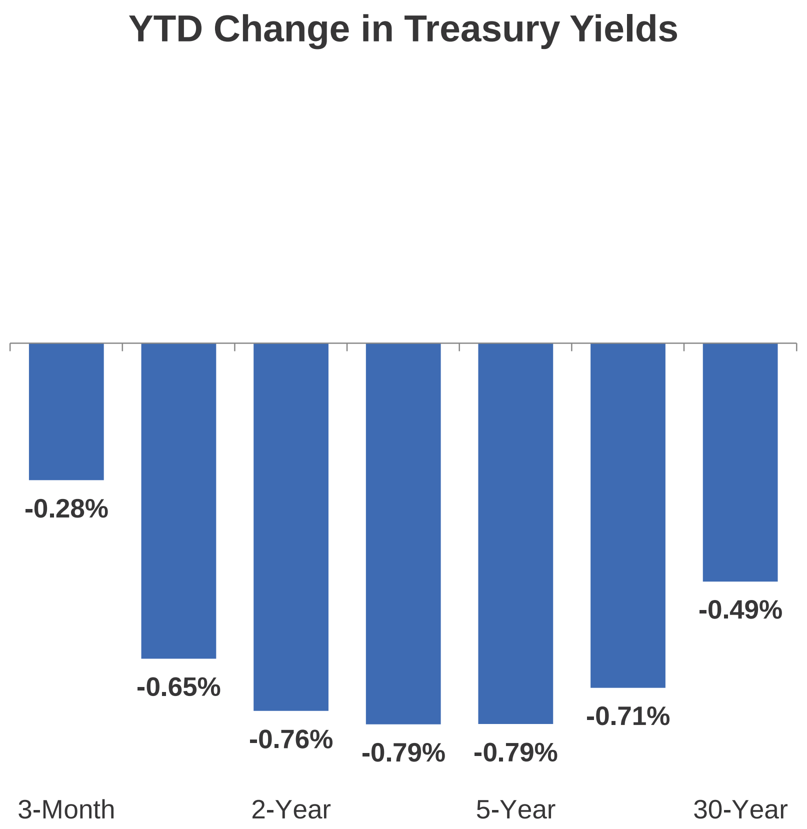
Fed Chair Jerome Powell has identified downside risks which may derail economic growth and warrant a change in monetary policy:

- slowing momentum in major foreign economies
- government policy issues such as trade, the debt ceiling, and Brexit
- weak inflation

Source: Federal Reserve.

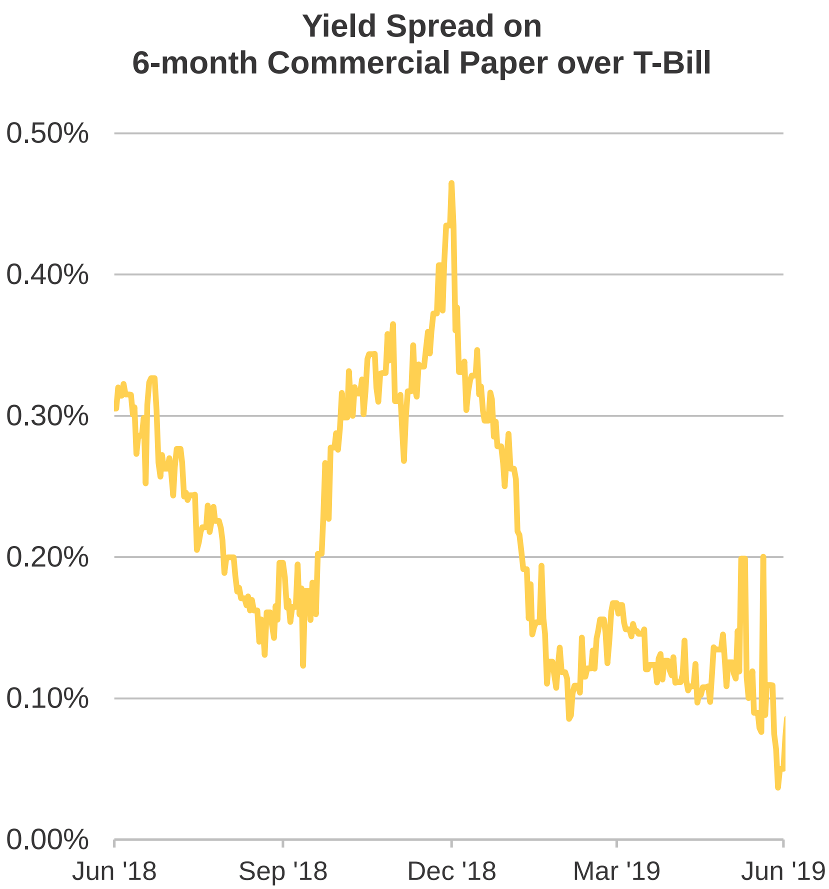
Yield Curve Inversion Reflects Less Certain Economic Outlook

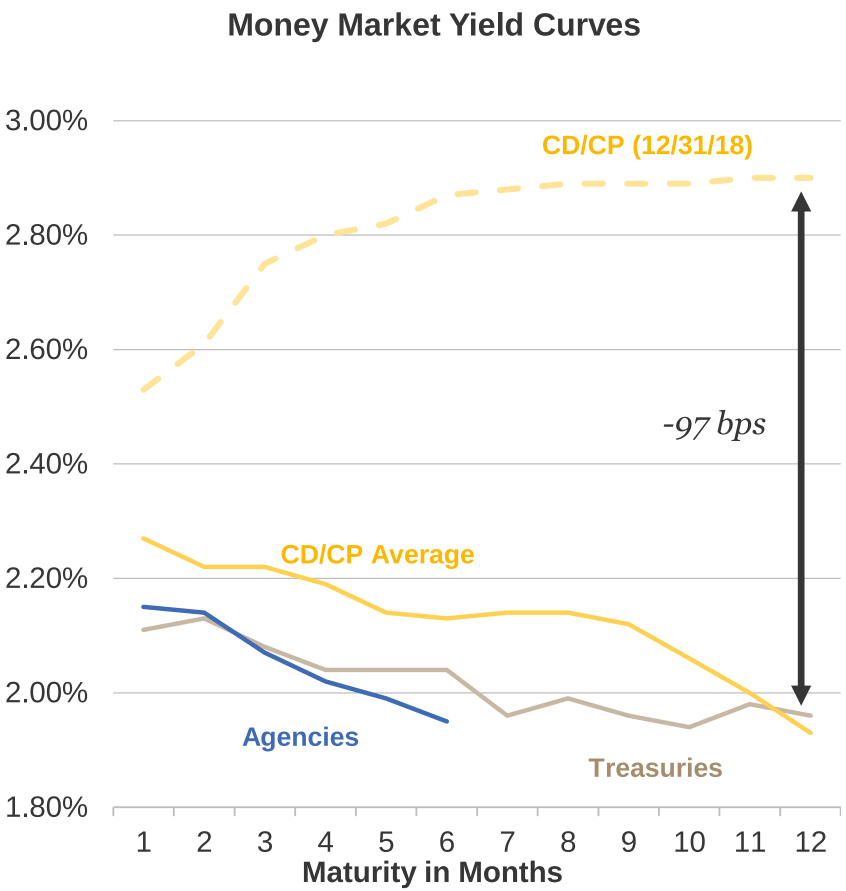




Source: Bloomberg, as of 6/30/2019.

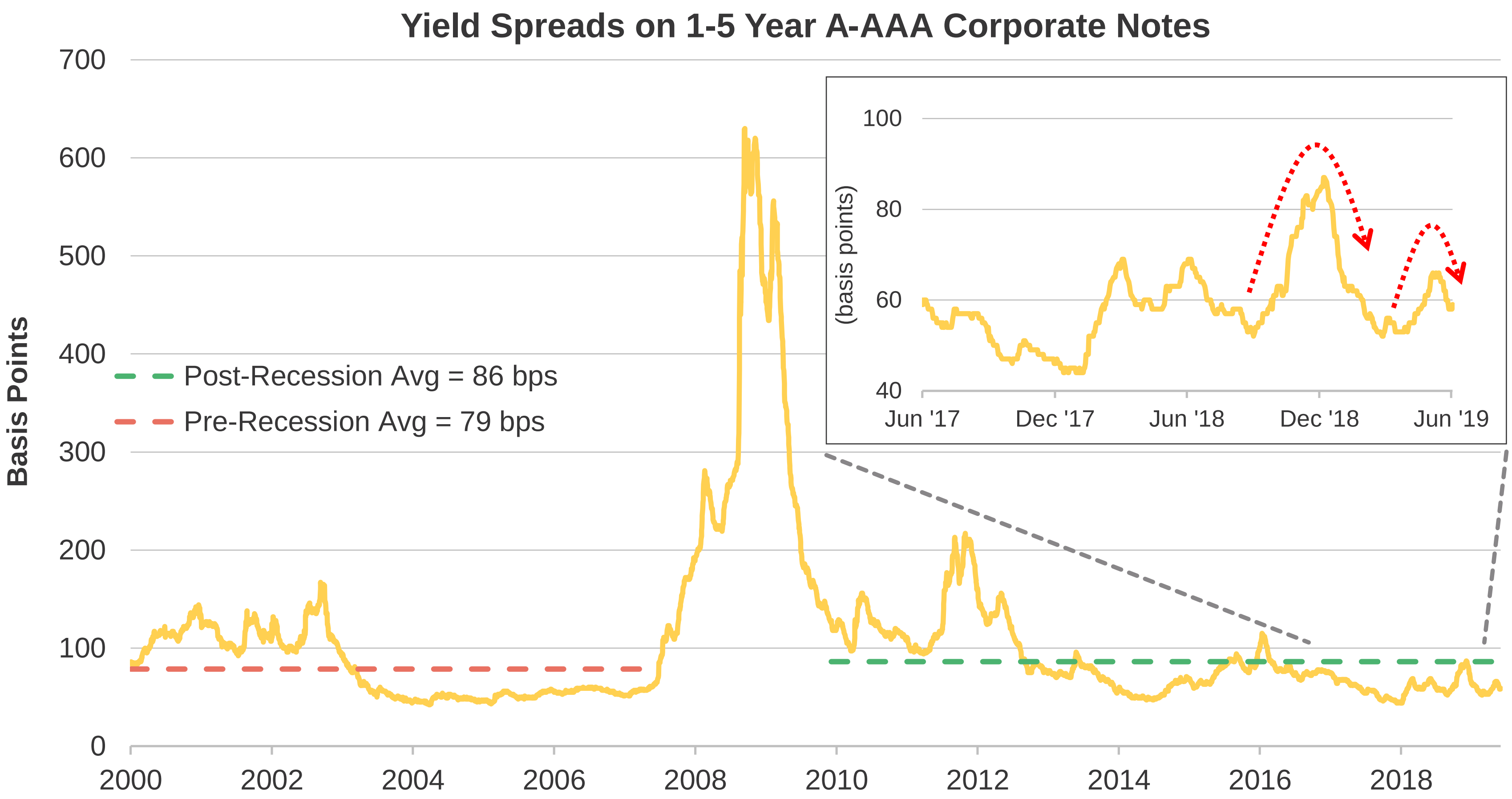
Short-Term Credit: Yield Curve Inversion Spills into Money Market Space





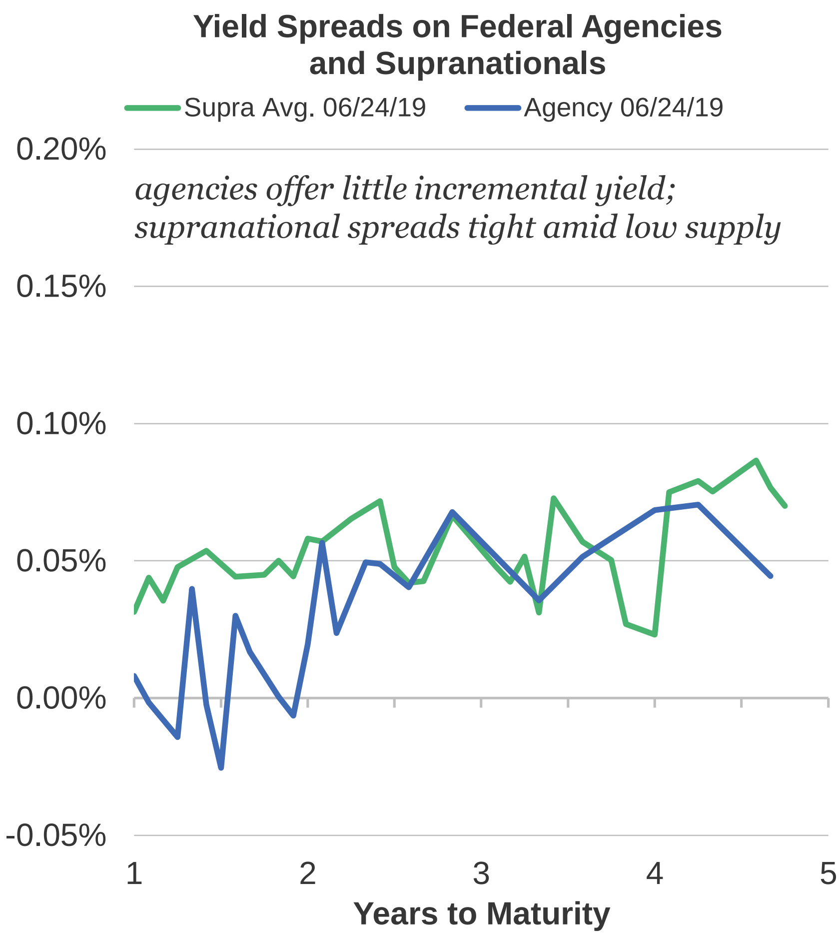
Source (left): Bloomberg as of 6/30/2019. Source (right): PFM Trading Desk, as of 7/11/2019. 6-mo CP yield spread based on A1/P1 rated CP index.

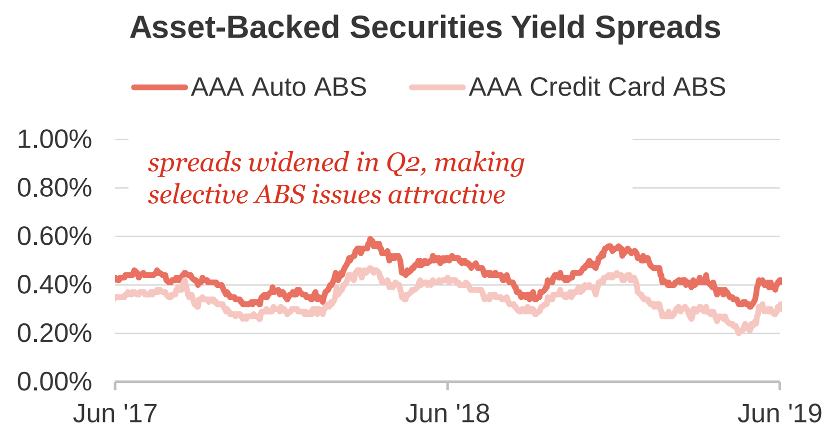
Corporate Yield Spreads Recover from Recent Bouts of Spread Widening

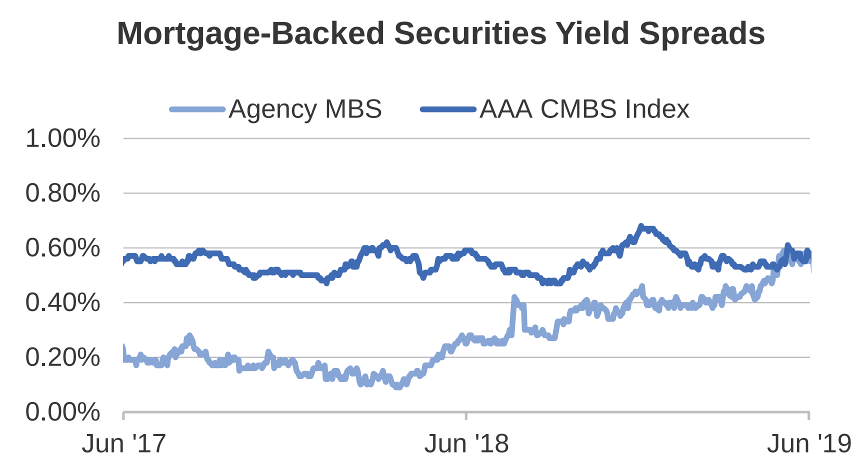


Source: Bloomberg, ICE BofAML Indices. OAS is option adjusted spread. As of 6/28/2019.

ABS and MBS Sectors Offer Value in a Tightening Spread Environment







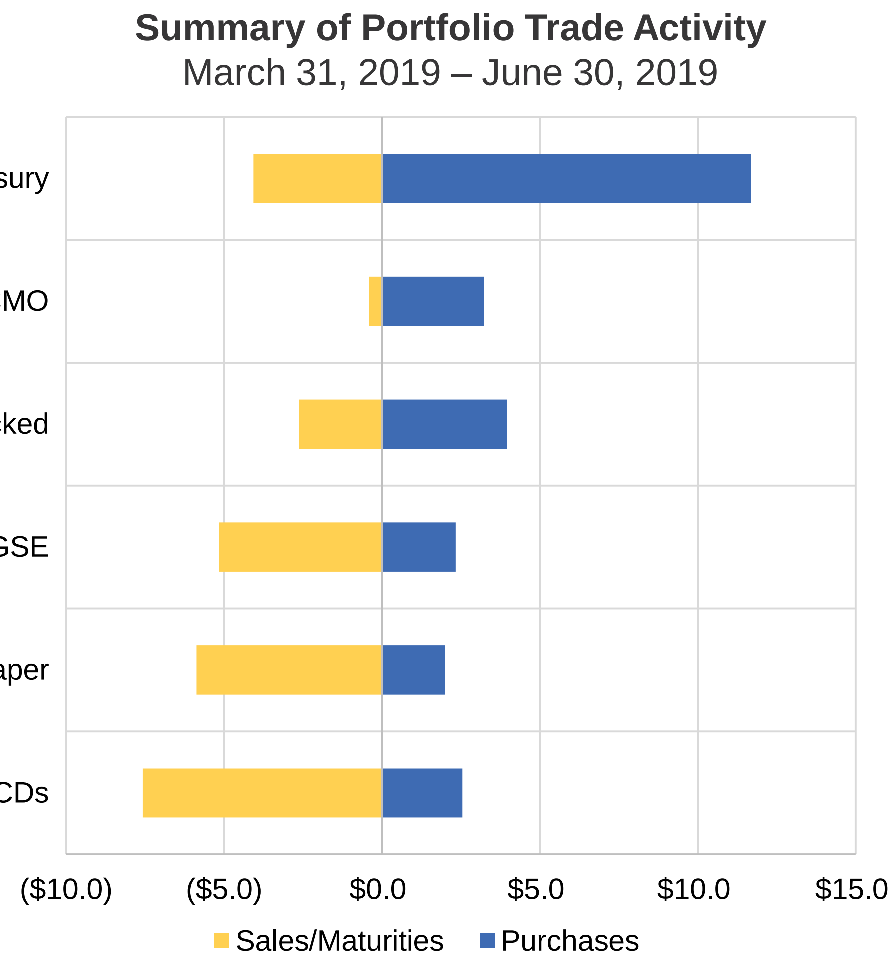
Source: Bloomberg, MarketAxess, and PFM. Spreads on ABS and MBS are option-adjusted spreads; spreads on agencies and supranationals are relative to comparable maturity Treasuries. Data as of 6/30/19. ICE BofAML 1-5 year Indices. MBS and ABS indices are 0-5 year, based on weighted average life.

Portfolio Update

Second Quarter Portfolio Strategy

- Maintained a portfolio duration in line with the benchmark.
- Portfolio strategy continued to favor broad diversification, generally including the widest range of permitted investments.
- During the quarter we found value in:
  - U.S. Treasuries
    - Yield spreads between Treasuries and Agencies remain narrow; however, we found treasury alternatives to be more attractive than additional federal agency allocations.
  - Agency MBS
    - Agency MBS served as an attractive alternative to other government sectors due to their incremental income potential.
  - Asset-Backed Securities (ABS)
    - The AAA-rated ABS sector continued to offer attractive incremental income vs. government alternatives and offered a defensive outlet to credit exposure.

Summary of Trade Activity



Based on par value of purchases, sells, maturities, and pay downs.

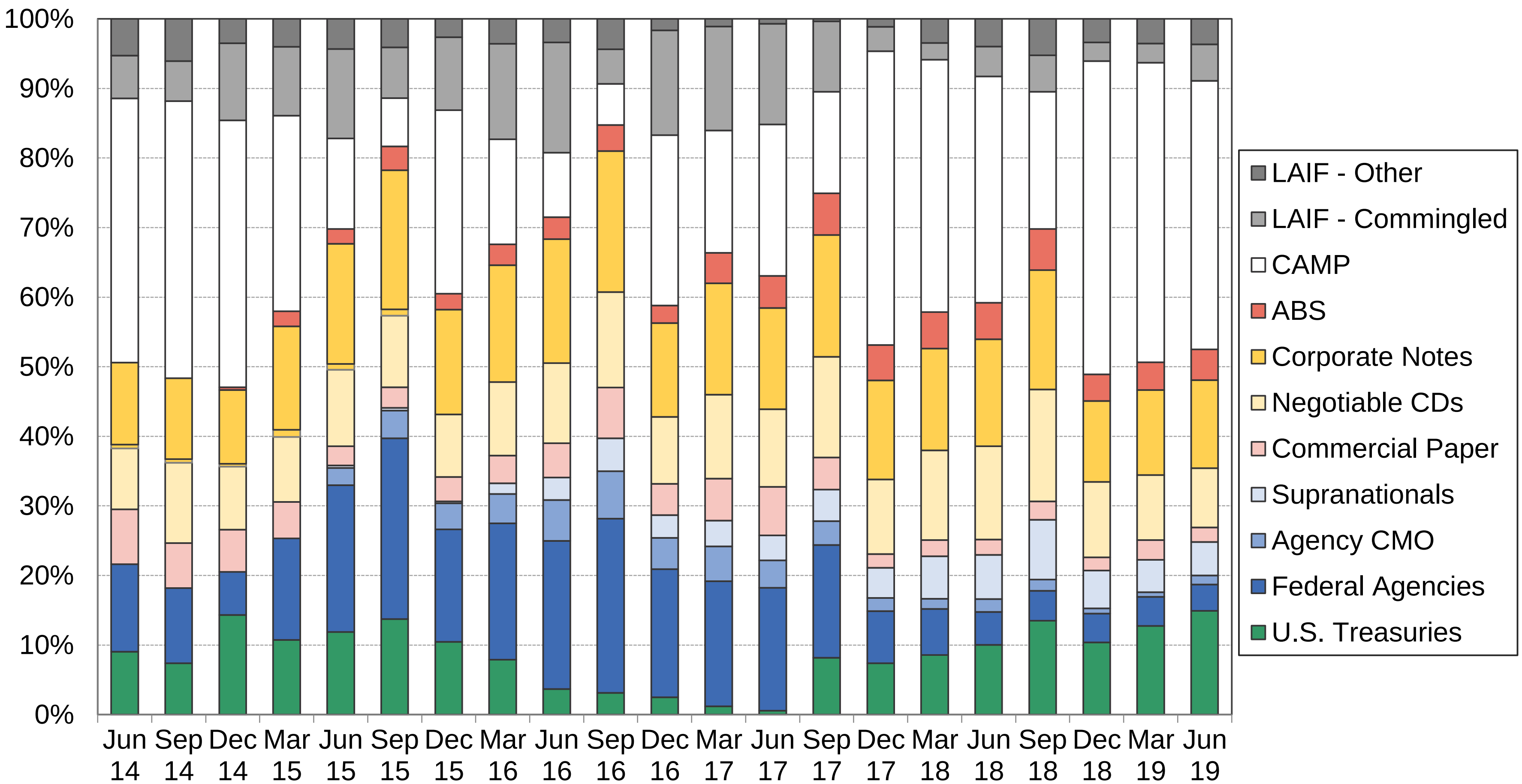
Net Transactions by Sector ($ millions)

U.S. Treasury	+ $7.61
Federal Agency/CMO	+ $2.83
Asset-Backed	+ $1.32
Federal Agency/GSE	($2.83)
Commercial Paper	($3.87)
Negotiable CDs	($5.03)
Total	**+ $0.03**

Portfolio Composition

Security Type	Market Value as of 6/30/19	% of Portfolio	% Change vs. 3/31/19	Permitted by Policy	In Compliance
U.S. Treasury	$69,991,837	14.9%	+2.2%	100%	✓
Federal Agency	$17,624,719	3.8%	-0.4%	100%	✓
Federal Agency CMOs	$6,154,104	1.3%	+0.6%	100%	✓
Supranationals	$22,557,982	4.8%	+0.2%	30%	✓
Negotiable CDs	$40,063,584	8.5%	-0.8%	30%	✓
Corporate Notes	$59,341,726	12.7%	+0.4%	30%	✓
Commercial Paper	$9,816,186	2.1%	-0.7%	40%	✓
Asset-Backed Securities	$20,655,091	4.4%	+0.4%	20%	✓
Securities Sub-Total	**$246,205,231**	**52.5%**			
Accrued Interest	$1,519,297				
Securities Total	**$247,724,528**				
CAMP	$181,101,663	38.6%	-4.4%	100%	✓
LAIF – Total	$41,761,213	8.9%	+2.6%	$65 million per account	✓
Total Investments	**$470,587,403**	**100.0%**			

Adding Value through Sector Allocation



Portfolio Issuer Distribution

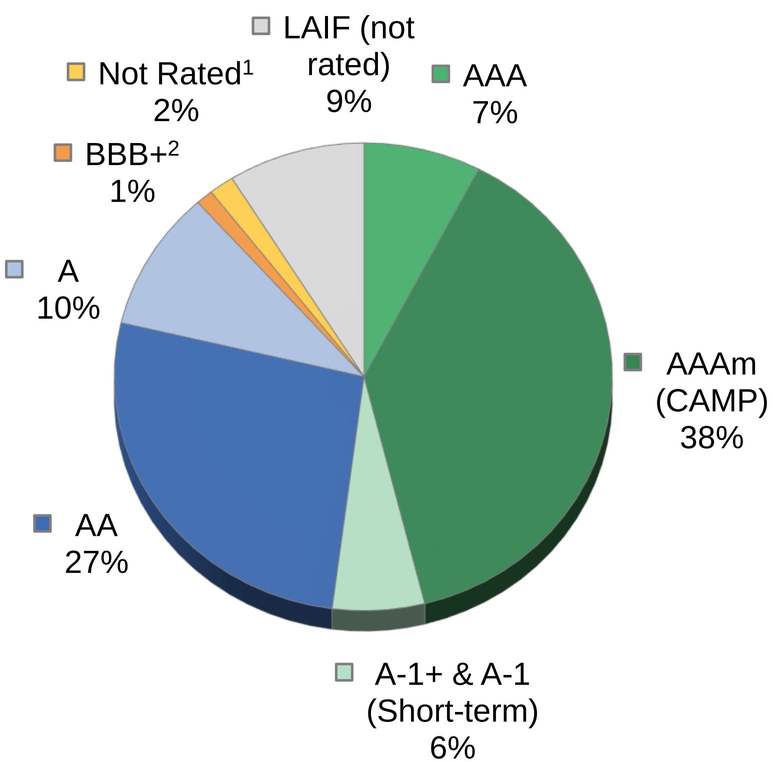
U.S. Treasury	28.4%
Fannie Mae	5.2%
IBRD	4.6%
Credit Agricole	2.8%
Federal Home Loan Bank	2.5%
International Finance Corp	2.5%
American Express	2.4%
Toyota Motor Credit	2.2%
Swedbank NY	2.1%
Inter-American Development Bank	2.1%
American Honda Finance	2.1%
Bank of New York	2.0%
Hyundai Auto Receivables	1.9%
MUFG Bank	1.9%
Freddie Mac	1.9%
Bank of Montreal Chicago	1.9%
Honda Auto Receivables	1.9%
Westpac Banking Corp (NY)	1.8%
Bank of Nova Scotia Houston	1.8%
Exxon Mobil	1.7%
Nordea Bank	1.6%
UBS AG Stamford	1.6%
Apple Inc	1.4%
Ally Auto Receivables Trust	1.4%

ING Funding LLC	1.3%
Canadian Imperial Bank	1.3%
JP Morgan Chase	1.2%
Wells Fargo	1.2%
Nissan Corp	1.2%
Visa	1.1%
Credit Suisse NY	1.1%
IBM	1.1%
CitiGroup Inc	1.1%
Bank of America	1.1%
BB&T Corp	1.1%
Goldman Sachs Corp	1.0%
Sumitomo Bitsui Bank	1.0%
Cisco Systems	1.0%
Toyota Auto Receivables	0.9%
Chevron Corp.	0.7%
United Parcel Service Corp	0.6%
Berkshire Hathaway	0.5%
National Rural Utility Corp	0.4%
John Deere Owner Trust	0.4%
CarMax Corp	0.4%
Capital One	0.3%
Unilever Capital Corp.	0.2%
Nissan Auto Receivables	0.1%

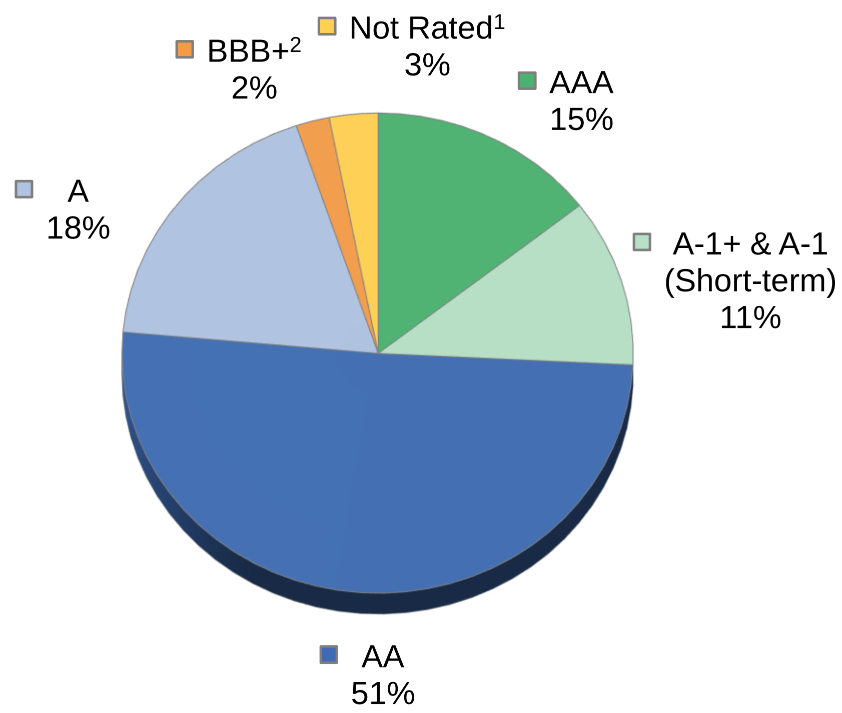
Portfolio Credit Quality

- The County's portfolio comprises high-quality securities.

Including Liquid Accounts

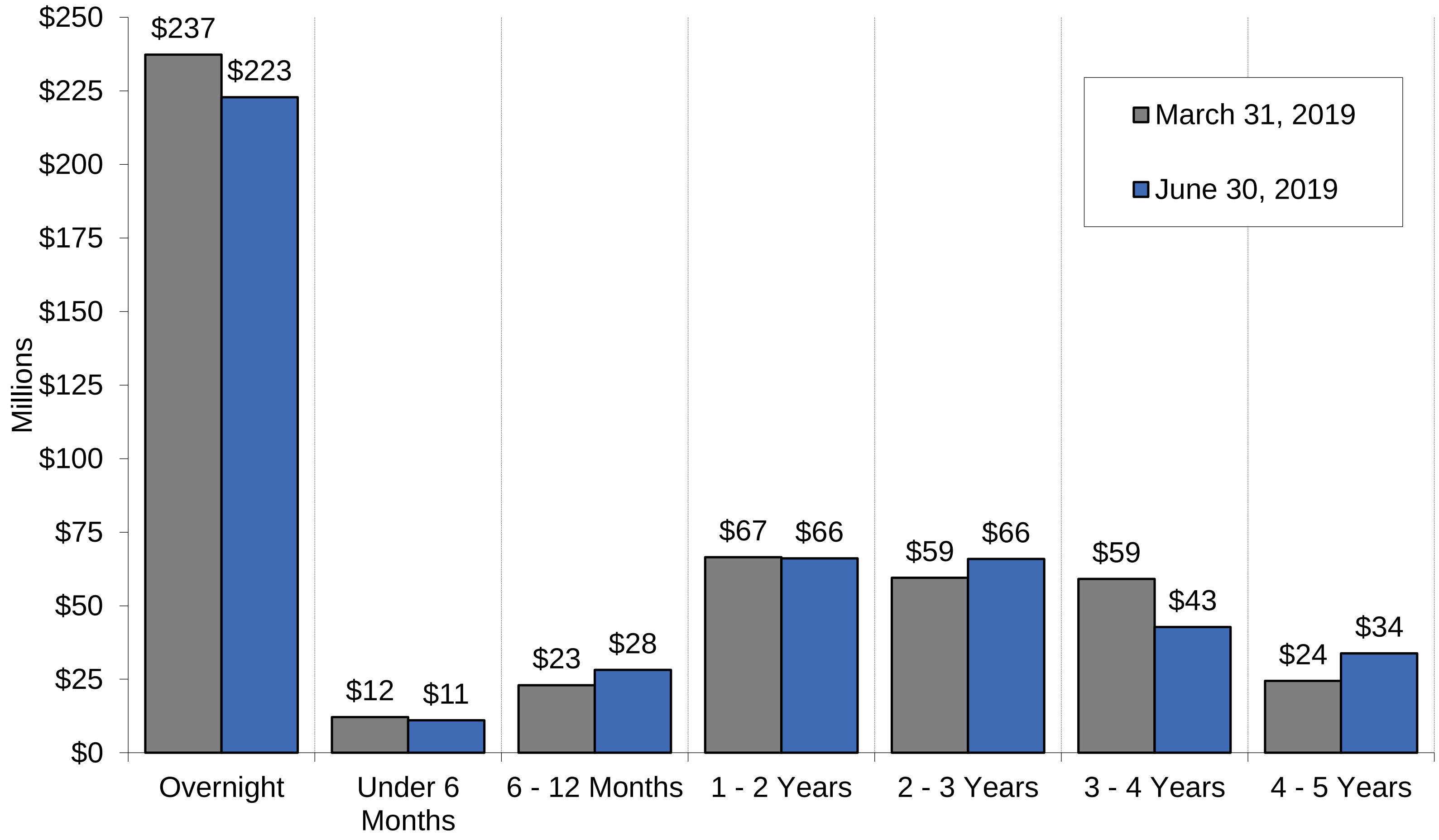


Excluding Liquid Accounts



As of June 30, 2019. Percentages may not sum to 100% due to rounding.
Ratings are based on Standard & Poor's.
1. The "Not Rated" category comprises asset-backed securities rated Aaa by Moody's.
2. The "BBB+" category comprises securities rated in a rating category of A or better by at least one NRSRO.

Portfolio Maturity Distribution

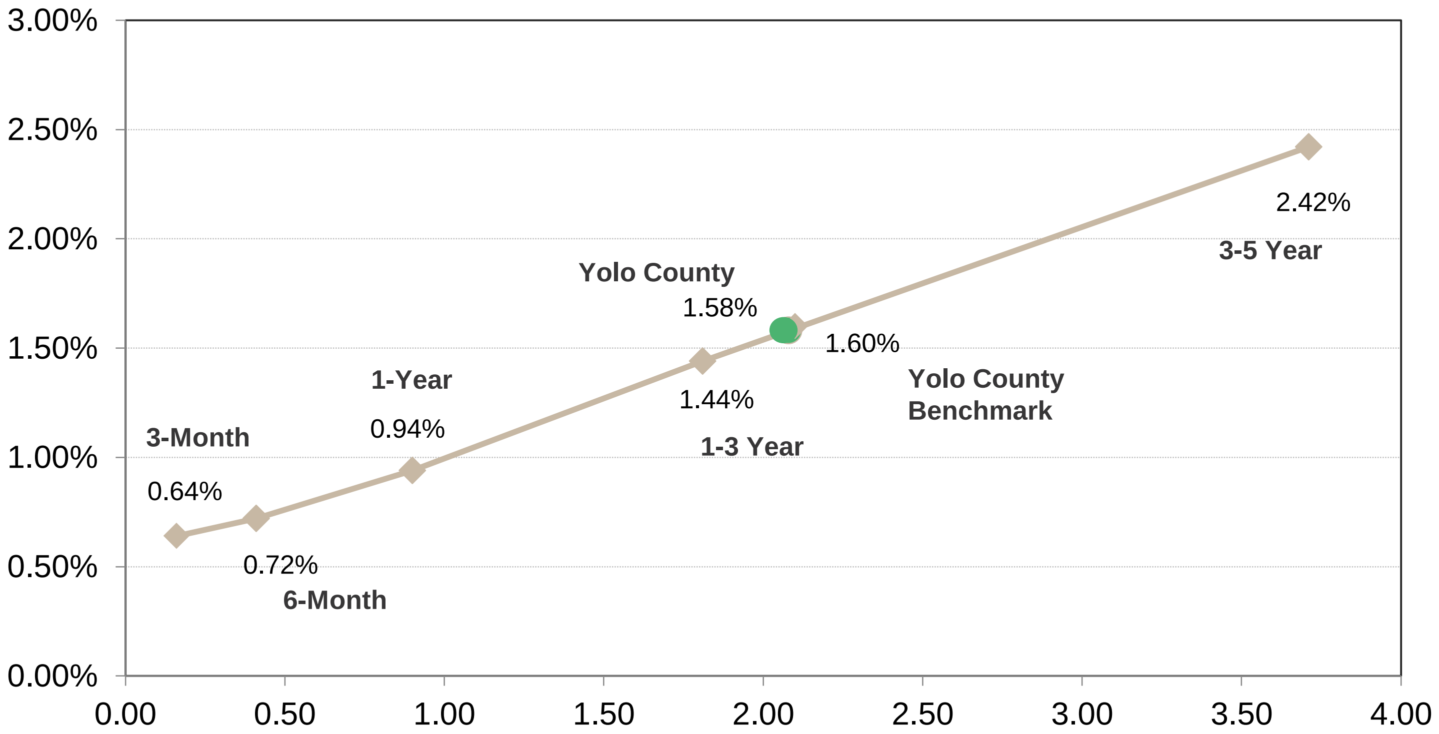


Callable and floating-rate securities are included in the maturity distribution analysis to their stated maturity date.

Longer-Duration Strategies Outperformed as Rates Fell in Second Quarter

Quarterly Total Returns

Yolo County, Yolo County Benchmark, and Various ICE BofA Merrill Lynch Treasury Indices



Yields

Portfolio Yield and LAIF Quarterly Apportionment Rate

Yolo County	*2.40%*
LAIF	*2.57%*

- *For periods ending June 30, 2019.*
- *Yolo County yield is the weighted average yield at cost.*
- *Source: Bloomberg, LAIF website.*
- *The County's benchmark is the ICE Bank of America Merrill Lynch (BAML) 0-5 Year U.S. Treasury Index. From March 31, 2015, to September 30, 2017, the benchmark was a blend of 30% ICE BAML 3-month Treasury index and 70% ICE BAML 1-3 year U.S. Treasury Index. From March 31, 2002, to March 31, 2015, the benchmark was a blend of 50% ICE BAML 1-3 Year U.S. Treasury index and 50% ICE BAML 3-month Treasury Bill index. Prior to March 31, 2002, the benchmark was the ICE BAML 1-3 Year U.S. Treasury index.*

Total Return Performance

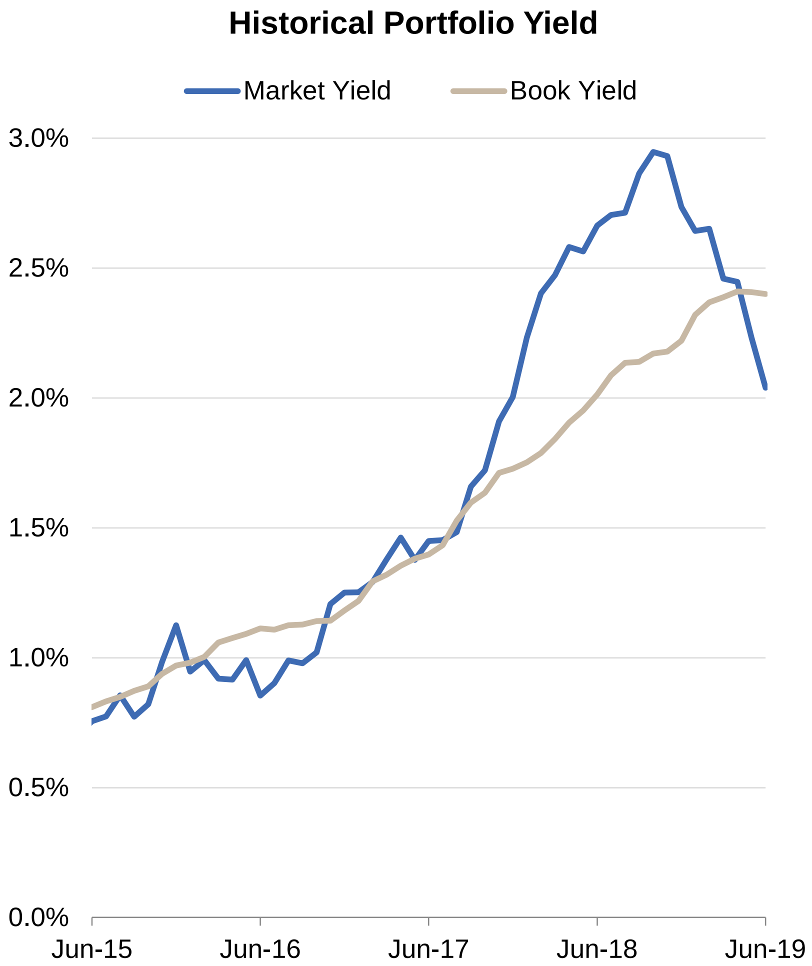
- During the quarter, the portfolio benefitted from a diversified sector allocation as most fixed-income sectors drove strong market-value returns due to the rise in prices as yields fell.
- Historically, the portfolio continues to outperform the benchmark by a wide margin.

Total Return
For periods ended June 30, 2019

	Duration (years)	Past Quarter	Past 1 Year	Past 5 Years	Past 10 Years	Since Inception
Yolo County	**2.08**	**1.58%**	**4.72%**	**1.55%**	**1.42%**	**3.17%**
Treasury Benchmark	2.10	1.60%	4.39%	1.16%	0.91%	2.52%

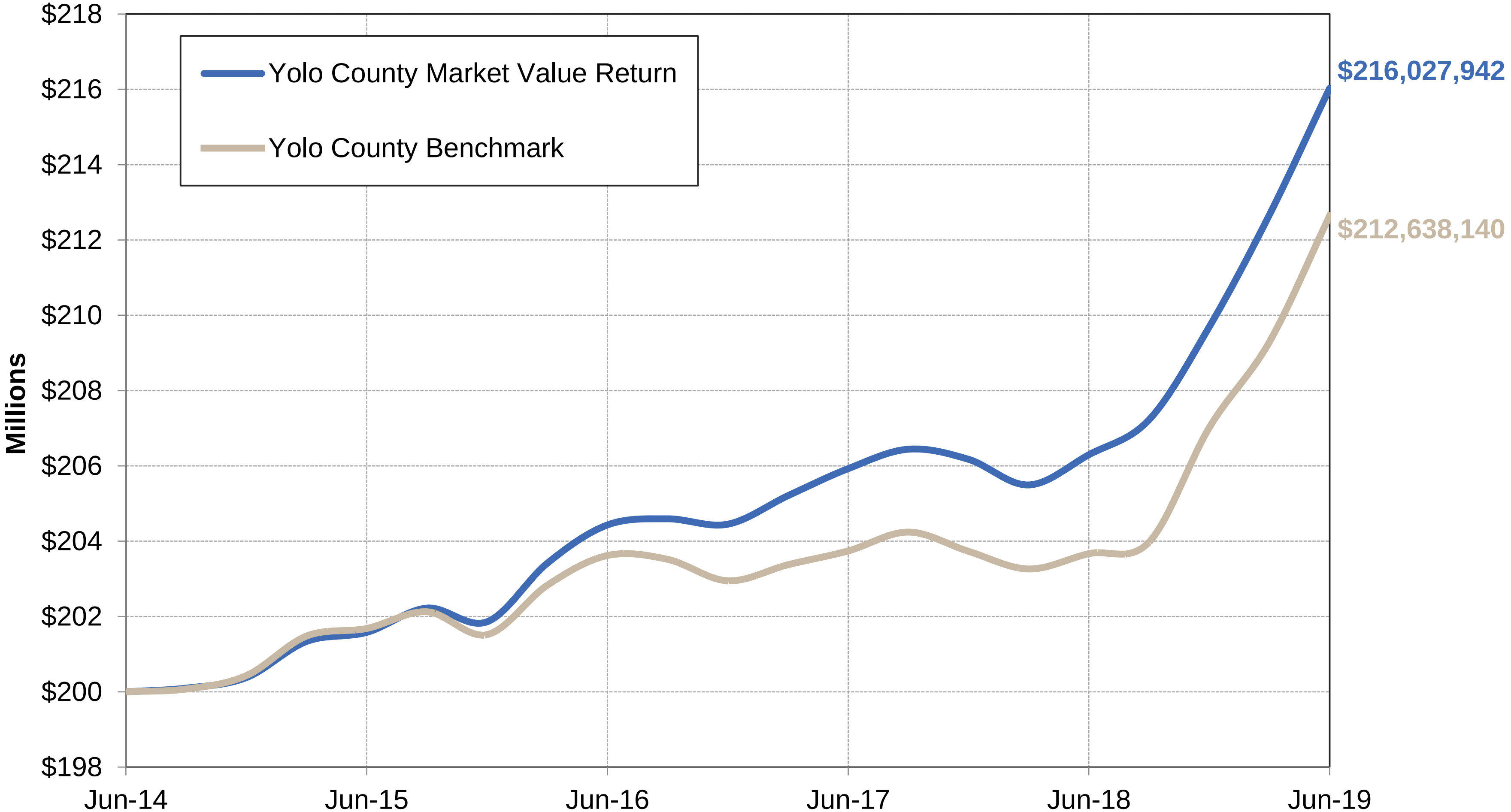
- *Performance on a trade-date basis, gross (i.e., before fees), in accordance with the CFA Institute's Global Investment Performance Standards (GIPS).*
- *Bank of America Merrill Lynch indices provided by Bloomberg Financial Markets.*
- *Inception date is June 30,1998.*
- *Performance, yield, and duration calculations exclude holdings in CAMP, LAIF, and the money market fund.*
- *The County's benchmark is the ICE Bank of America Merrill Lynch (BAML) 0-5 Year U.S. Treasury Index. From March 31, 2015, to September 30, 2017, the benchmark was a blend of 30% ICE BAML 3-month Treasury index and 70% ICE BAML 1-3 year U.S. Treasury Index. From March 31, 2002, to March 31, 2015, the benchmark was a blend of 50% ICE BAML 1-3 Year U.S. Treasury index and 50% ICE BAML 3-month Treasury Bill index. Prior to March 31, 2002, the benchmark was the ICE BAML 1-3 Year U.S. Treasury index.*

Historical Securities Portfolio Yields and Quarterly Accrual Earnings



Annual Accrual Basis Investment Earnings	
Fiscal Year	Earnings
14-15	$1,469,534
15-16	$2,930,752
16-17	$3,598,905
17-18	$3,828,675
18-19	$5,131,486

County's Strategy Continues to Be Effective

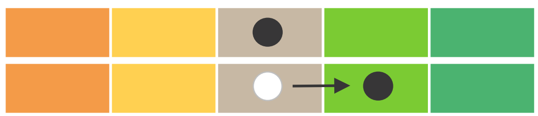
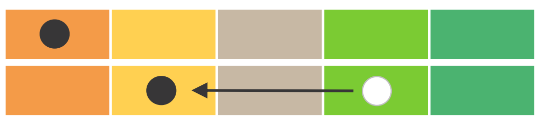
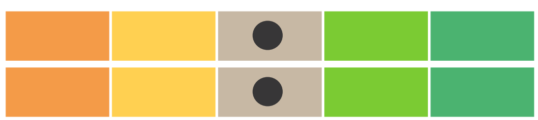
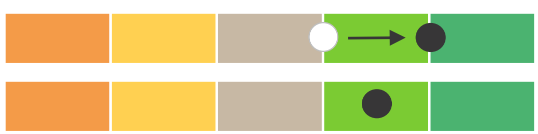


- *Source: Bloomberg.*
- *Hypothetical growth of $200 million.*
- *Past performance is not indicative of future performance.*

Investment Strategy Outlook

- The Fed has officially shifted its stance on monetary policy from “patient” to “appropriate,” and rates have continued to move lower.
  - We will continue to maintain a portfolio duration in line with the benchmark.
- As a result of the outlook for slower economic growth:
  - We continue to recommend maintaining diversification among investment grade sectors with a tilt toward higher grade corporate bonds given their income-producing potential.
  - We will remain diligent in our issuer and security selection process given some of the international growth concerns.
- As federal agency spreads are expected to remain very tight:
  - We expect agency purchases to be minimal, seeking better value in either Treasuries or other sectors.
- ABS spreads have recently widened back to levels that offer attractive incremental income compared to government and credit alternatives. We will seek to maintain allocations.
- Careful maturity selection around the Fed meeting expectations will be a key component of our portfolio strategy going forward, particularly with both the Treasury and credit yield curves inverted.

Fixed-Income Sector Outlook – July 2019

Sector	Our Investment Preferences	Comments
COMMERCIAL PAPER / CD		• Commercial paper/negotiable CD spreads remain narrow. Short credit remains higher-yielding than some longer-dated Treasuries.
TREASURIES T-Bill T-Note		• Treasury Bill supply increased in March but slowed in April, putting downward pressure on rates. • The 3-month to 10-year part of the yield curve briefly inverted in the past two months, renewing concerns about a possible recession. With a flat-to-inverted yield curve, there is little expected roll-down.
FEDERAL AGENCIES Bullets Callables		• Federal agency spreads remain very tight. The only value has been in certain new issue securities. • With the likelihood of the Federal Reserve rate cuts, callable agencies should be avoided.
SUPRANATIONALS		• USD supply has increased modestly; however, spreads remain near historical tights across the curve. We continue to favor UST or GSE.
CORPORATES Financials Industrials		• Corporate yield spreads have narrowed back significantly, settling in around longer-term. Spreads are near post-recession tights. While the sector is no longer "cheap," we plan to maintain allocations. • The corporate spread curve remains positively sloped, offering modest value for extending maturities.
SECURITIZED Asset-Backed Agency Mortgage-Backed		• The AAA-rated ABS sector continues to offer attractive incremental income versus government alternatives and offers a defensive outlet to credit exposure. • With an improving fundamental landscape, Agency MBS are an attractive alternative to other government sectors due to their incremental income potential.
MUNICIPALS		• Munis continue to be expensive versus Treasuries amid limited supply.

● *Current outlook* ○ *Outlook one month ago*

Negative	Slightly Negative	Neutral	Slightly Positive	Positive

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.