

# US Rates Outlook In a Post Quantitative Tightening World

Ira Jersey, Chief US Interest Rate Strategist  
609.279.3564 [ijersey5@bloomberg.net](mailto:ijersey5@bloomberg.net)

Angelo Manolatos, US Interest Rate Associate  
646.324.5179 [emanolatos1@bloomberg.net](mailto:emanolatos1@bloomberg.net)

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# BI RATES <GO>

## **BI Macro Briefing**

Every Monday at 8:30am EST

Dial-in:

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## **Cross-Asset Strategy Webinar**

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The screenshot displays the Bloomberg Intelligence (BI) Interest Rates Dashboard (BI RATEN). The interface includes a navigation bar at the top with options like <Back> to Return, 94 <GO> to Hide Navigation, and a search bar. The main content area is divided into several sections:

- Research:** A sidebar on the left lists categories such as Dashbd Home, US Rates, EU Rates, Strat. Monthly, Data Library, Market Data, Flow Data, DTS, Forecasts, Monitor, Research, and News.
- Primer (Click to see more):** A central section titled "10-Year U.S. Yield May End 2019 at 2.91%, Updated" with a summary: "The Treasury market appears to be in risk-management mode and is priced for economic growth to be weaker than will likely occur. Ten-year Treasury yields have scope to stabilize and..."
- Key Indicators:** A table on the right titled "Rate Markets" showing the latest values for various indicators:

Key Indicators	Latest
31) US Personal Co...	3.68
32) US Personal Co...	1.79
33) Adjusted Retail...	3.62
34) US Treasury Fe...	-4.17
35) Federal Funds ...	2.50

- Featured Research:** A list of research articles with checkmarks indicating they are featured.
- Most Recent | More »:** A list of recent research articles with timestamps.

# Today's Agenda

- **Macro Outlook**
- **Front End and Monetary Policy**
- **Yield Scorecard and Forecasts**
- **Some Interesting Charts**

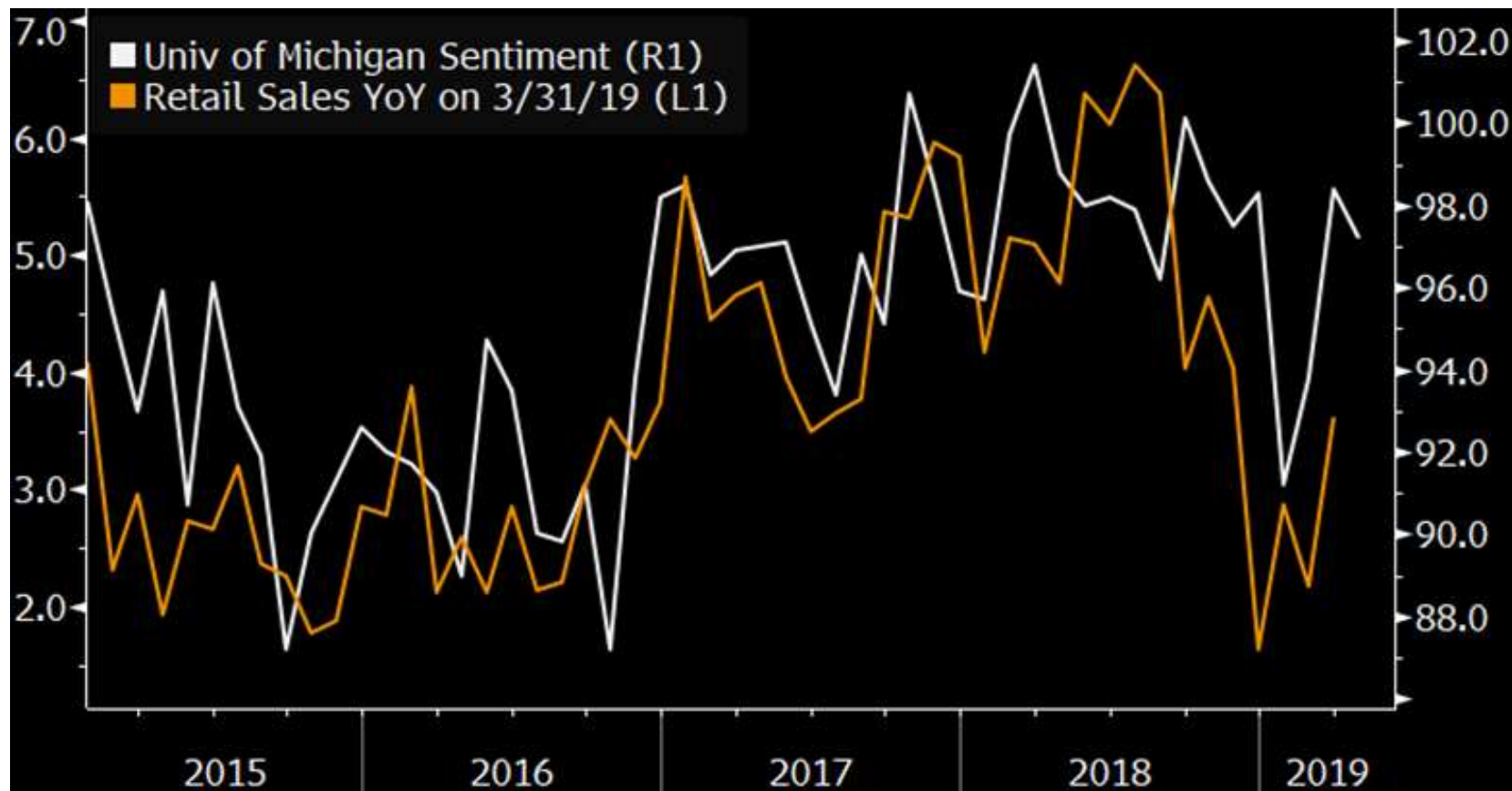
# Macro Outlook

# Industrial Production & Leading Indicators



\* Source: Bloomberg, G #BI 14657

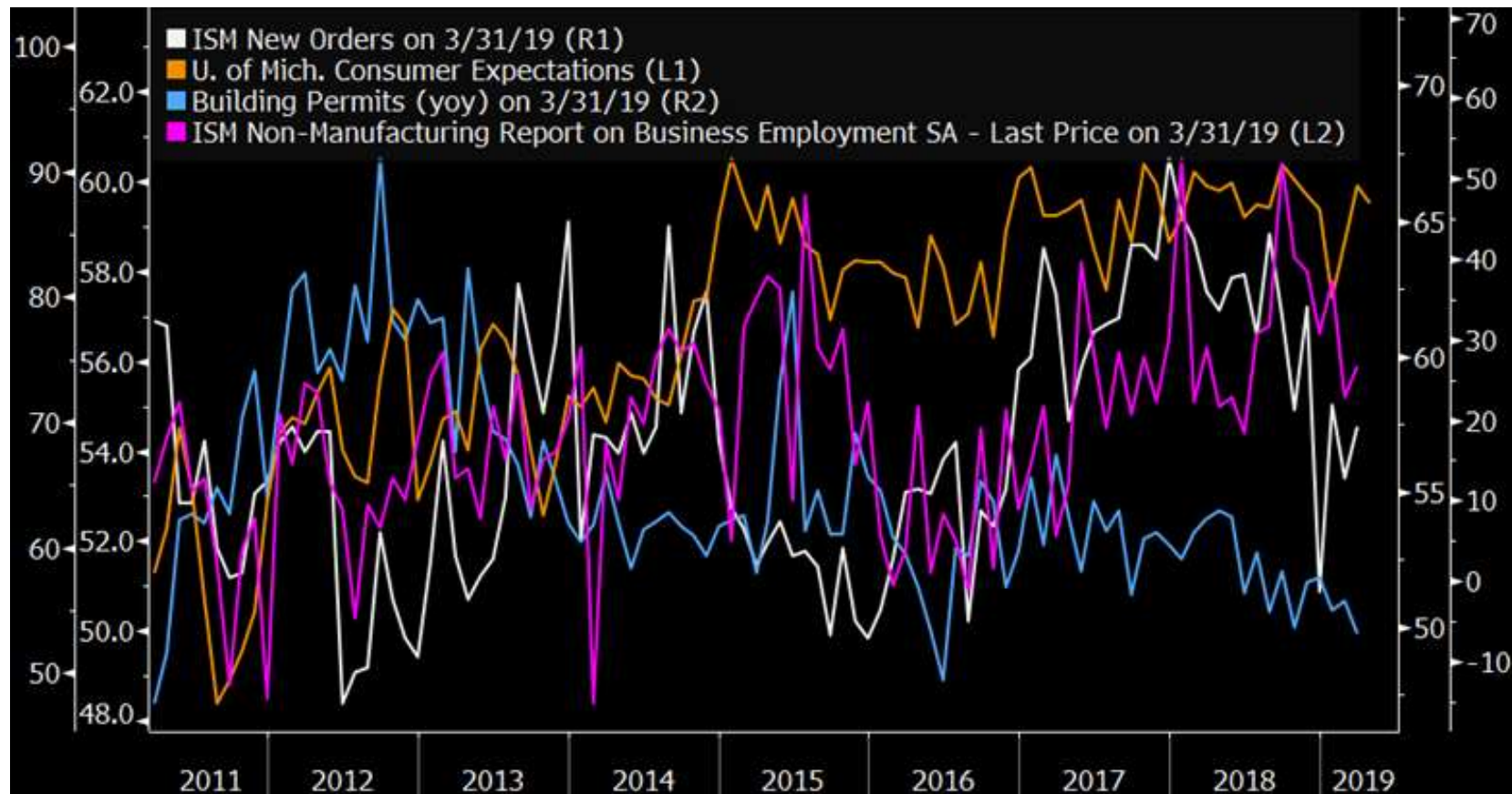
## Consumer Confidence & Retail Sales



\* Source: Bloomberg, G #BI 14047

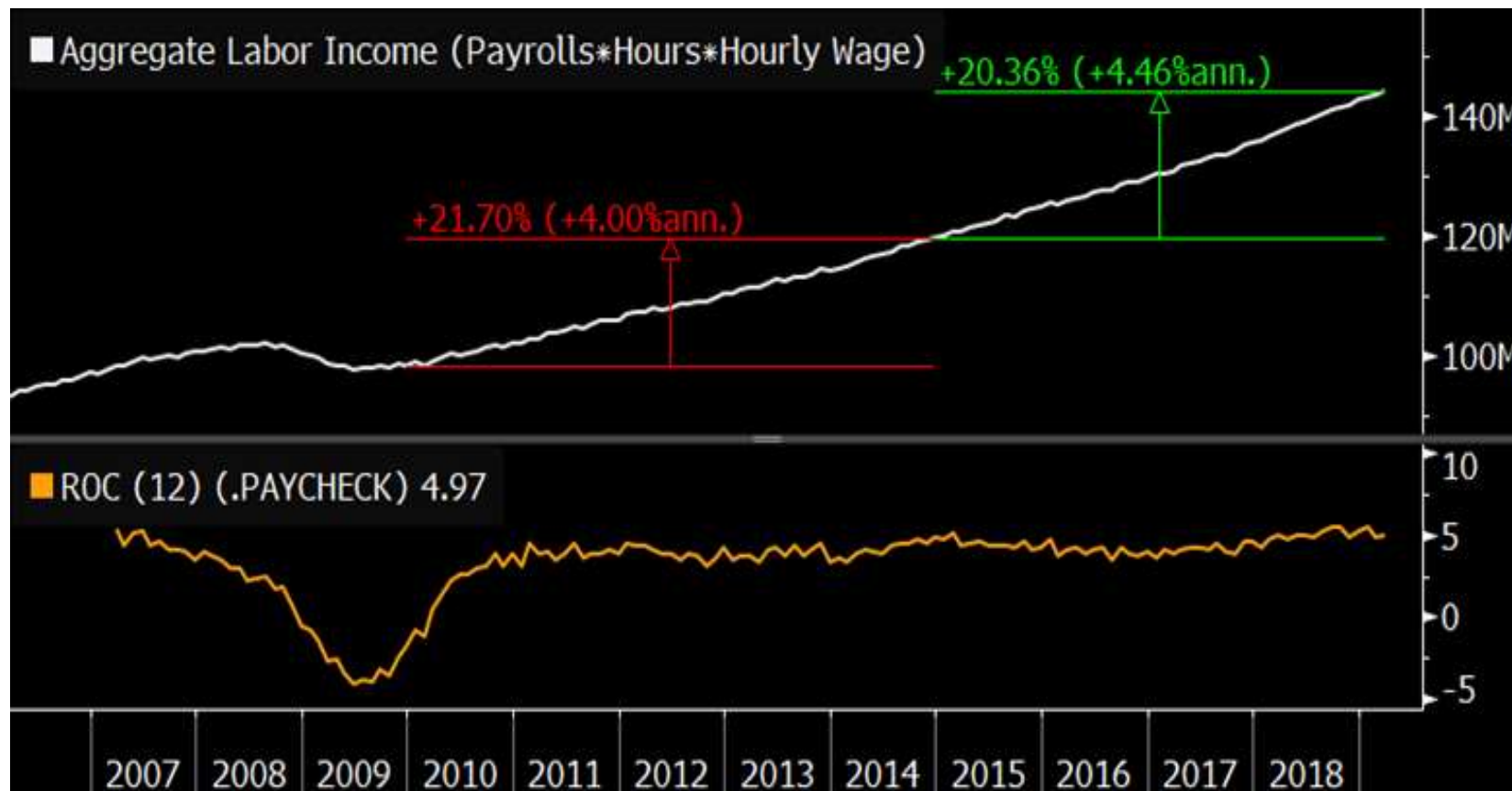


## ISM New Orders, ISM Employment Consumer Expectations and Building Permits



\* Source: Bloomberg, G #BI 20119

## Labor Income Growth Healthy



\* Source: Bloomberg, G #BI 11145



## Consumer Prices Bottoming?



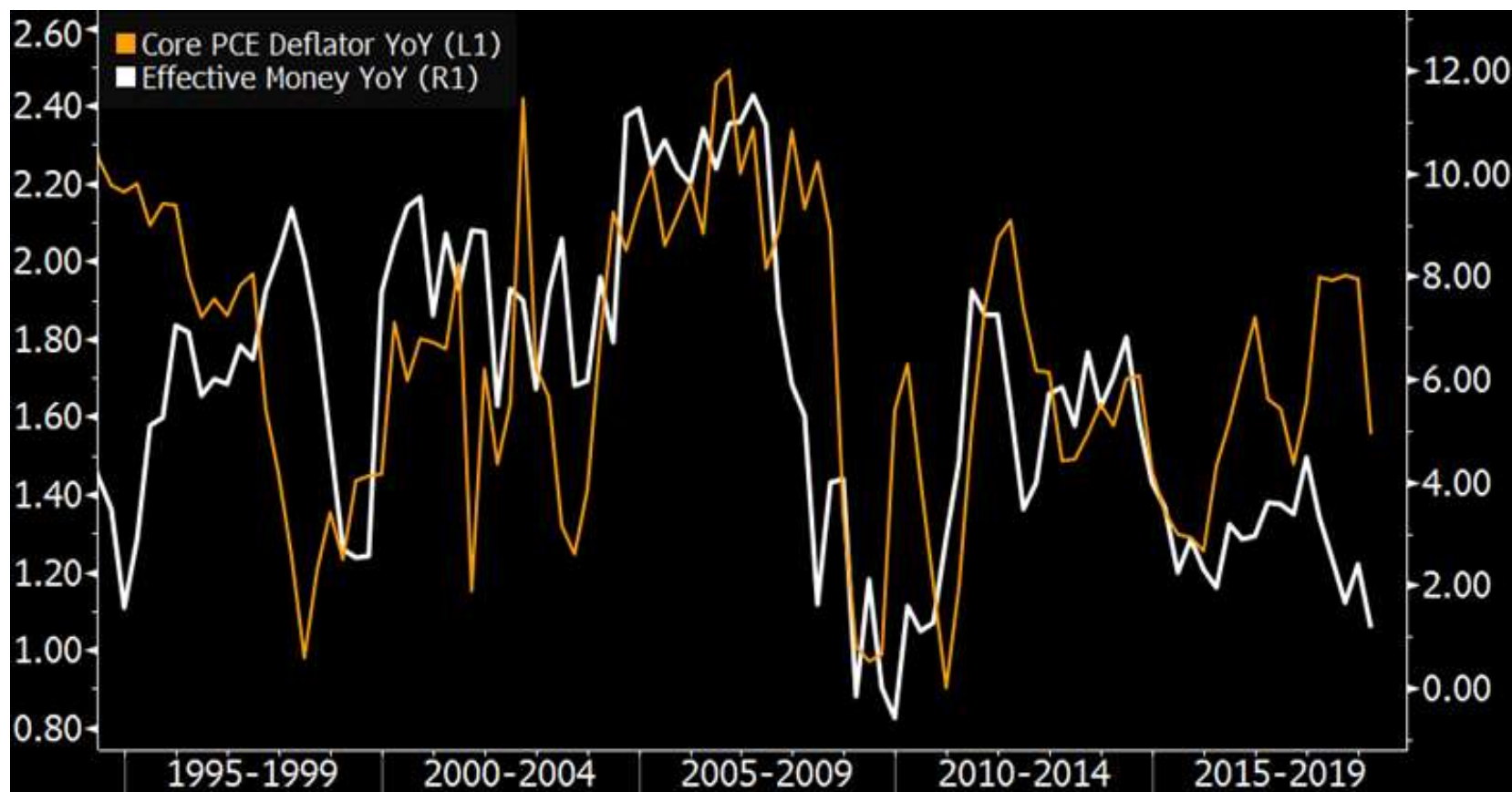
\* Source: Bloomberg, G #BI 17746

## Global Situation Worrying... But Turning?



\* Source: Bloomberg, G #BI 19260

## Effective Money Growth



\* Source: Bloomberg, G #BI 14504

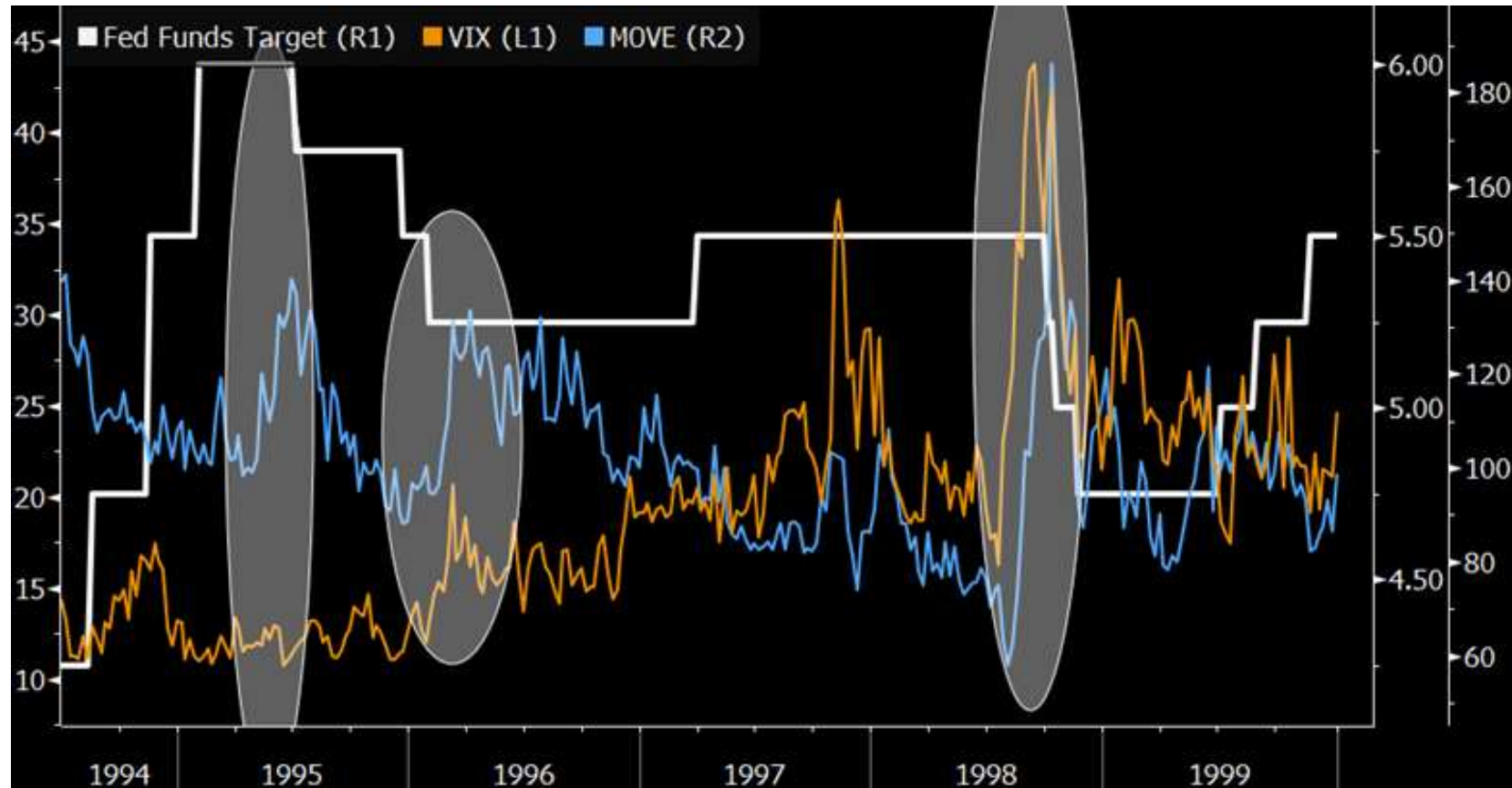
# **Conducting Monetary Policy in Post-QT World**

## Fed Is Currently Right In the Middle



\* Source: Bloomberg Intelligence

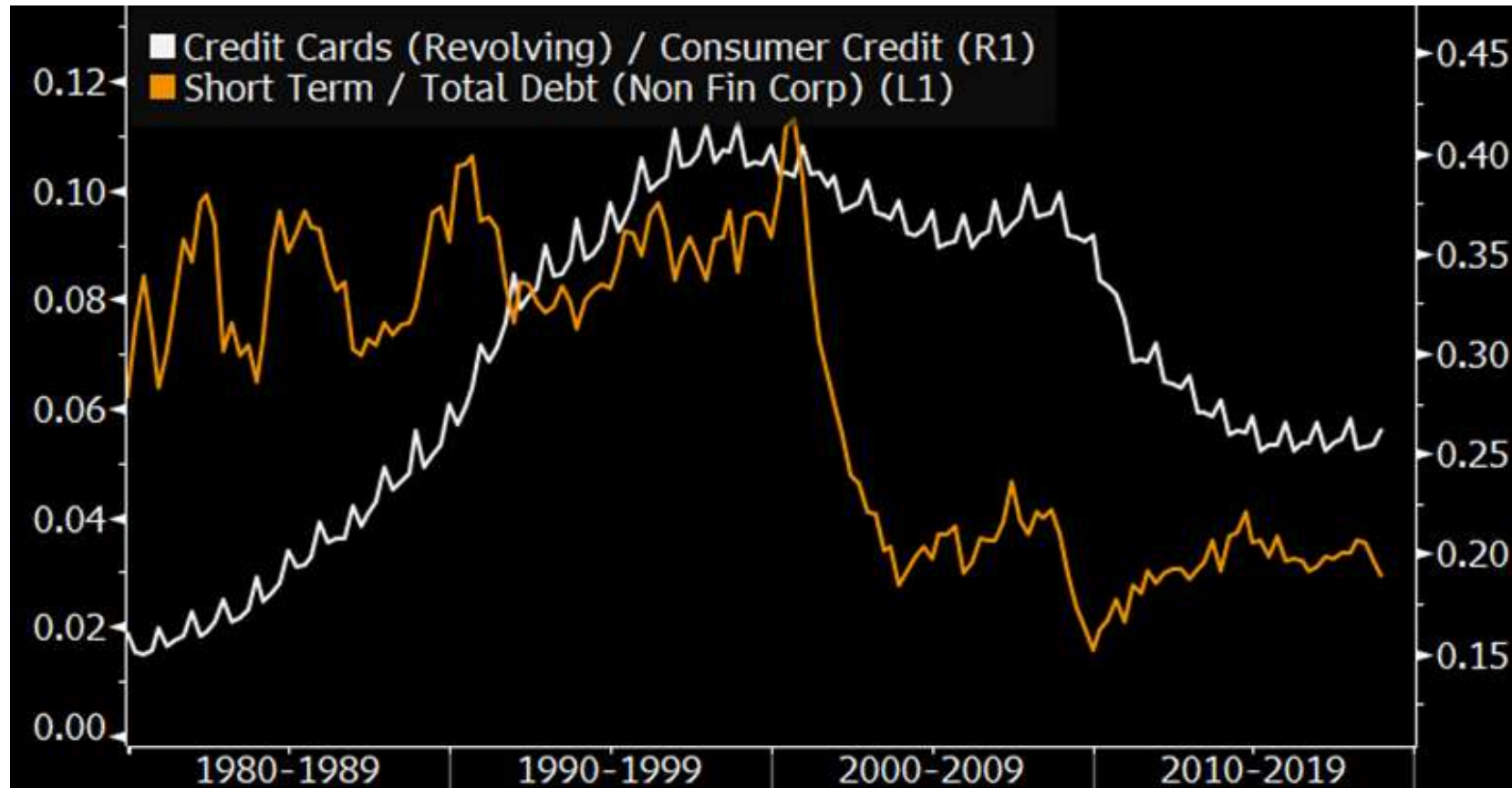
## 1990s Policy Tweaks Tended to Be Market Driven



\* Source: Bloomberg, G #BI 20396

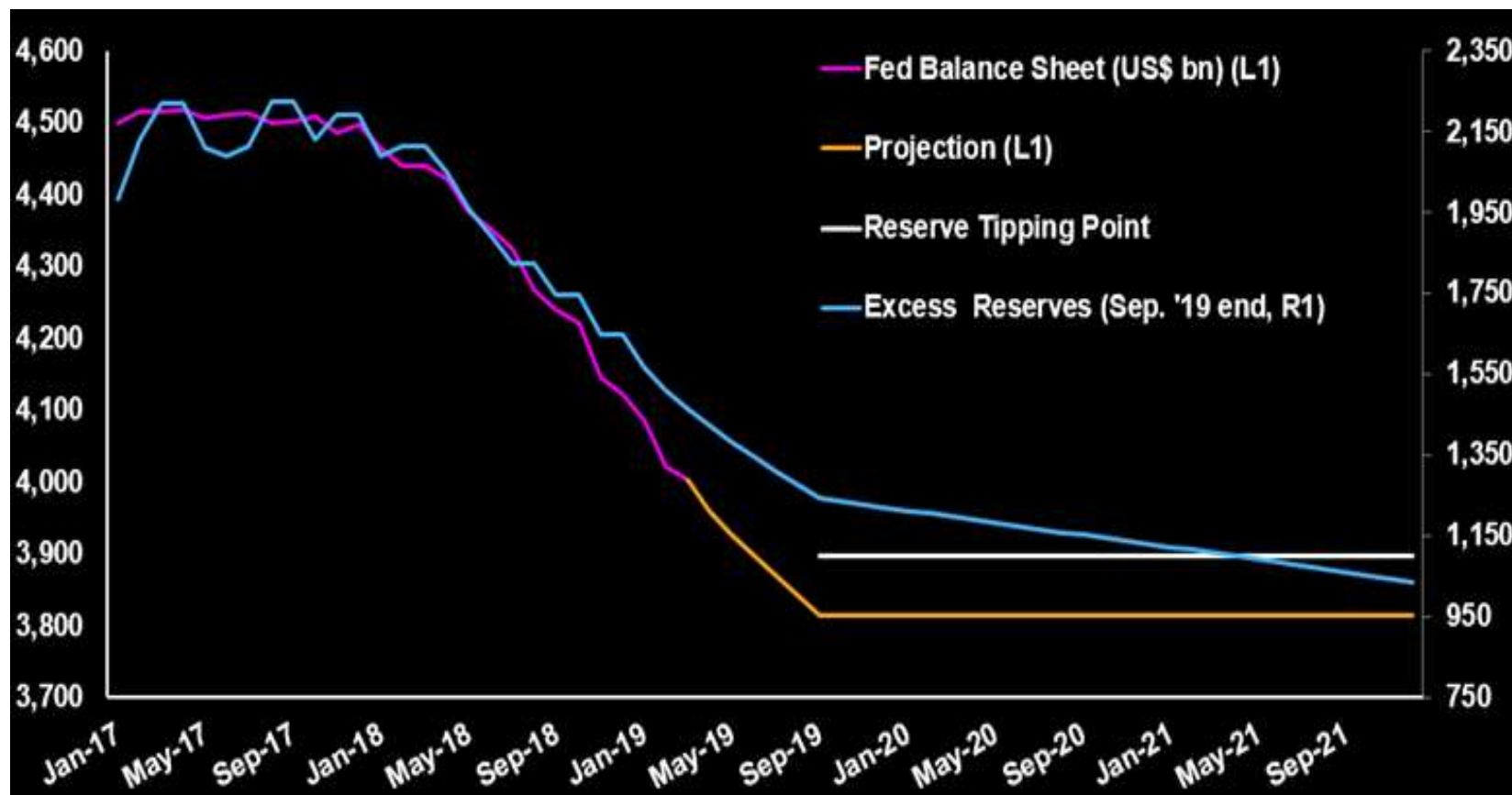


## Lower Short Term Debt Means Longer Policy Lag



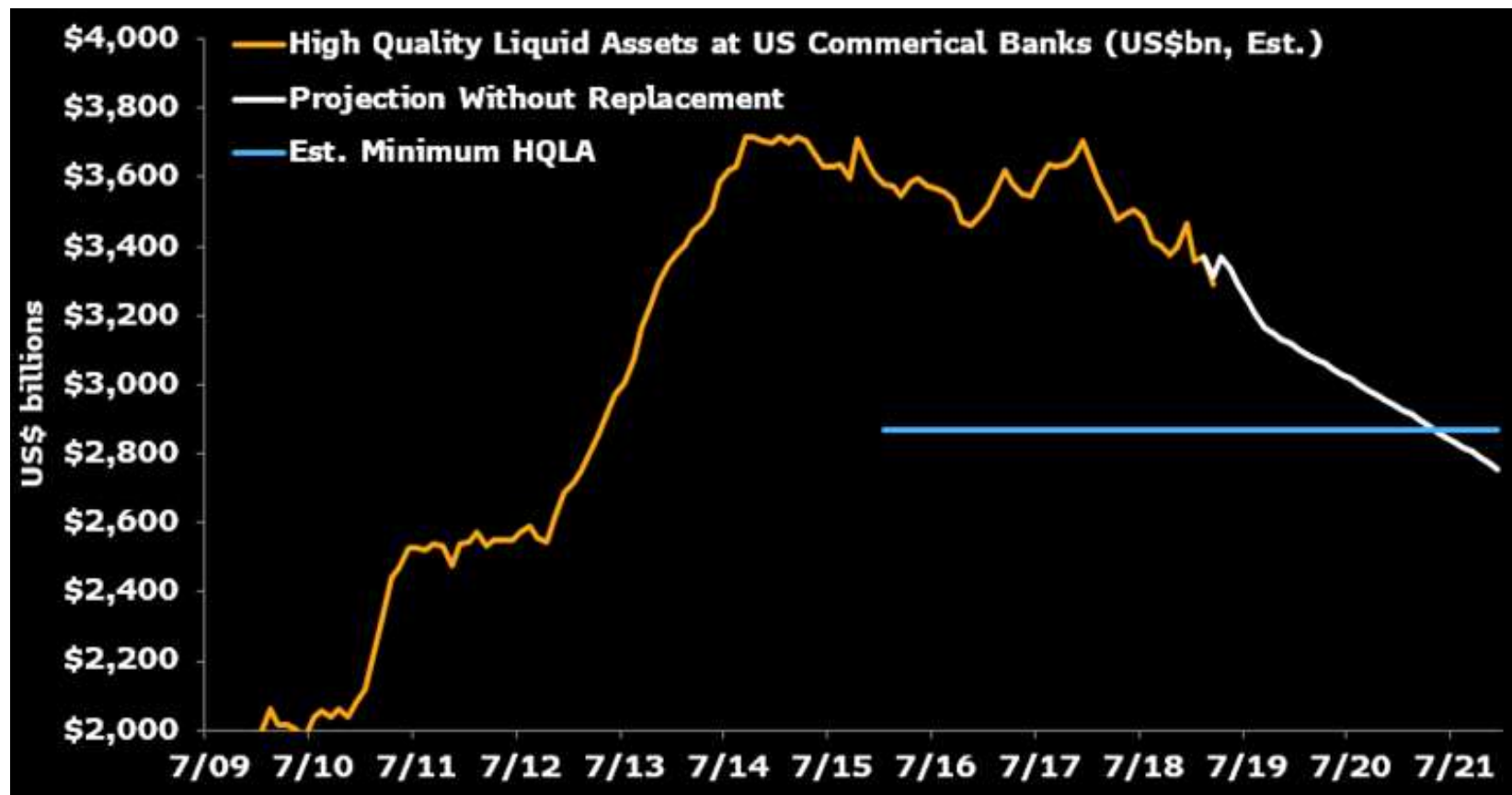
\* Source: Bloomberg, G #BI 19931

## Fed Balance Sheet Size Upon QT End & Reserves



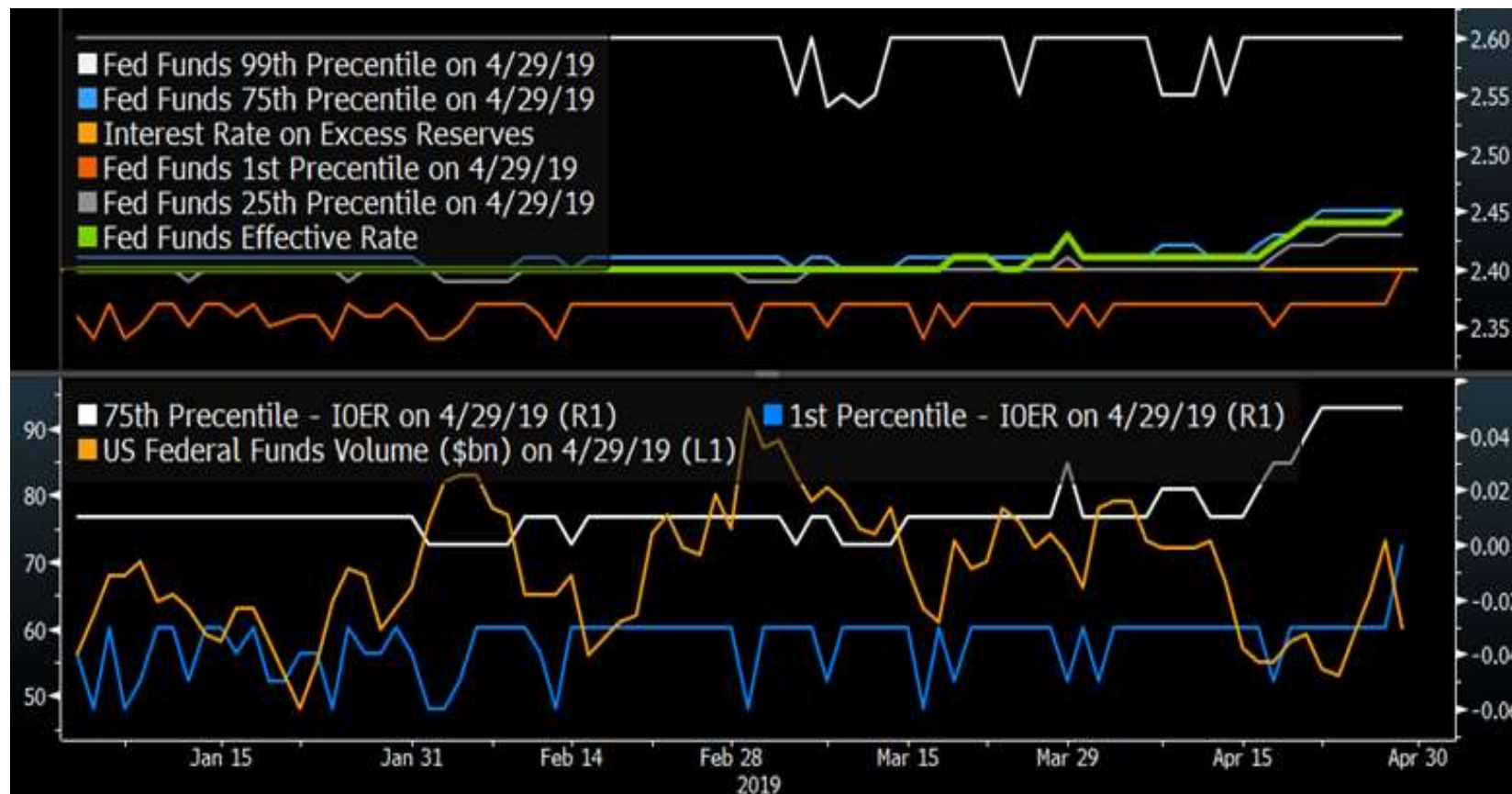
\* Source: Bloomberg Intelligence, Federal Reserve

## Currency Increase Means Reserves Fall Further



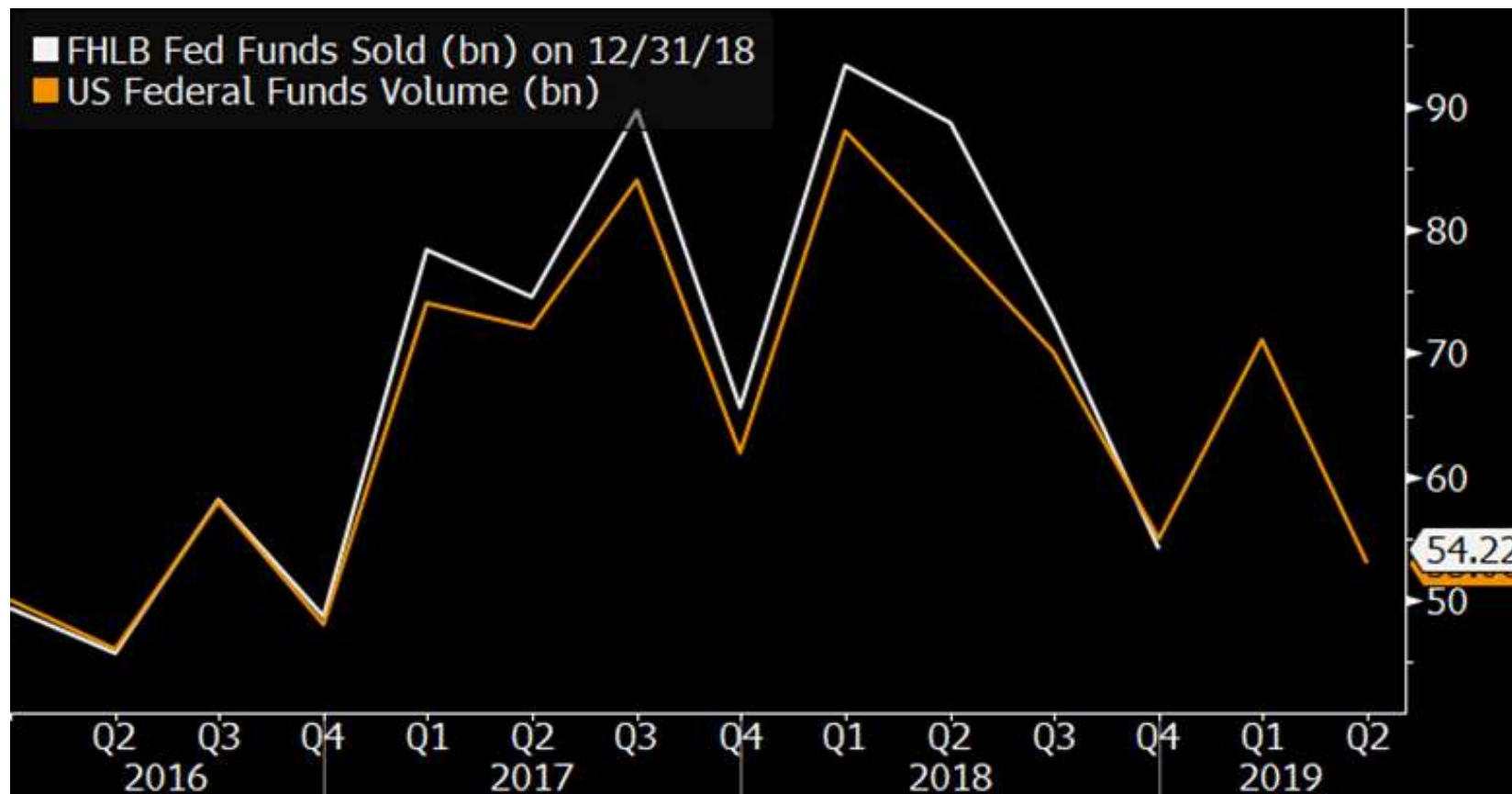
\* Source: Bloomberg Intelligence

## Funds Creeping Up, Now Above IOER



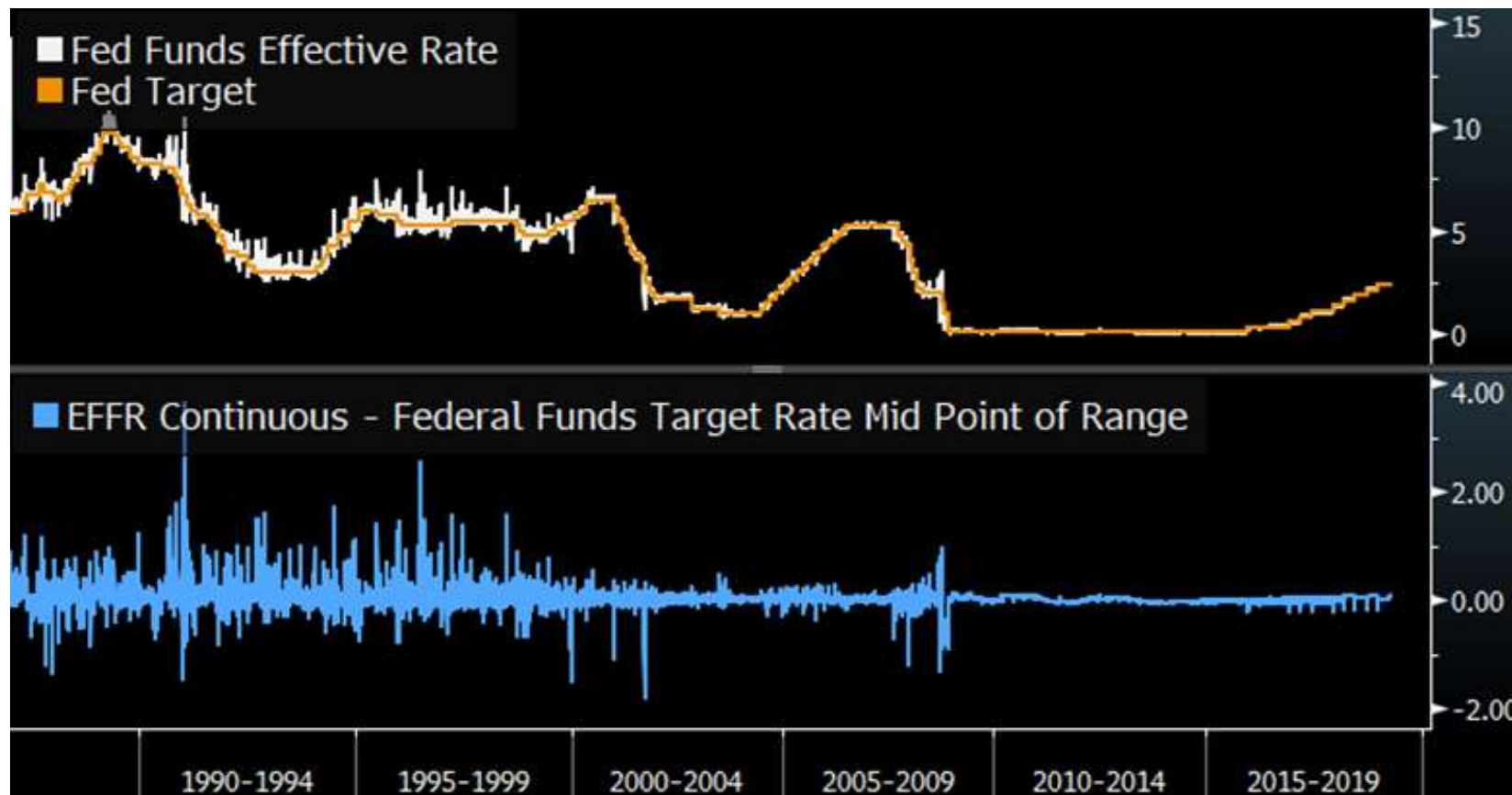
\* Source: Bloomberg Intelligence, Federal Reserve, G #BI 17982

## FHLBs Not Selling Fed Funds Puts Upward Pressure



\* Source: Bloomberg Intelligence, Federal Reserve, G #BI 20404

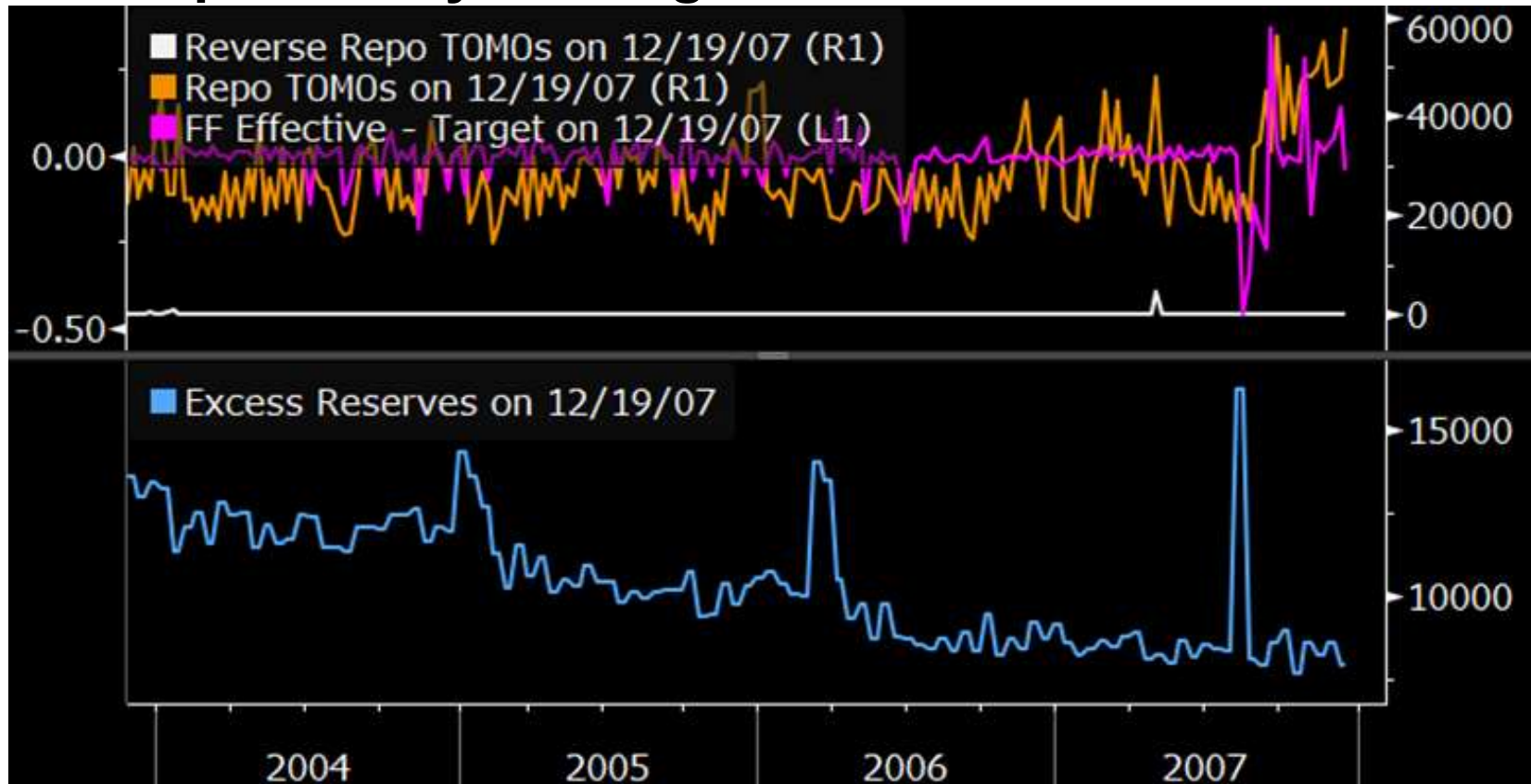
## Post-Crisis Federal Funds Volatility Low



\* Source: Bloomberg, G #BI 16013

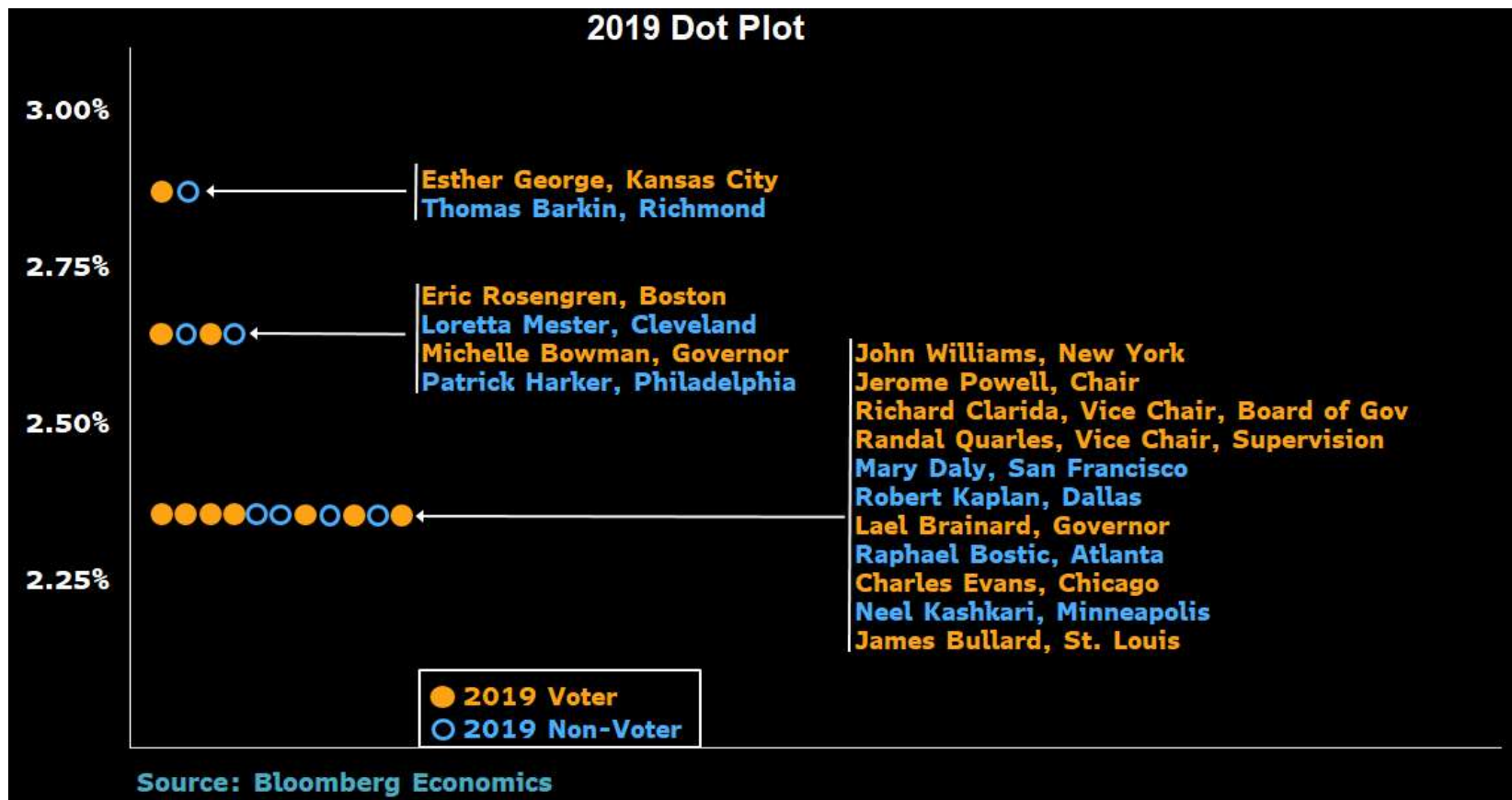


## Pre-Crisis Fed Operations Unrealistic Given Sizes – Repo Facility Coming?



\* Source: Bloomberg, G #BI 19924

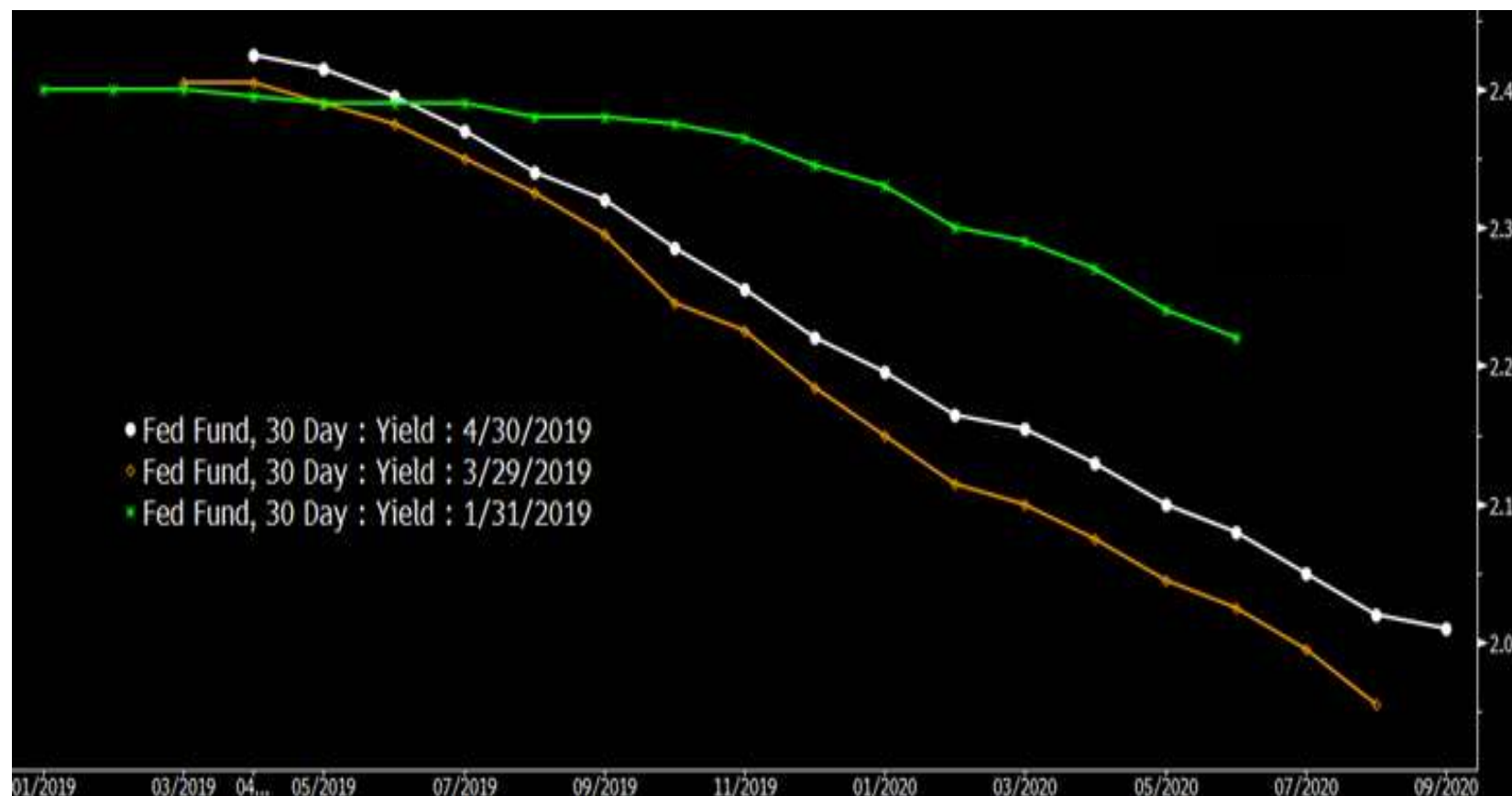
# Who is Who On The 2019 Dot Plot



\* Source: Bloomberg Economics

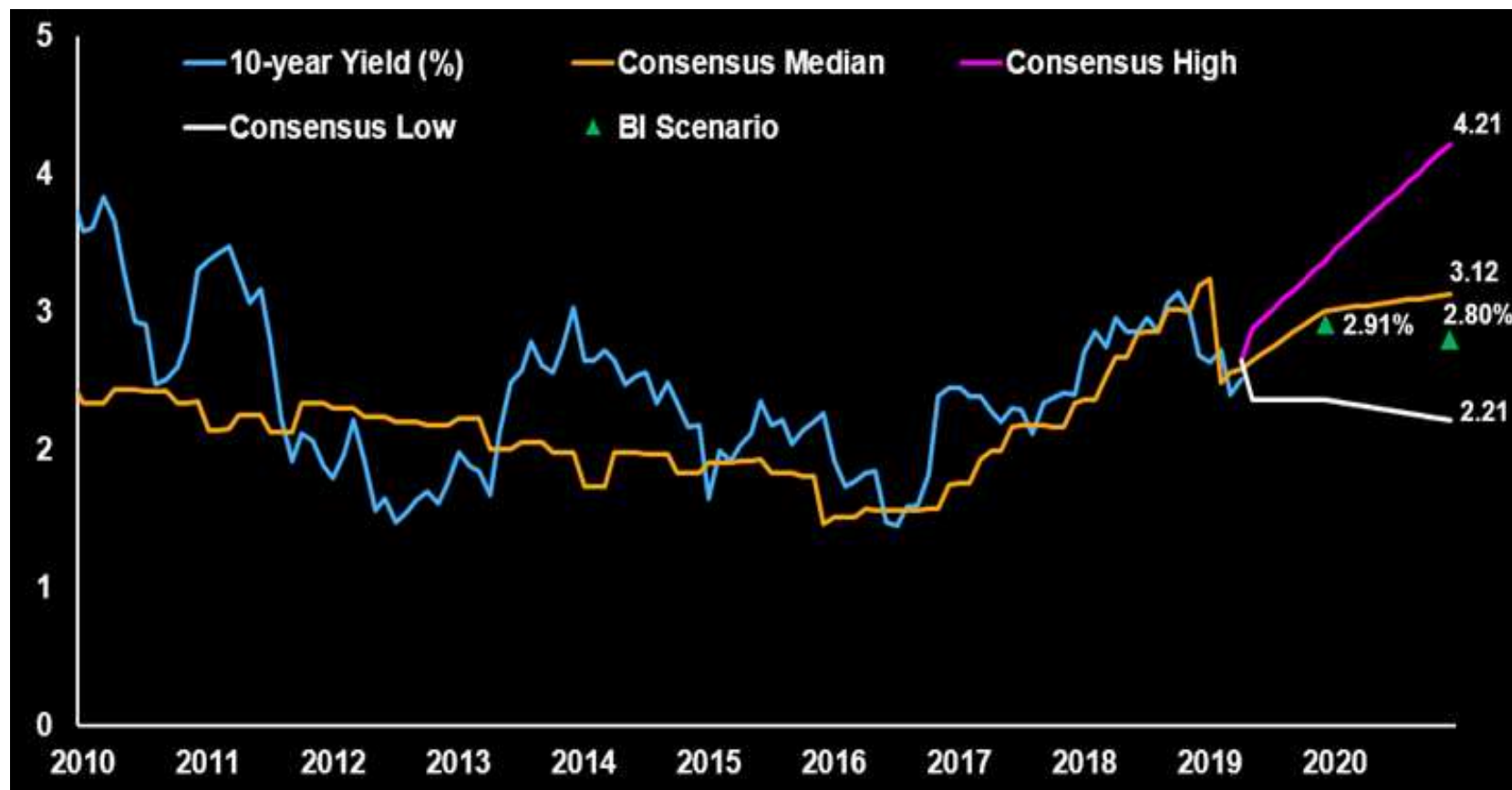
# **Yields, Scorecard and Models**

## Market Pricing for Cuts



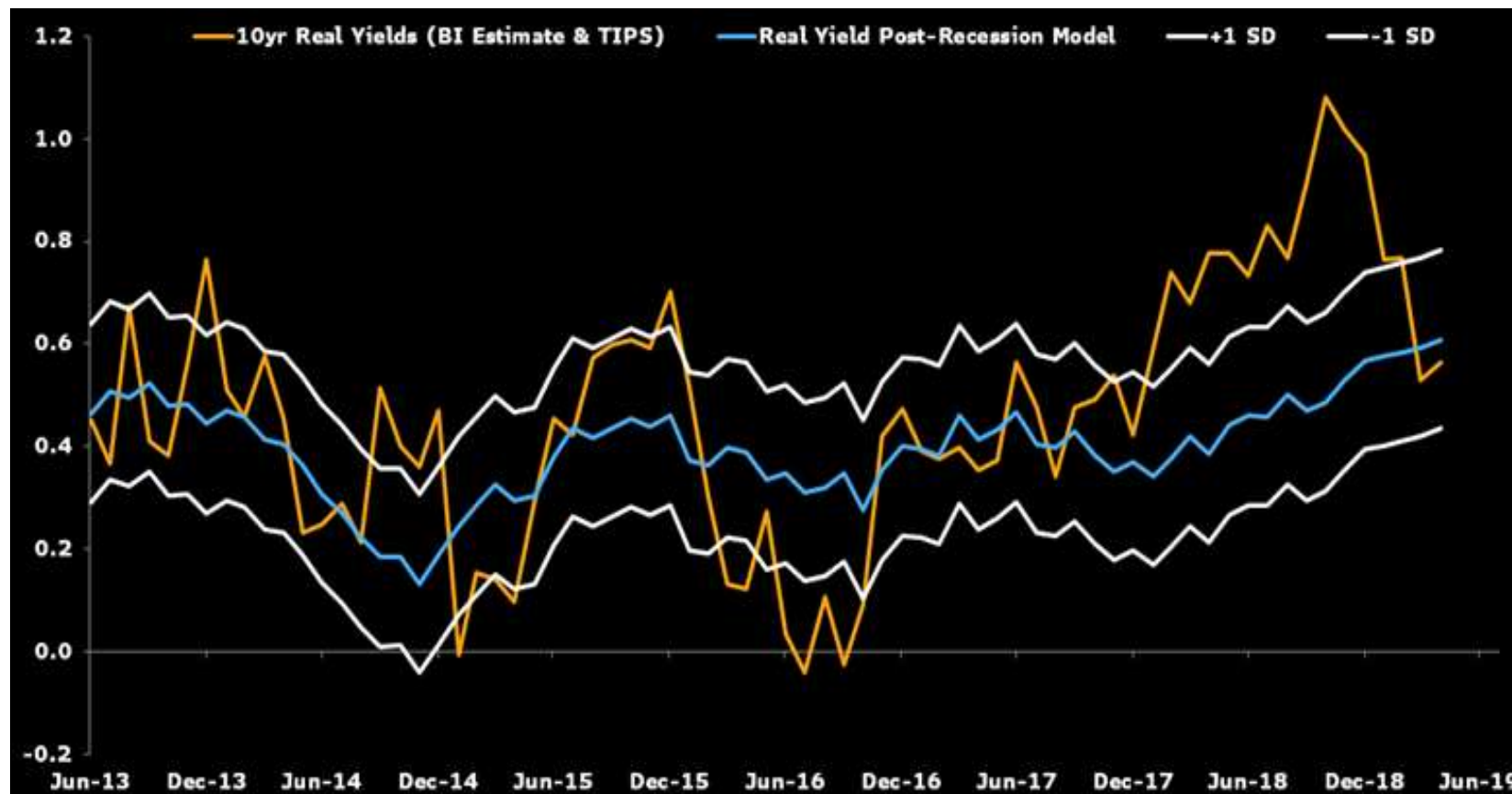
\* Source: Bloomberg Intelligence

# 10-Year Fundamental Model



\* Source: Bloomberg Intelligence

## 10-Year Real Yield Model



\* Source: Bloomberg Intelligence



## Breakevens and Real Yields



\* Source: Bloomberg Intelligence, G #BI 13000

## BI Term Premium Model vs. Curve and ACM Model



\* Source: Bloomberg Intelligence

# Treasury Yield Scorecard

	Economics Surprise Trend	Fundamental Fair Value Model	Industrials vs. Precious Metals	Market Technicals (supply, demand, etc)	Economic Momentum	Monetary Policy	Fair Value to Other Markets
Duration		↑	↓				↓
Related Functions/Indices	Data Surprises	10-Year Model	Metals vs. TIPS	Treasury Supply	IP, ISM & Leading Ind	U.S. Aggregate Index (LBUSTRUU)	U.S. Treasury Index (LUATTRUU)
	Economic Momentum	Relative Value Model	Curve Fair Value Model Fundamentals	Market Technicals	Monetary Policy	Related Indices	
1-3 Year	↓					1-3yr Agg (LU13TRUU)	1-3yr Treasury (LT01TRUU)
3-5 Year	↓	↓				3-5yr Agg (LU35TRUU)	3-5yr Treasury (LT02TRUU)
5-7 Year	↓	↓				5-7yr Agg (LU57TRUU)	5-7yr Treasury (LT03TRUU)
7-10 Year	↓				↓	7-10yr Agg (LU71TRUU)	7-10yr Treasury (LT09TRUU)
10+ Year	↓				↓	10+yr Agg (LU10TRUU)	Long Treasury (LUTLTRUU) 20+yr Treasury (LT11TRUU)
Related Functions	LEAD	GOVY	Curve Model	Treasury Supply	FED		

\* Source: Bloomberg Intelligence

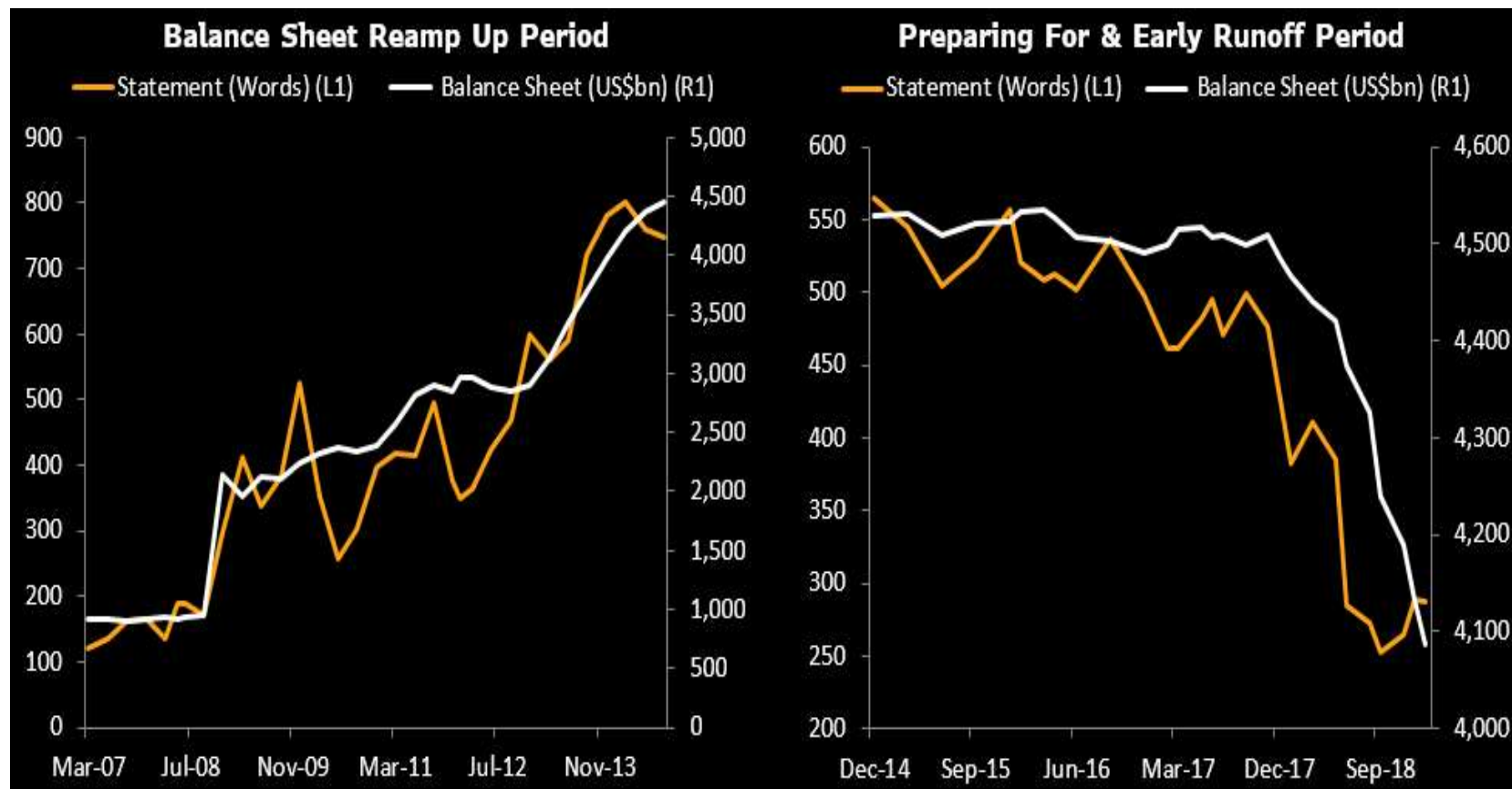
## BI Scenario for U.S. Treasury Yields & Consensus

	2s	5s	10s	30s	2s5s	2s10s	5s10s	10s30s	2s5s10s	5s10s30s
<b>Actual 4/30/19</b>	<b>2.27</b>	<b>2.28</b>	<b>2.51</b>	<b>2.94</b>	<b>0.02</b>	<b>0.24</b>	<b>0.22</b>	<b>0.43</b>	<b>-0.20</b>	<b>-0.21</b>
<b>12/31/2019</b>										
<b>BI Scenario</b>	<b>2.35</b>	<b>2.57</b>	<b>2.91</b>	<b>3.35</b>	<b>0.22</b>	<b>0.56</b>	<b>0.34</b>	<b>0.44</b>	<b>-0.12</b>	<b>-0.10</b>
<b>Consensus</b>	<b>2.53</b>	<b>2.56</b>	<b>2.75</b>	<b>3.13</b>	<b>0.10</b>	<b>0.35</b>	<b>0.25</b>	<b>0.40</b>	<b>-0.15</b>	<b>-0.15</b>
<b>12/31/2020</b>										
<b>BI Scenario</b>	<b>2.15</b>	<b>2.45</b>	<b>2.80</b>	<b>3.25</b>	<b>0.30</b>	<b>0.65</b>	<b>0.35</b>	<b>0.45</b>	<b>-0.05</b>	<b>-0.10</b>
<b>Consensus</b>	<b>2.56</b>	<b>2.66</b>	<b>2.87</b>	<b>3.25</b>	<b>0.25</b>	<b>0.55</b>	<b>0.30</b>	<b>0.40</b>	<b>-0.05</b>	<b>-0.10</b>

\* Scenario reflect the base case view of the Bloomberg U.S. Interest Rate Strategy team

## Interesting Charts

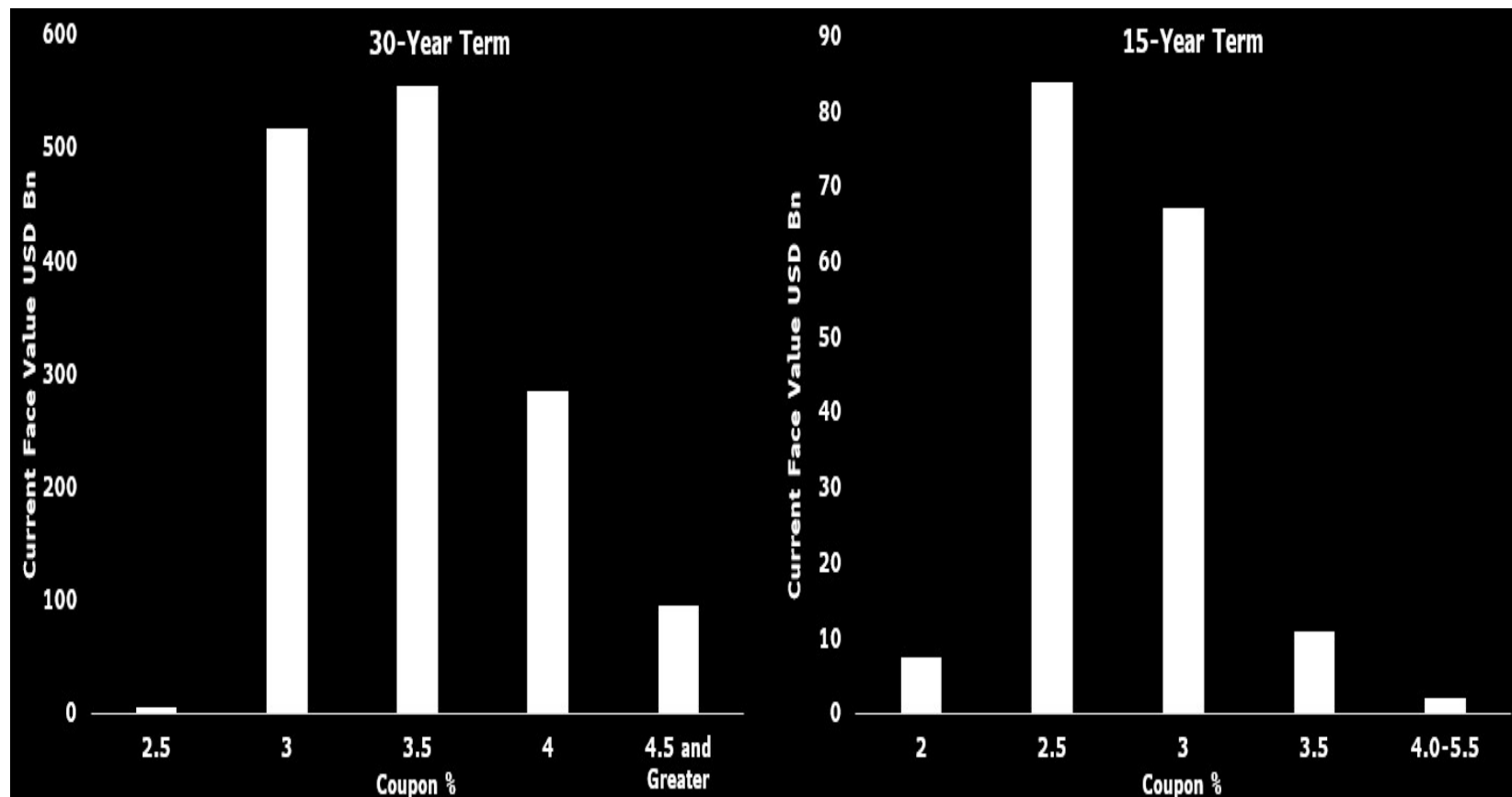
## Another Normalization – Fed Statement vs. Balance Sheet



\* Source: Bloomberg Intelligence, Federal Reserve



## Fed Mortgage Coupon Holdings Below Market (as of 4/3/19)



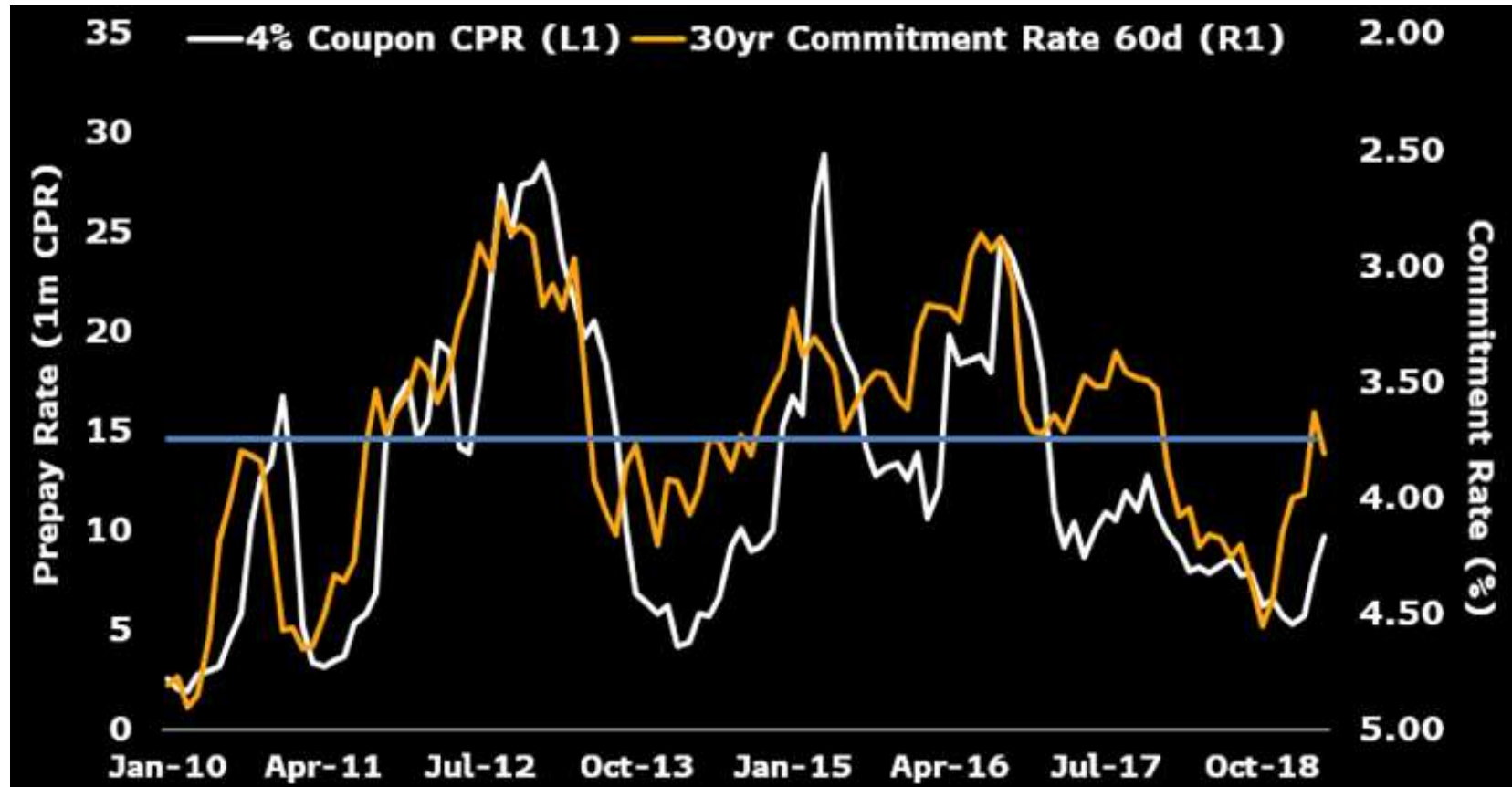
\* Source: Bloomberg Intelligence, Federal Reserve

## Fed MBS Holdings Weighted Average Life

Fed SOMA MBS Portfolio		
	Years	Change
Weighted Average Life	6.72	
Yields Rise 100 Bp	7.83	1.12
Yields Fall 100 Bp	4.14	-2.58
	3m Constant Prepayment Rate (%)	
Current 3Mo.	8.26	
Apr. '18 3Mo.	8.85	

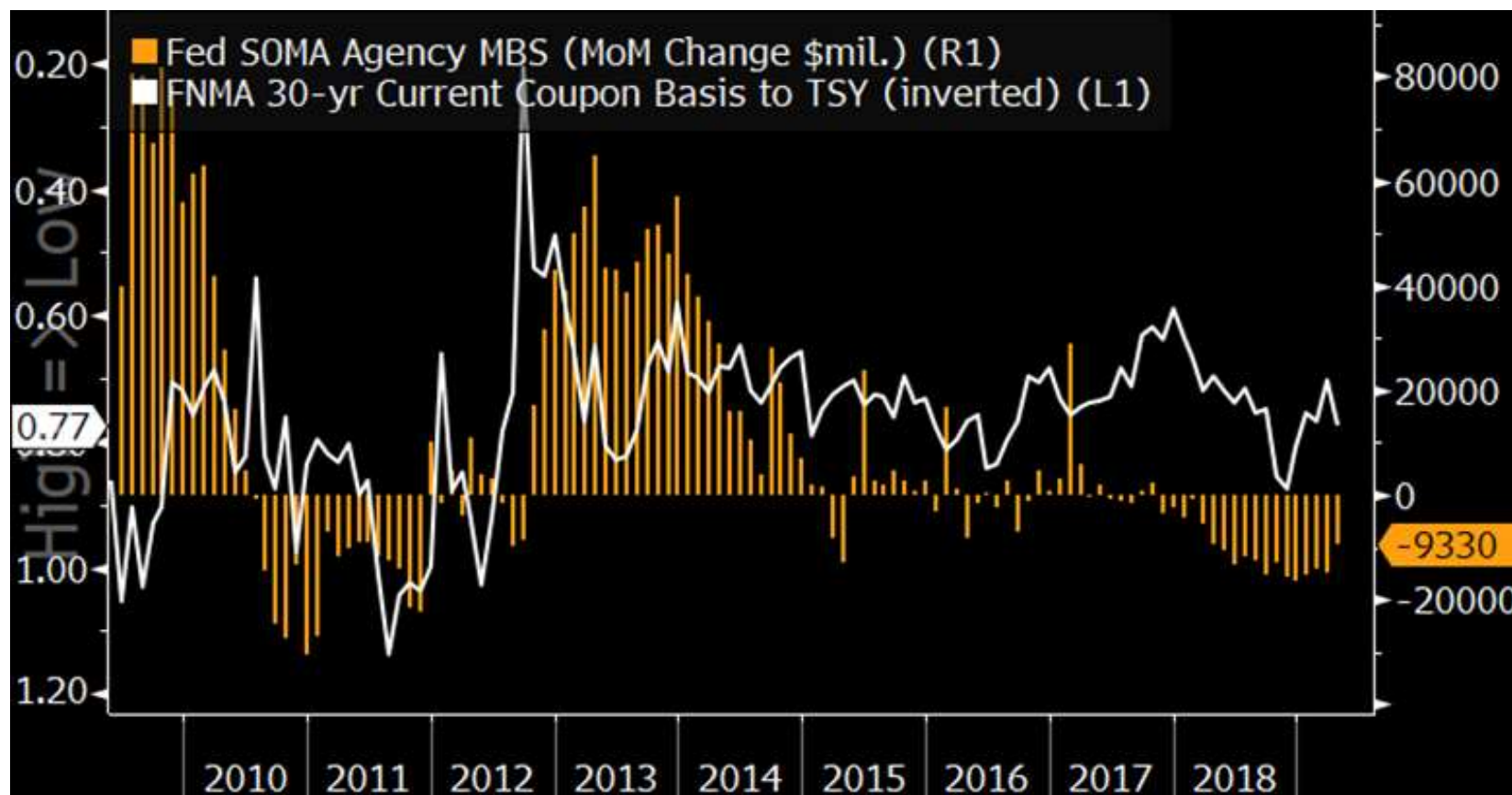
\* Source: Bloomberg Intelligence

## 4% Coupon Prepays Accelerate on Rates Below 3.75%



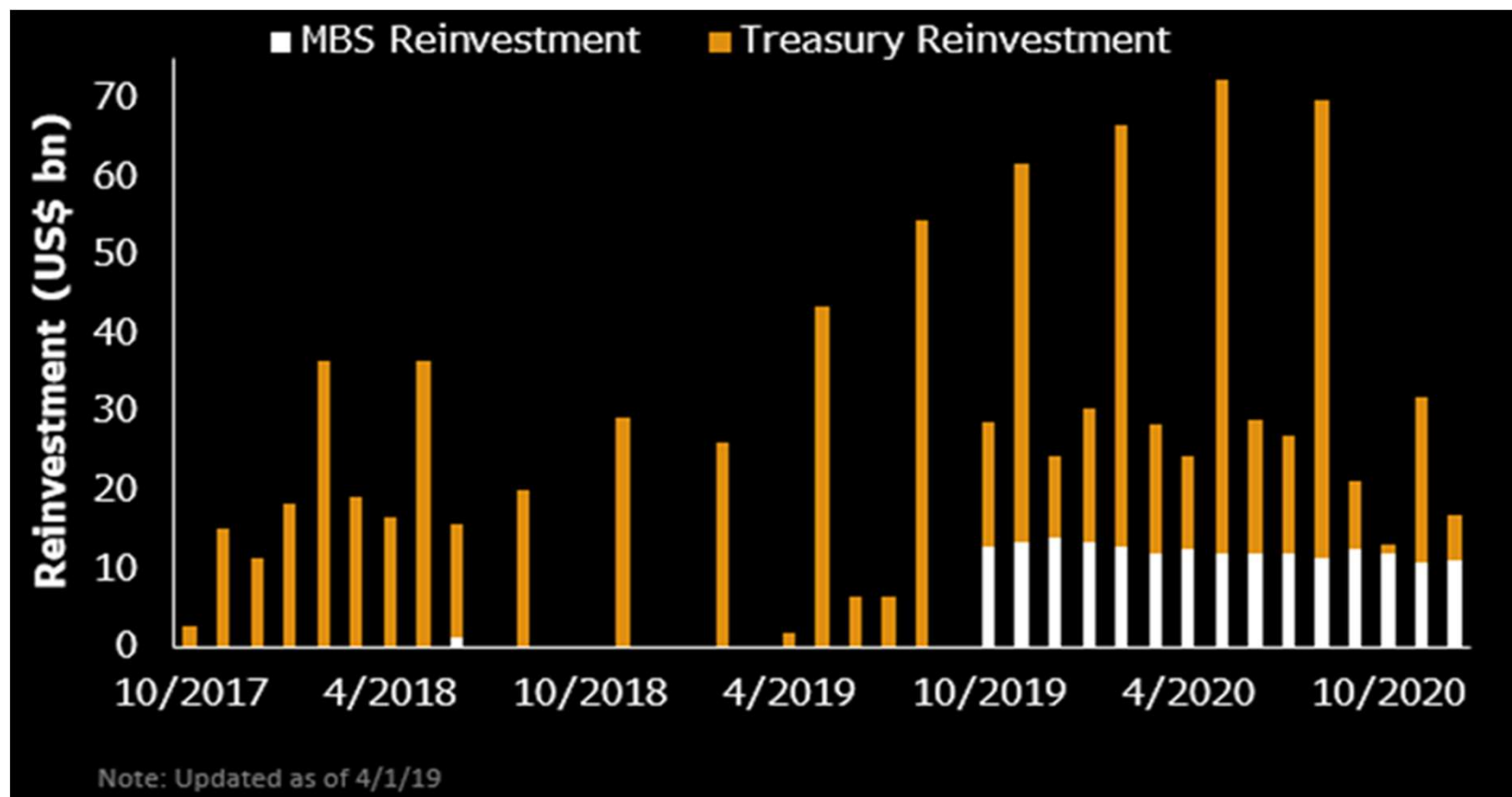
\* Source: Bloomberg

## Mortgage Runoff vs. MBS Basis to Treasuries



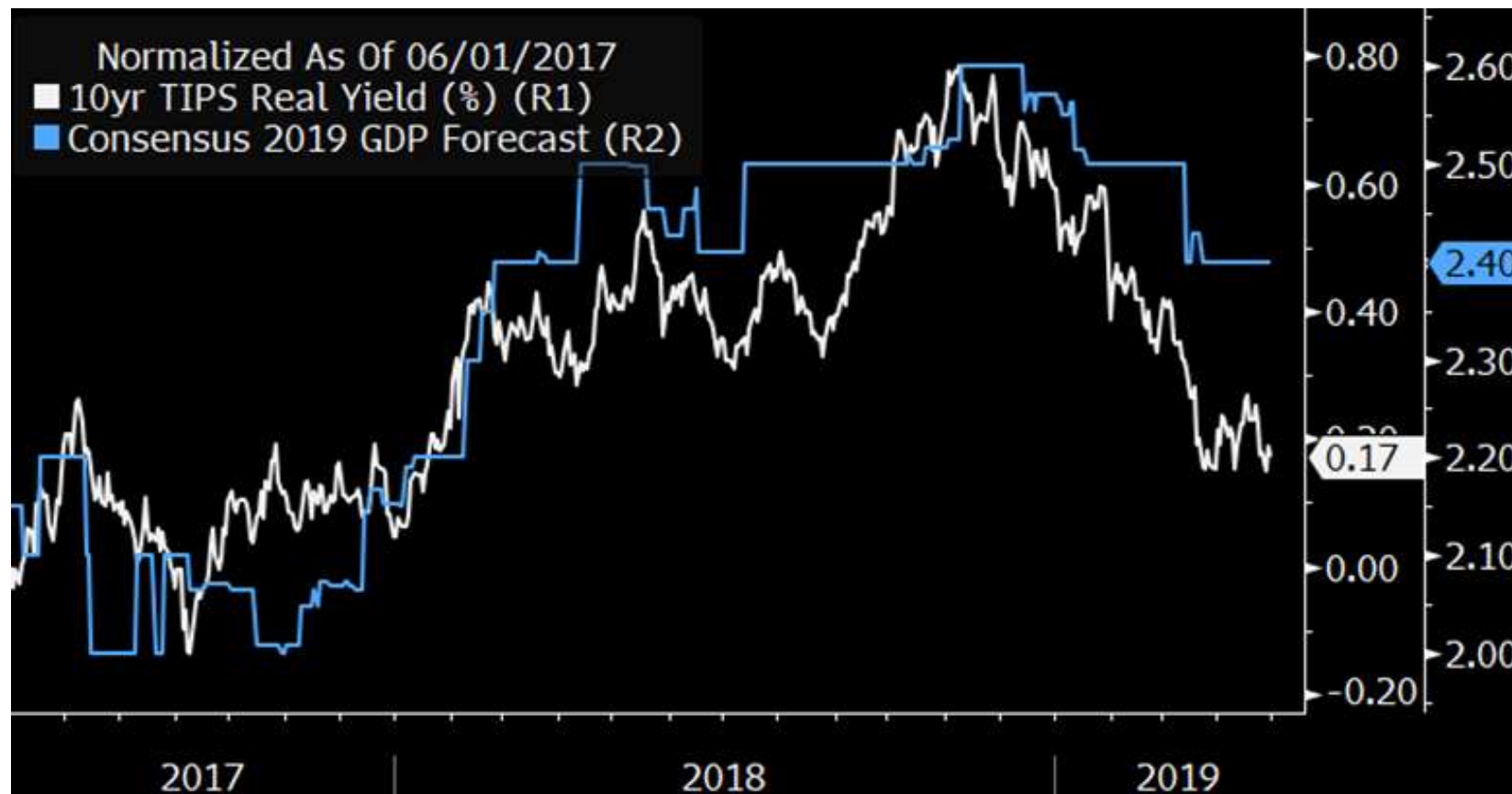
\* Source: Bloomberg, G #BI 19621

## Securities Reinvested Jump When QT Ends



\* Source: Bloomberg Intelligence, Federal Reserve

## 10-Year TIPS Real Yields Lead Changes in GDP Forecasts



\* Source: Bloomberg, G #BI 7567

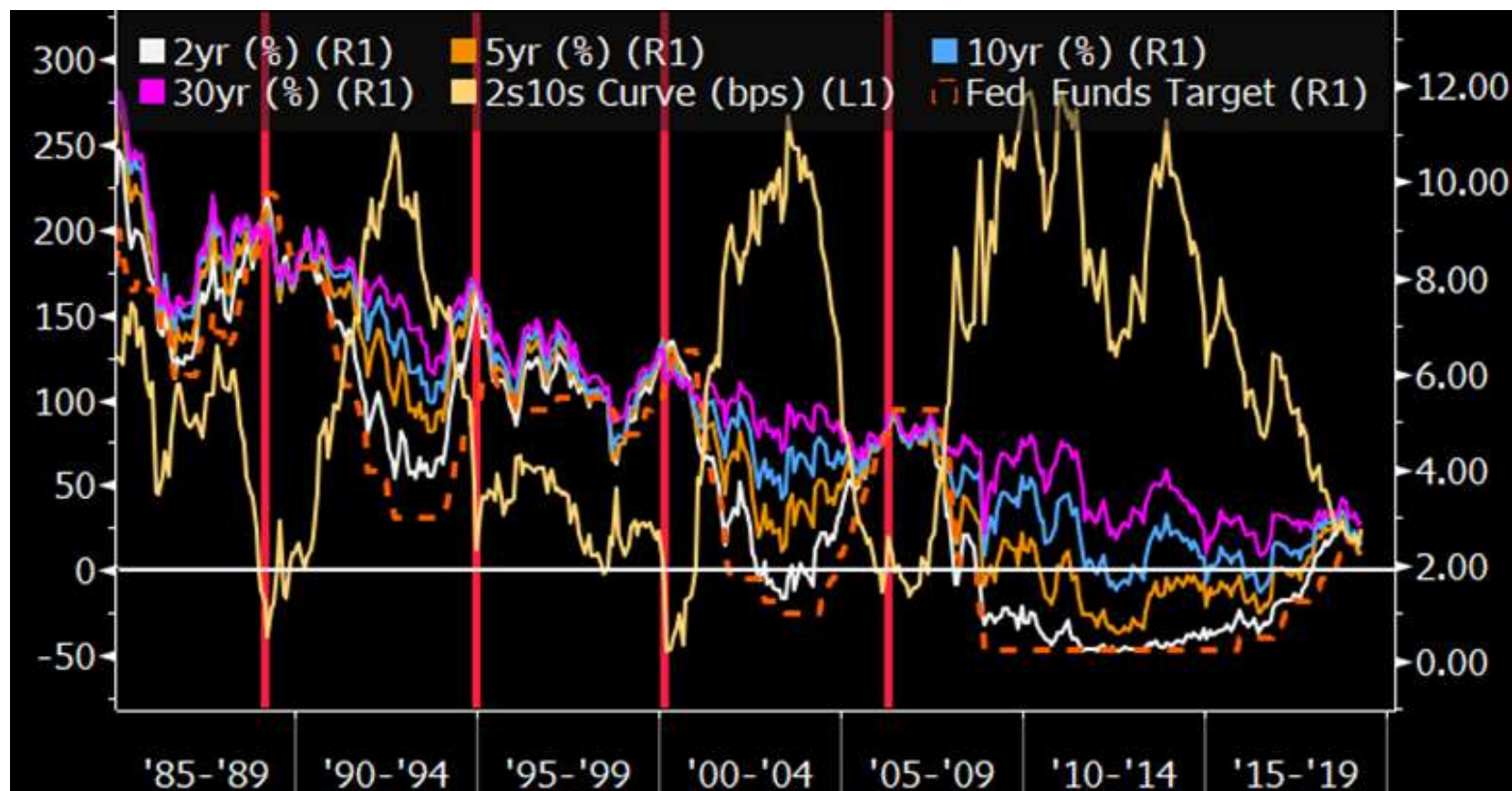
## Real Yields and Breakevens Taking Turns Piloting Yields



\* Source: Bloomberg, G #BI 8488

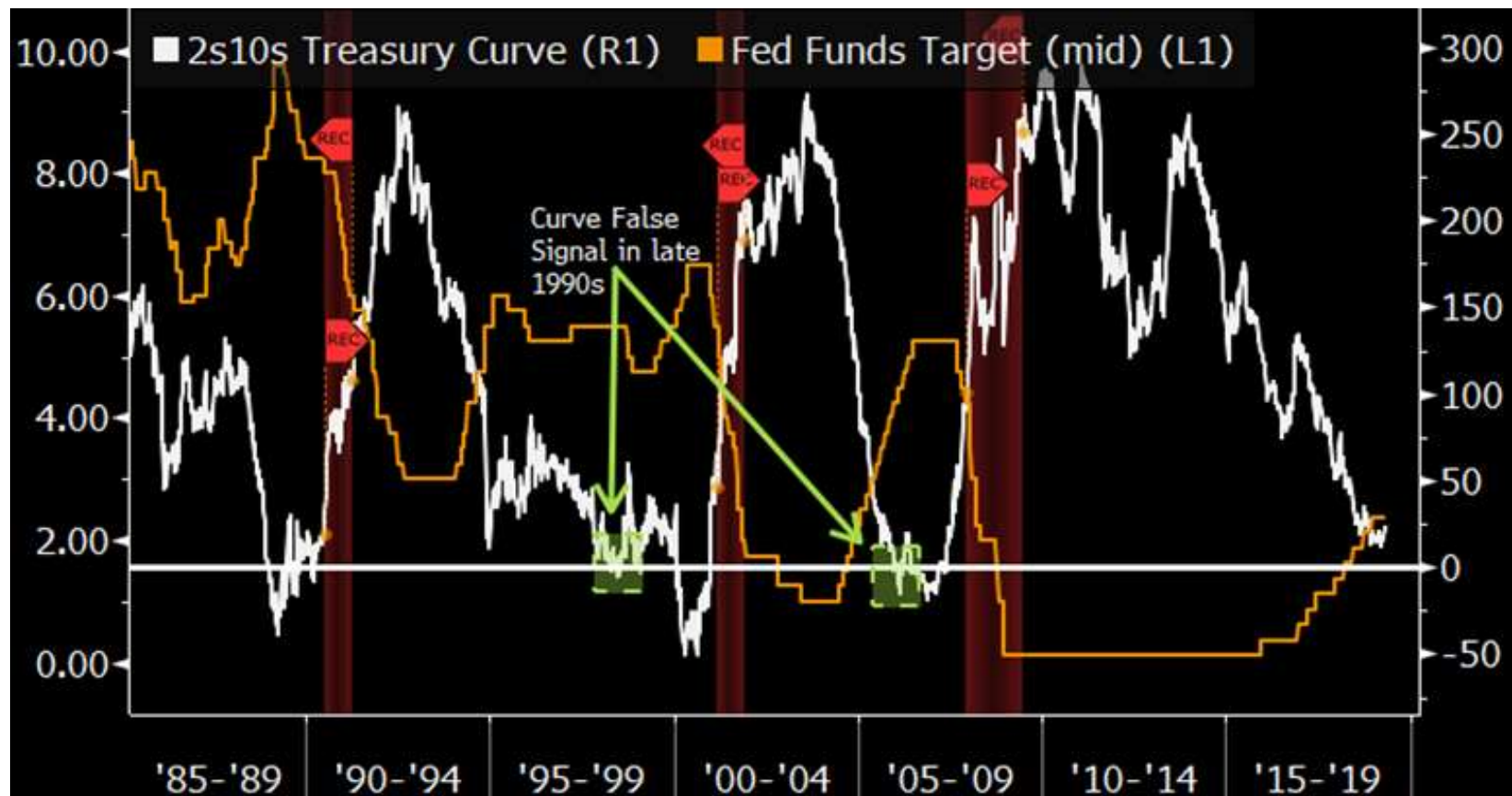


## Curve Inversion Usually Stops as Yields Peak



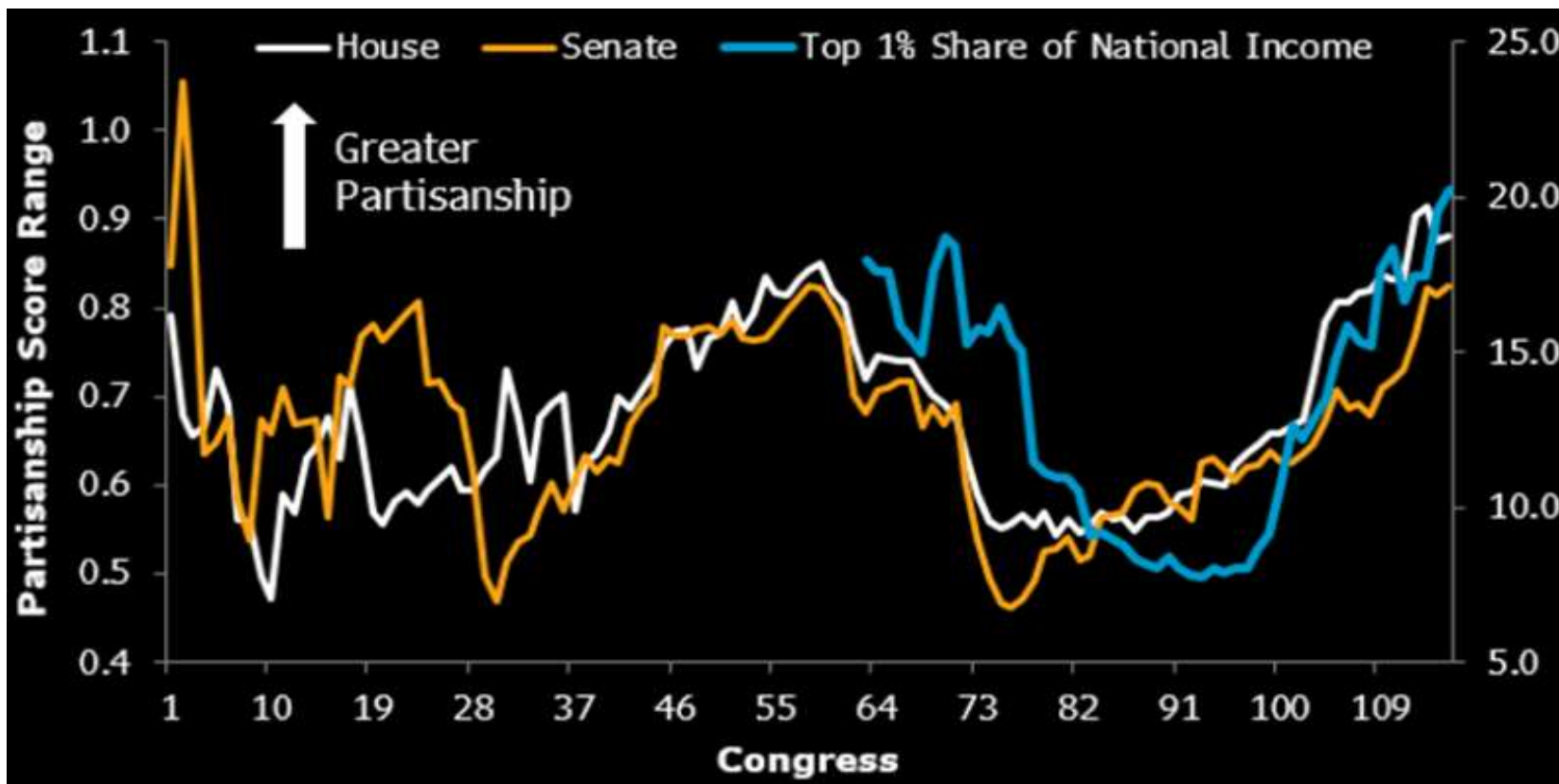
\* Source: Bloomberg, G #BI 13297

## Curve Inversion Signal Sometimes False or Very Early



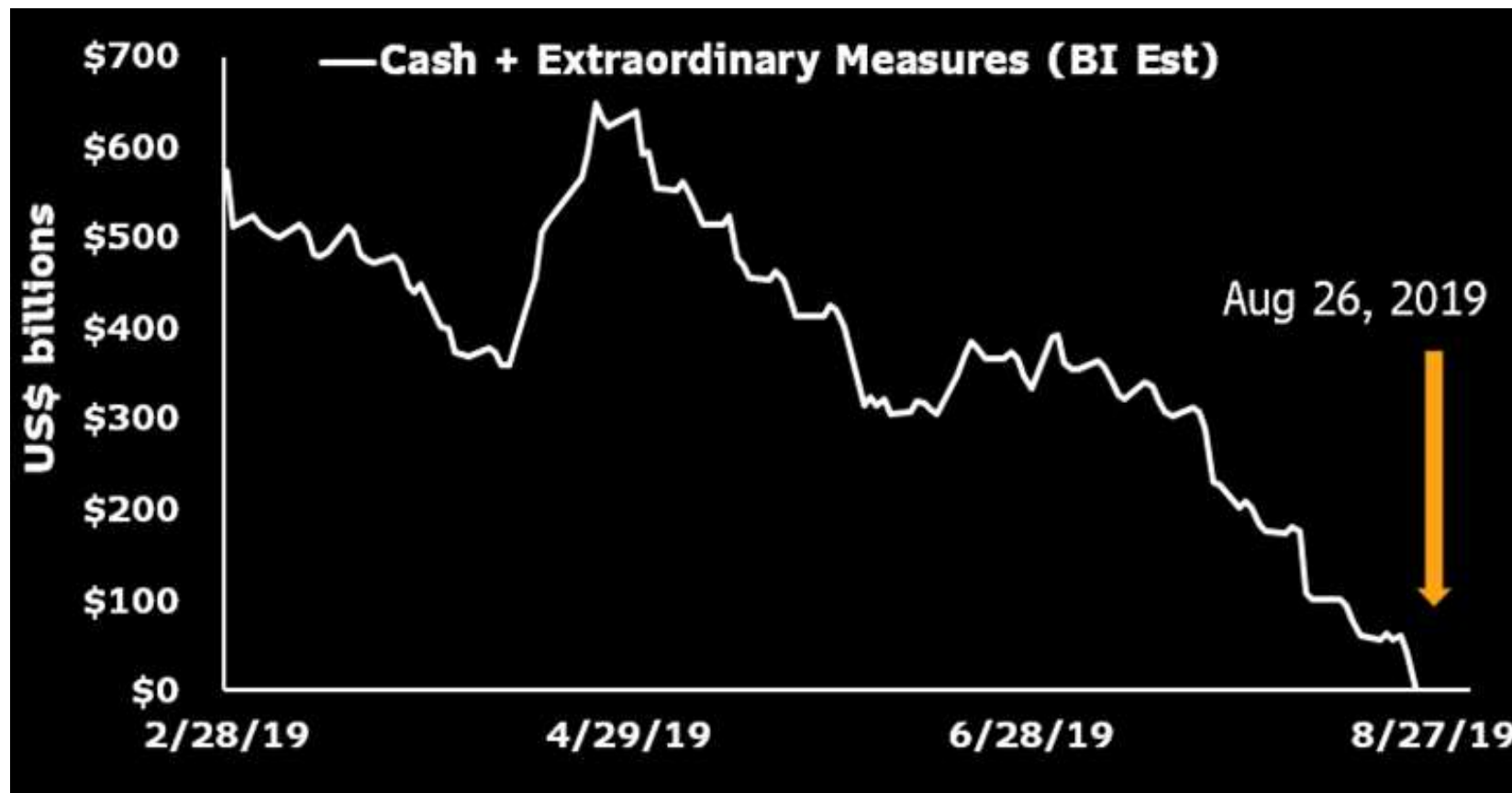
\* Source: Bloomberg, G #BI 20069

# Income Inequality and Political Partisanship



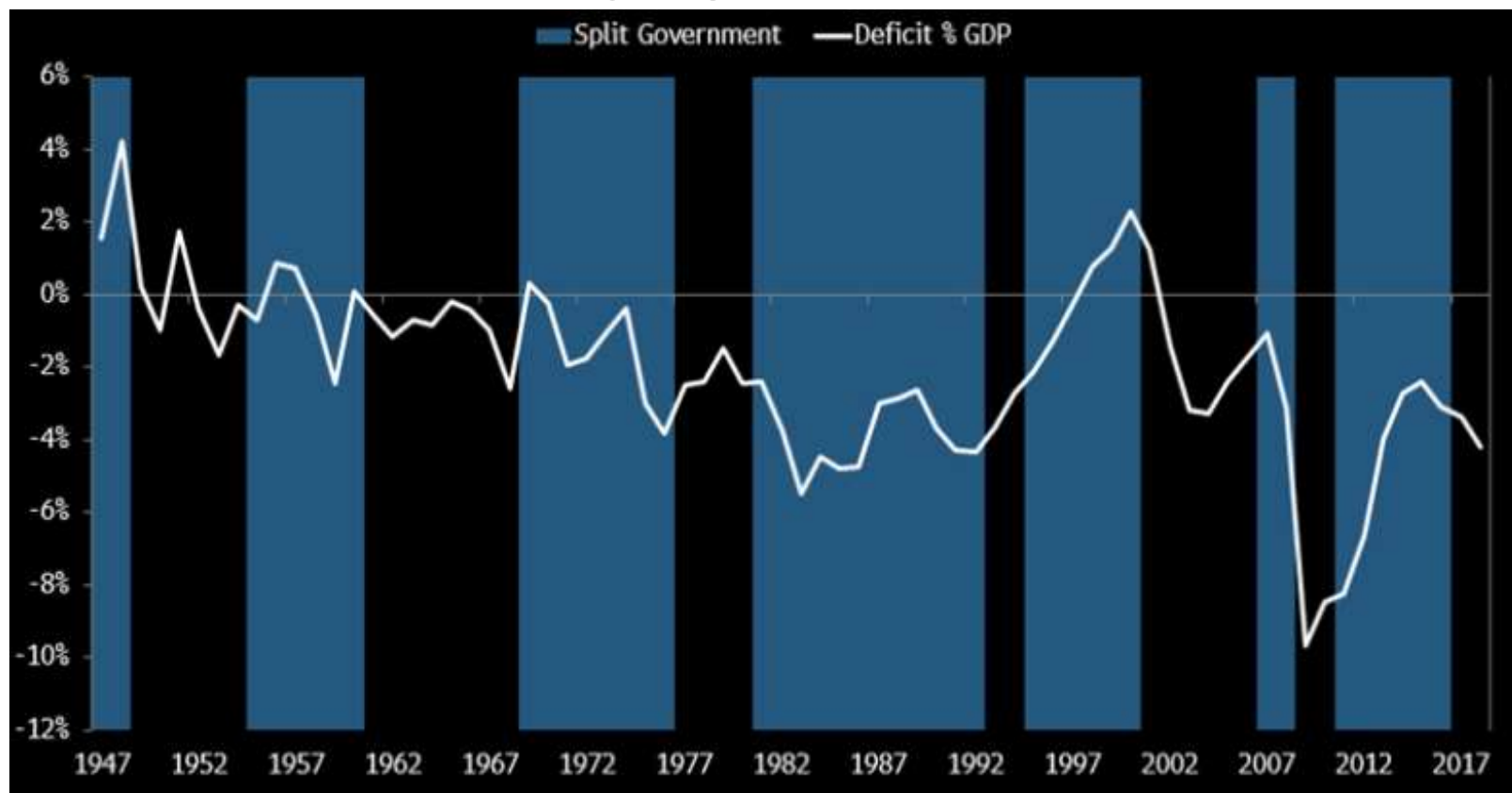
\* Source: Bloomberg Intelligence, voteview.com, World Income Database

## Money Runs Out Aug. 26 If Debt Ceiling Not Raised



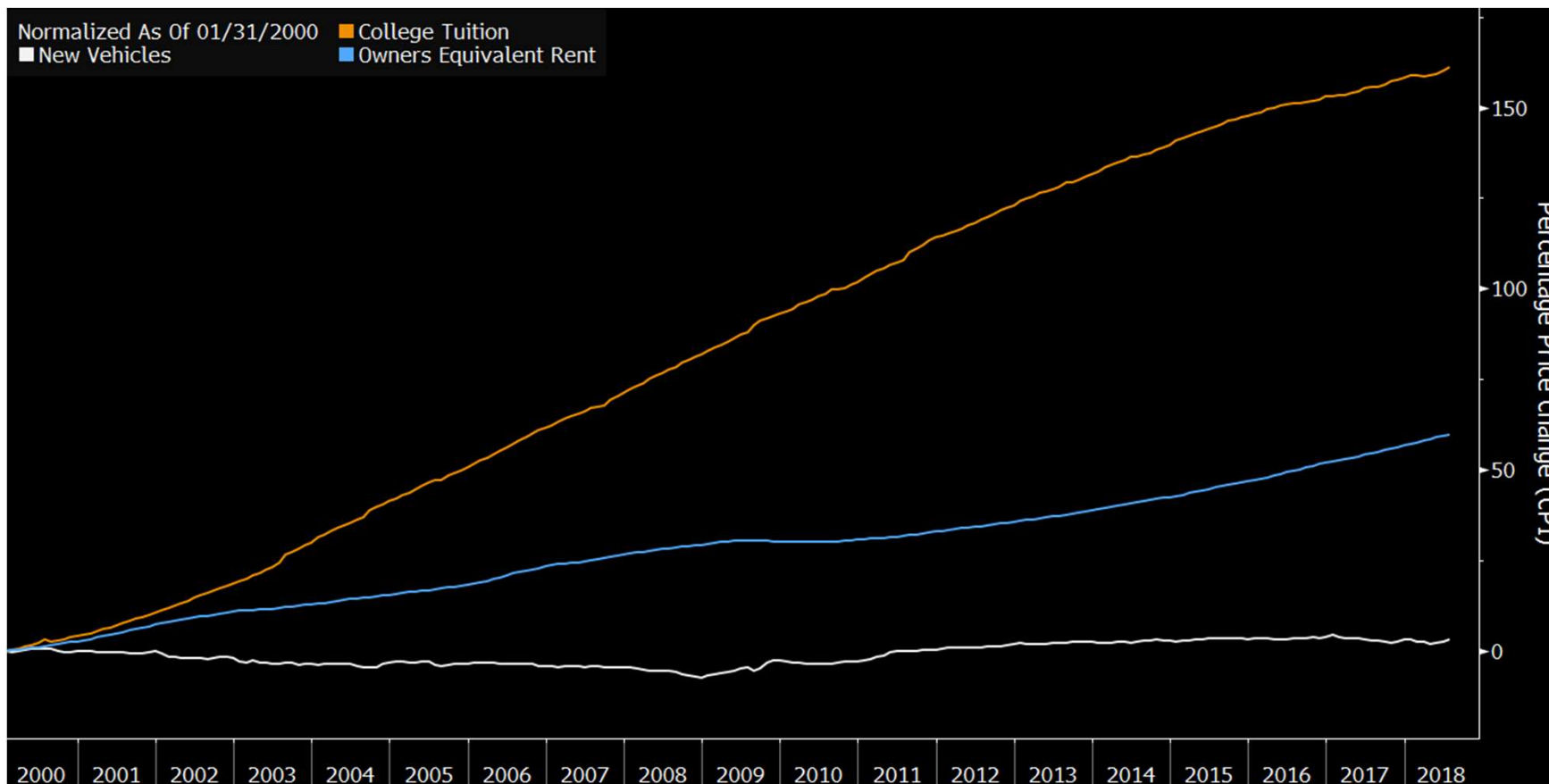
\* Source: Bloomberg Intelligence

## Deficits Appear to Be Party Agnostic



\* Source: Bloomberg Intelligence

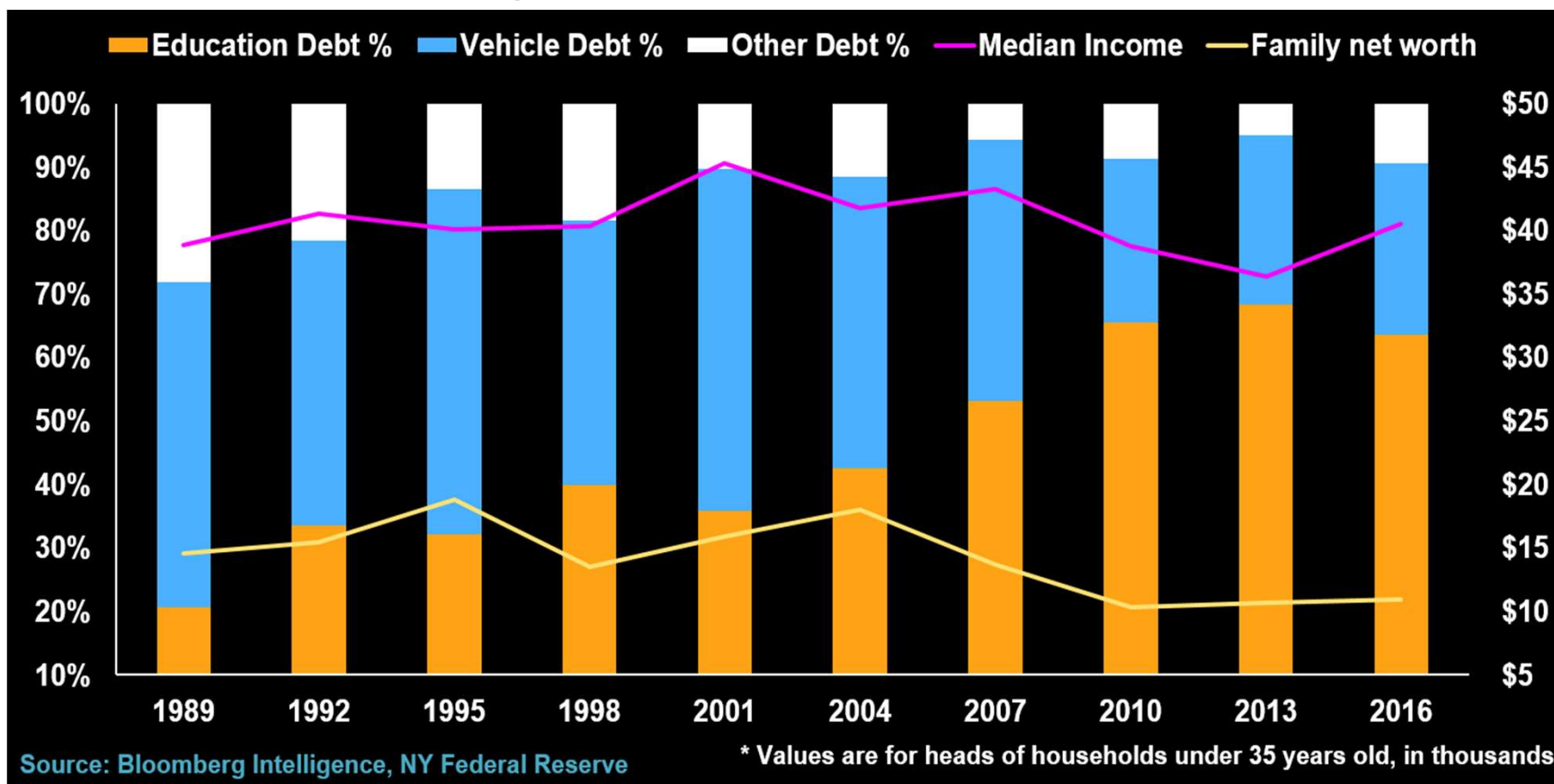
# College Cost Growth Dominates



\* Source: Bloomberg

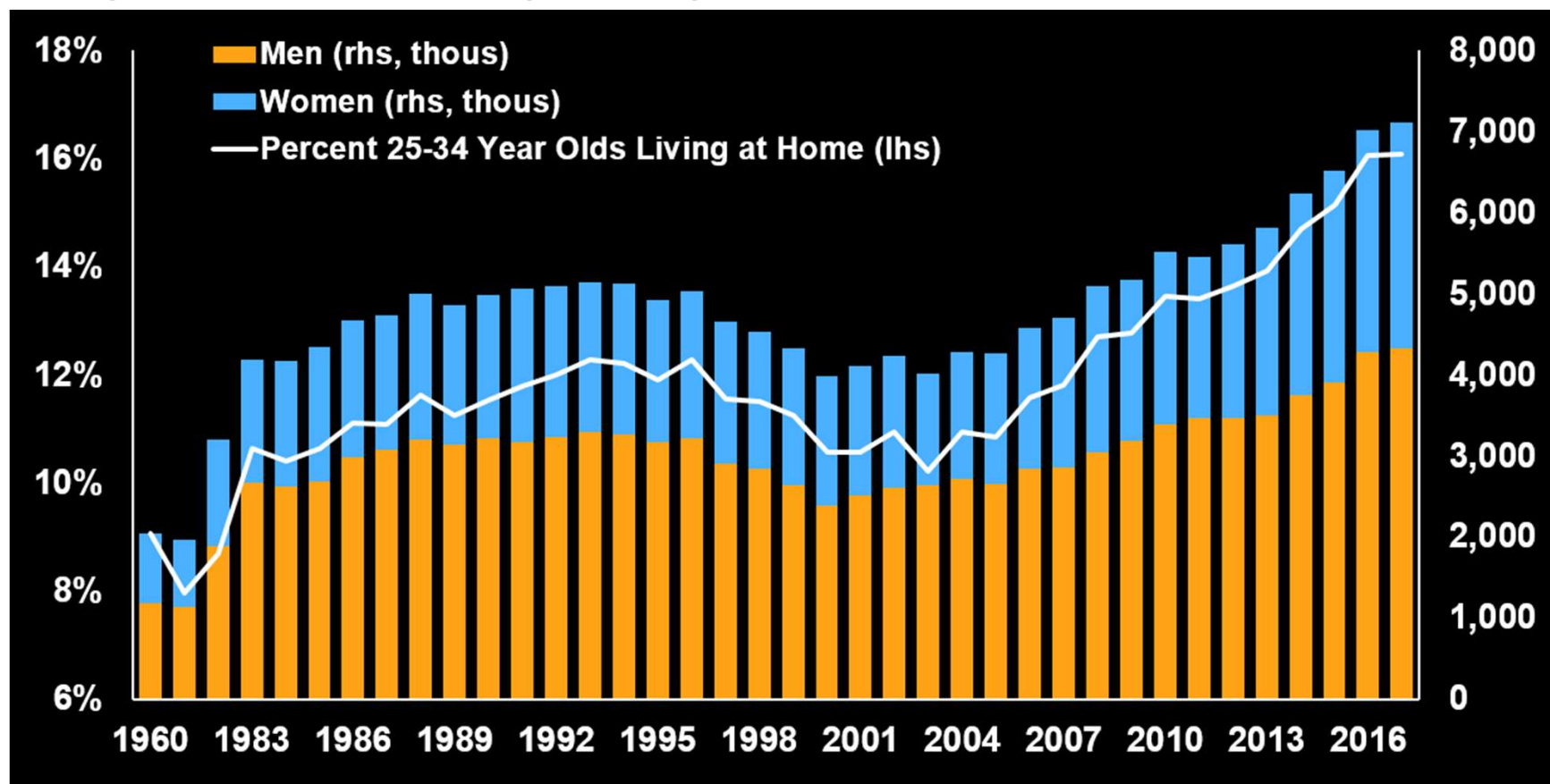


# Households Financing More Education



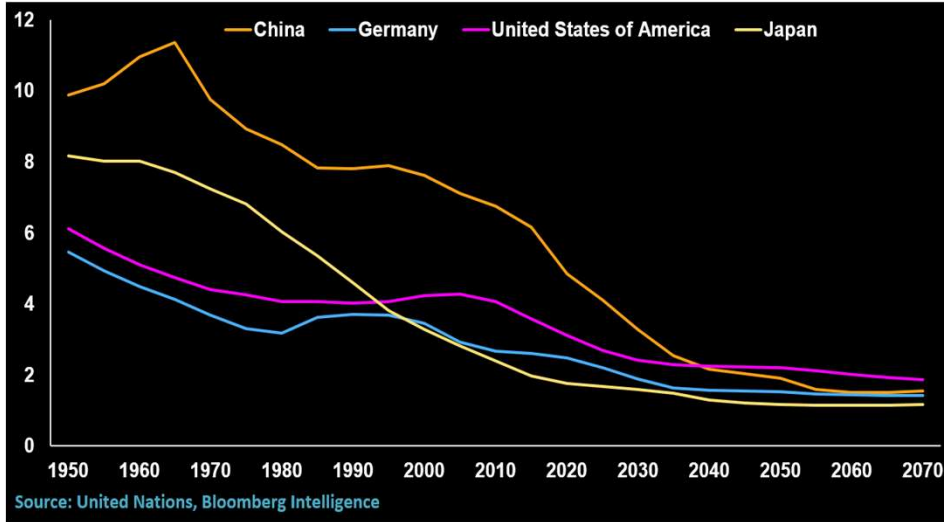
\* Source: Bloomberg Intelligence, voteview.com, World Income Database

## Demographics Holding Things Back



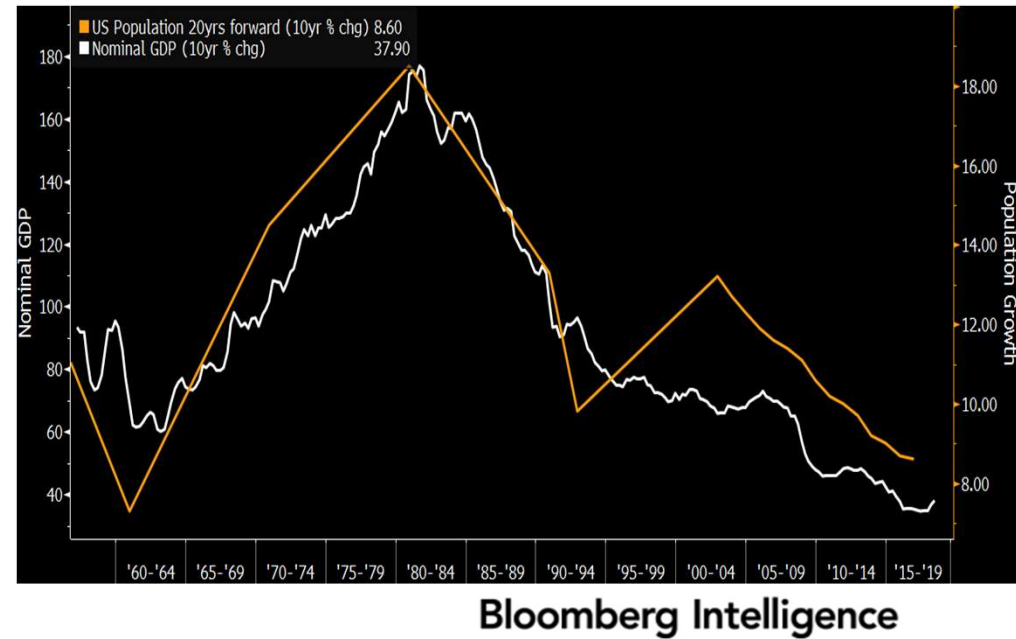
\* Source: Bloomberg Intelligence

## Global Population Support Ratios

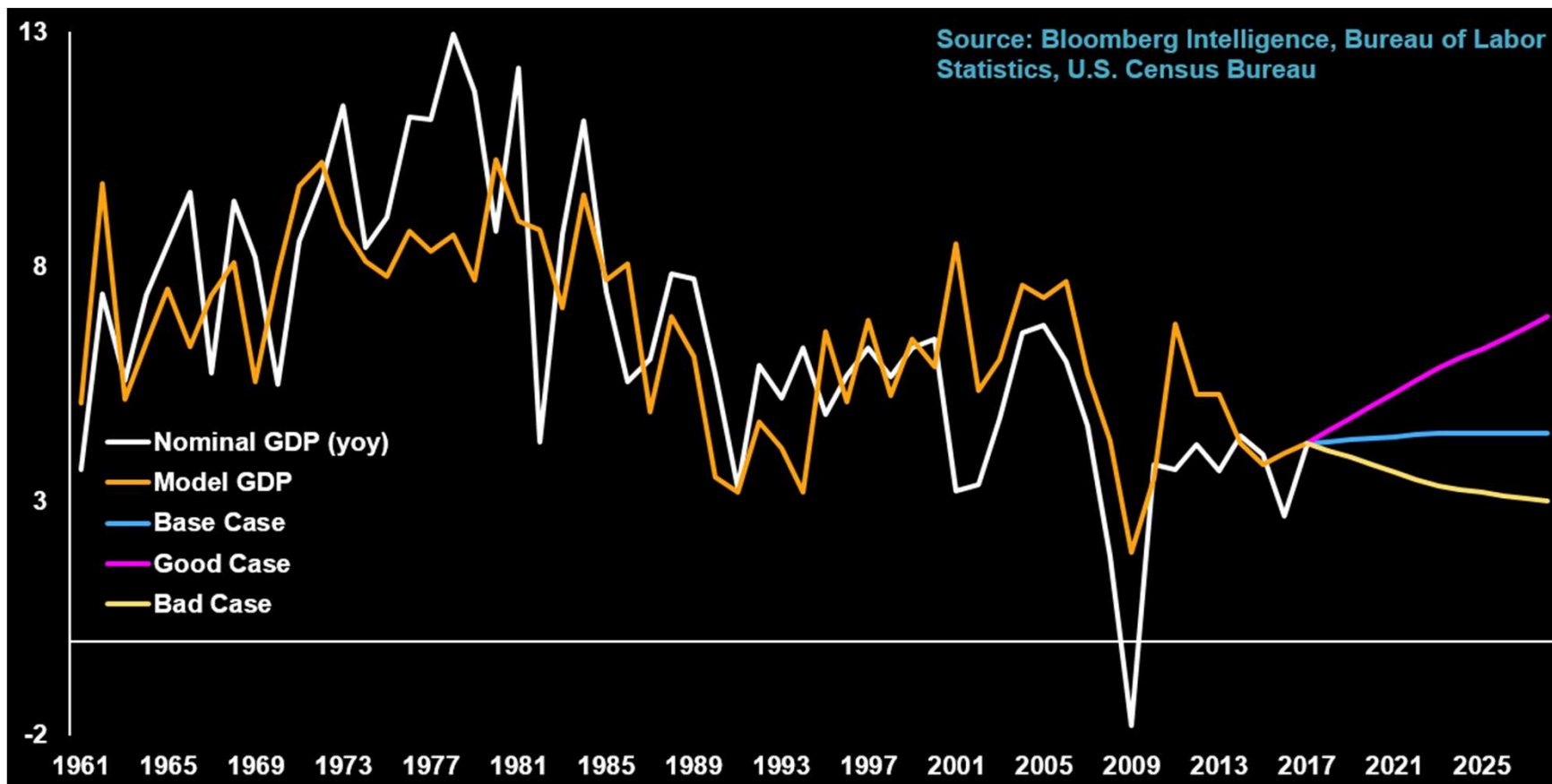


\* Source: United Nations, Bloomberg Intelligence, G #BI 16660

## Population Growth vs GDP



# Stylized Solow Growth Illustration



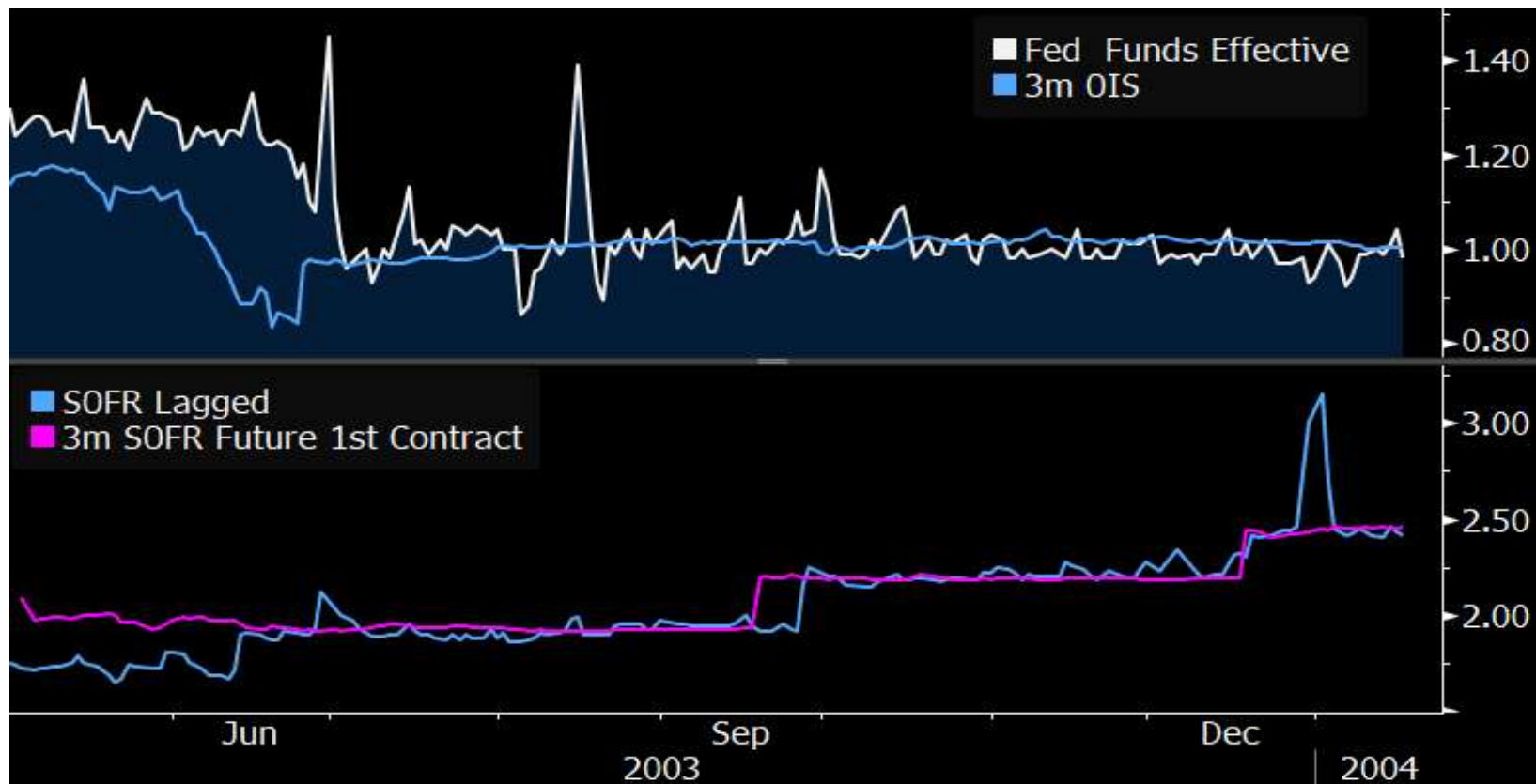
\* Source: Bloomberg, Bureau of Labor Statistics, U.S. Census Bureau

# Federal Government Mandatory Spending



\* Source: Bloomberg, G #BI 16637

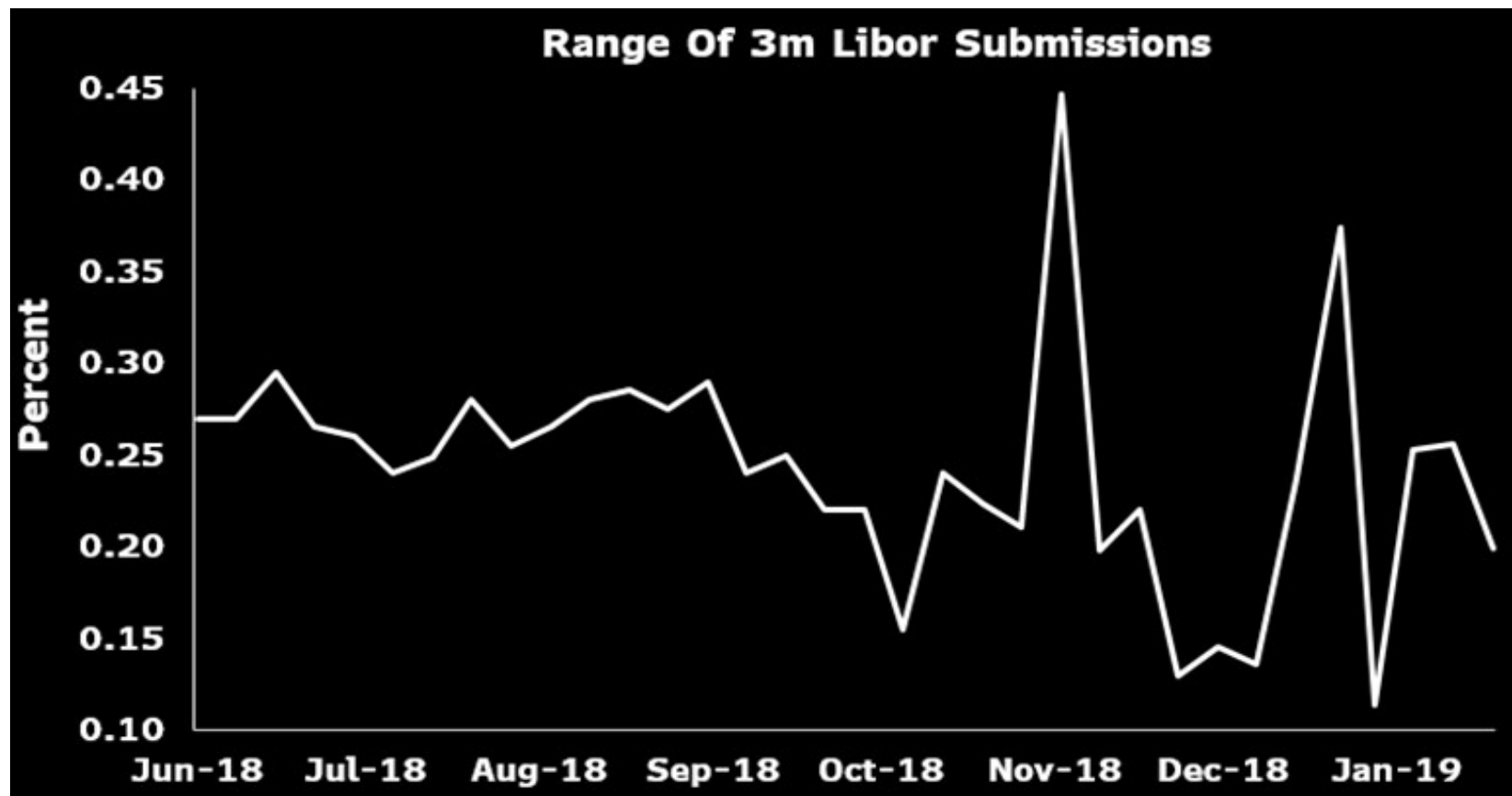
## SOFR Volatility Akin to Pre-Crisis Fed Funds



\* Source: Bloomberg, G #BI 19153

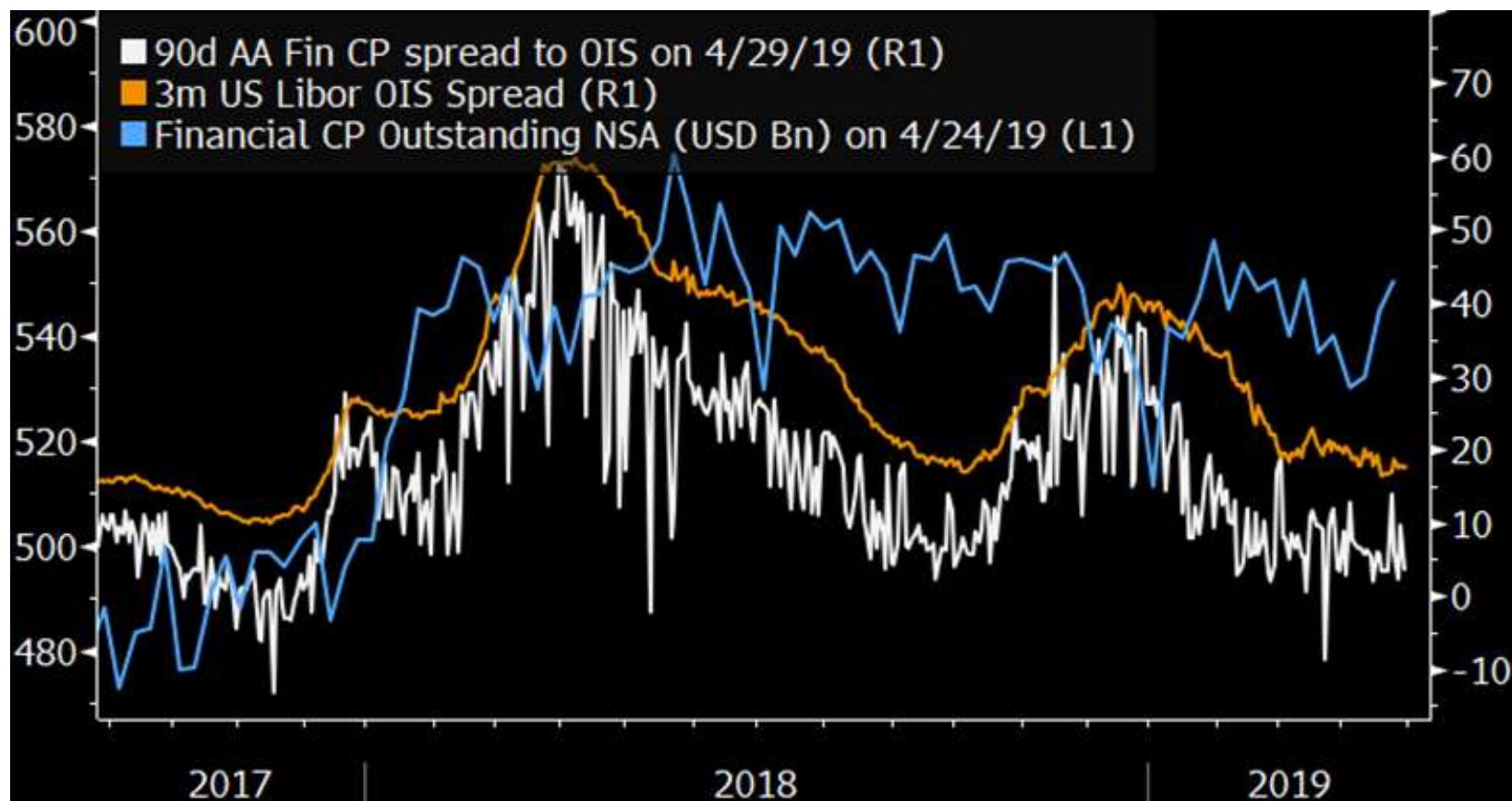


## Libor Panel Submission Volatility Higher Than Rate



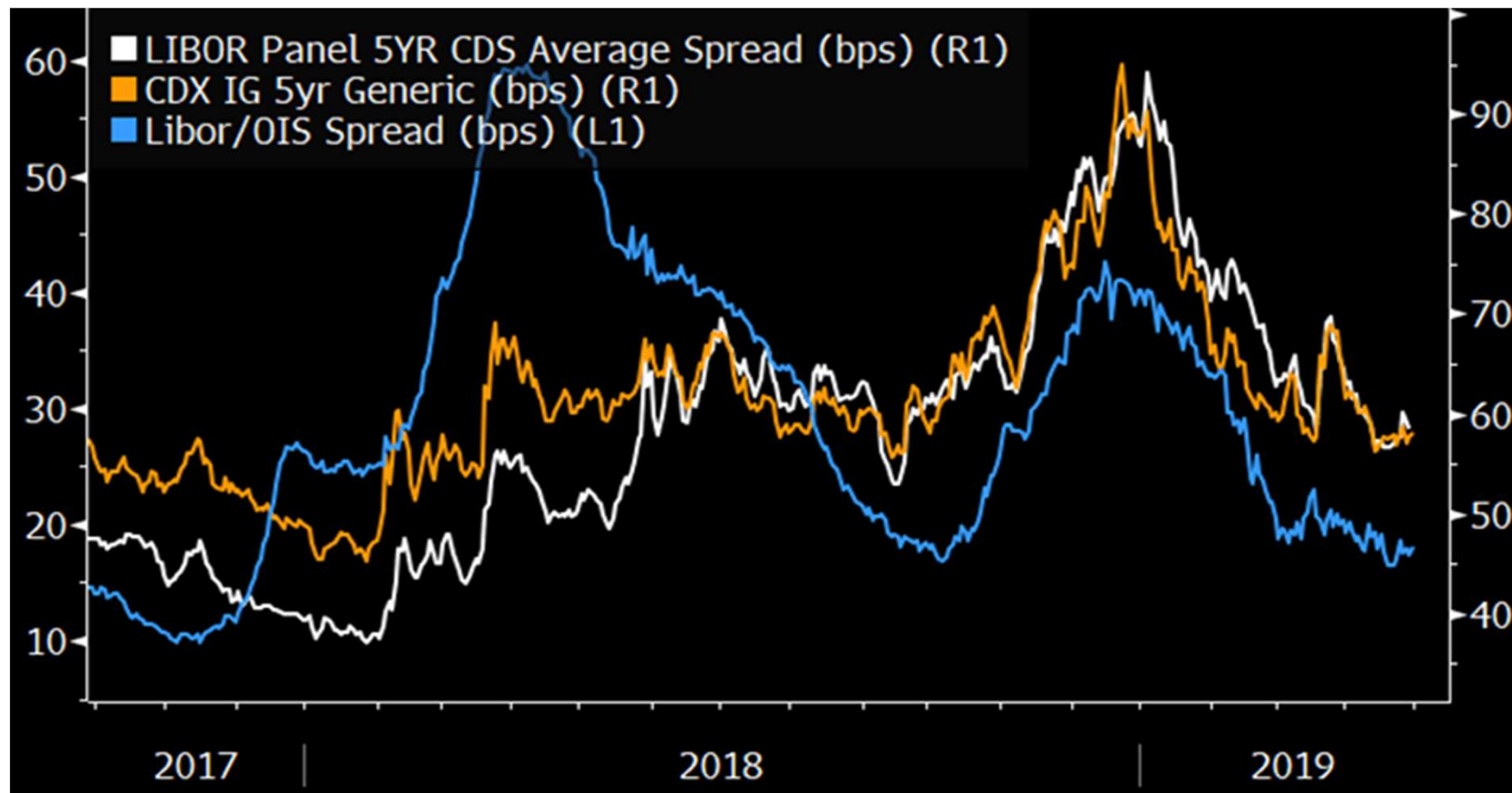
\* Source: The Ice, Bloomberg Intelligence

## Libor/OIS Has Followed CP/OIS Spread



\* Source: Bloomberg, G #BI 13742

## Libor Panel Bank CDS



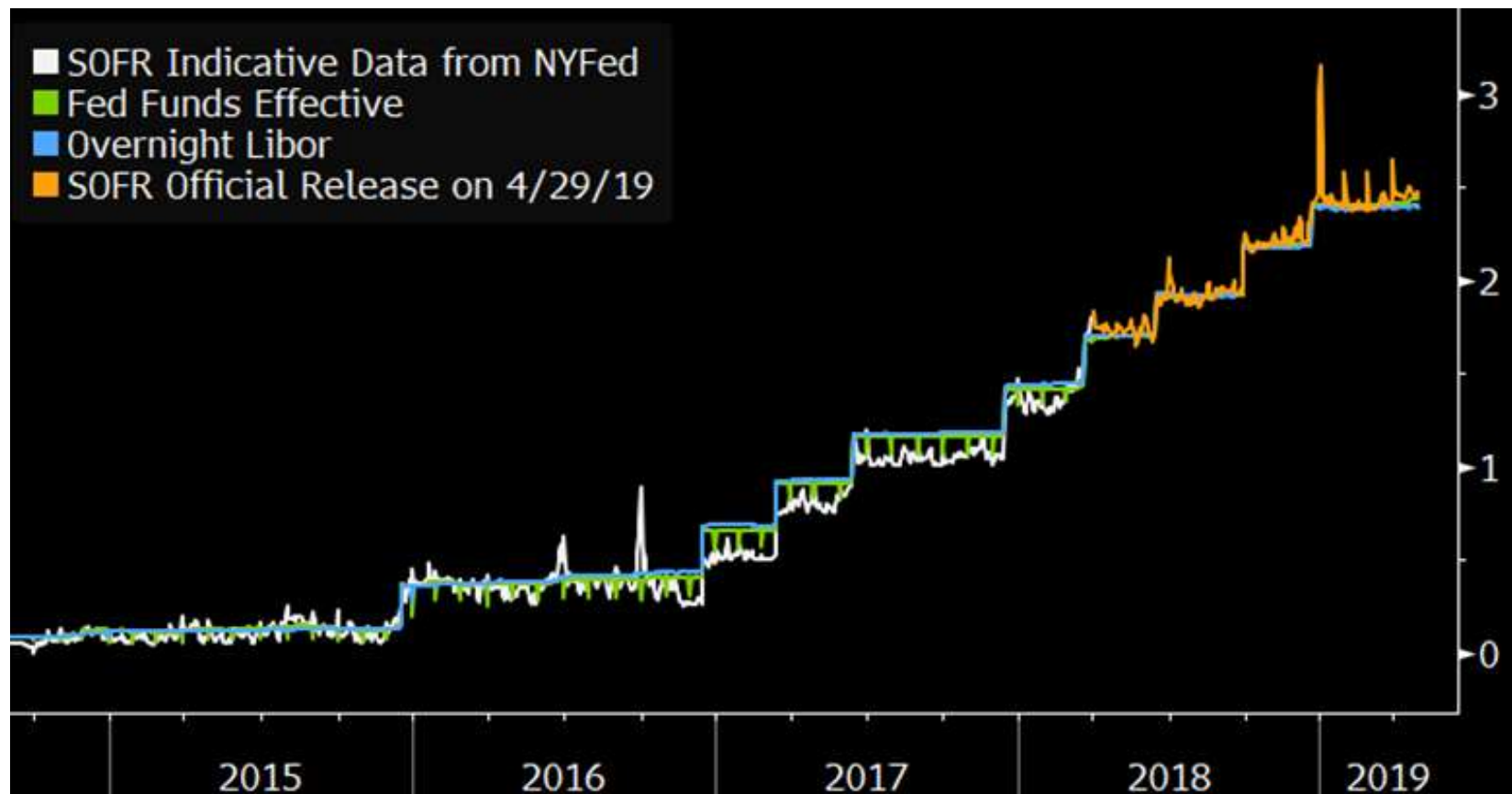
\* Source: Bloomberg, G #BI 14145

## Libor/OIS Fair Value Model



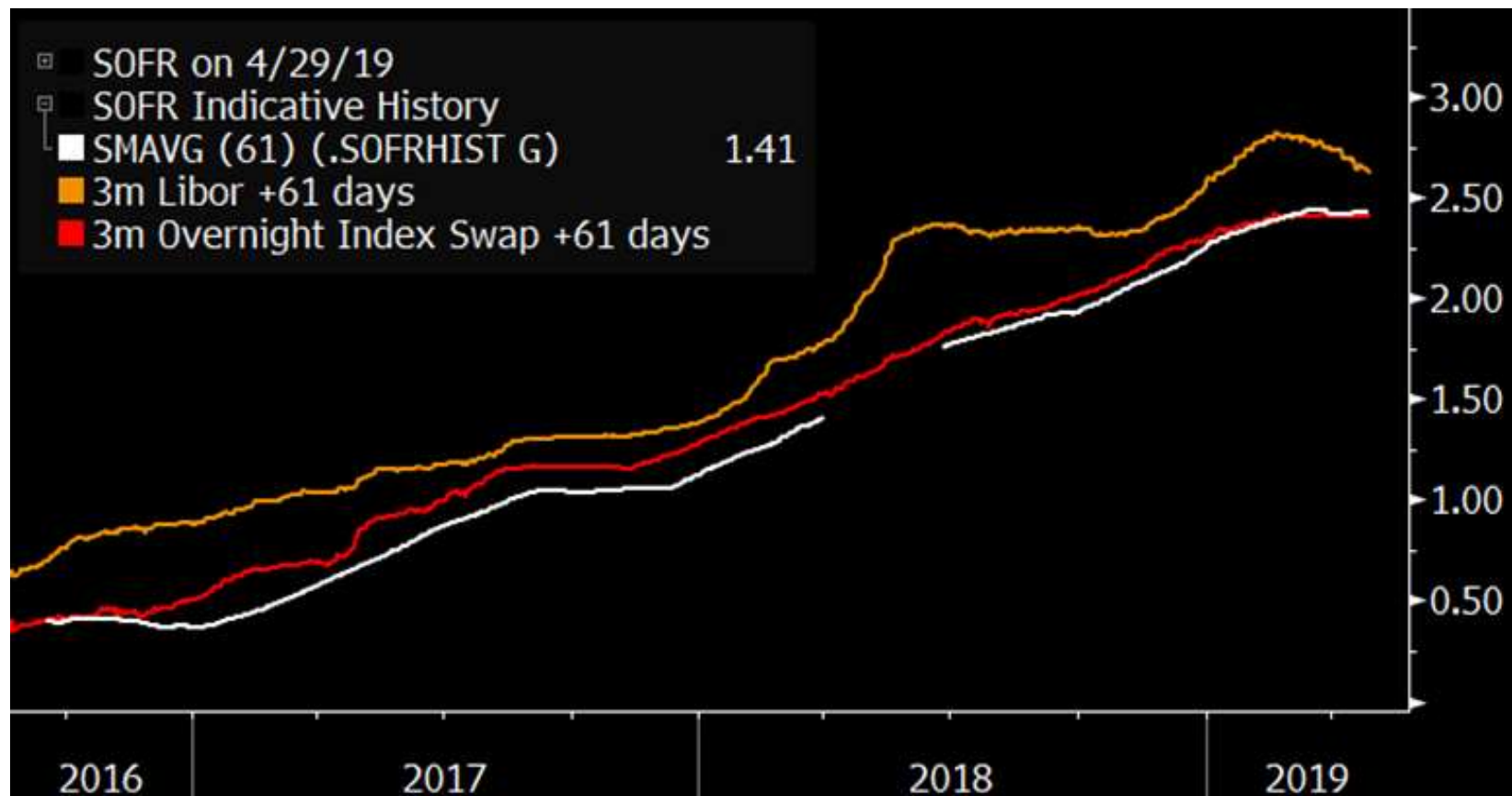
\* Source: Bloomberg Intelligence

## Secured Overnight Financing Rate (SOFR)



\* Source: Bloomberg, G #BI 14382

## SOFR vs. Libor



\* Source: Bloomberg, G #BI 16954



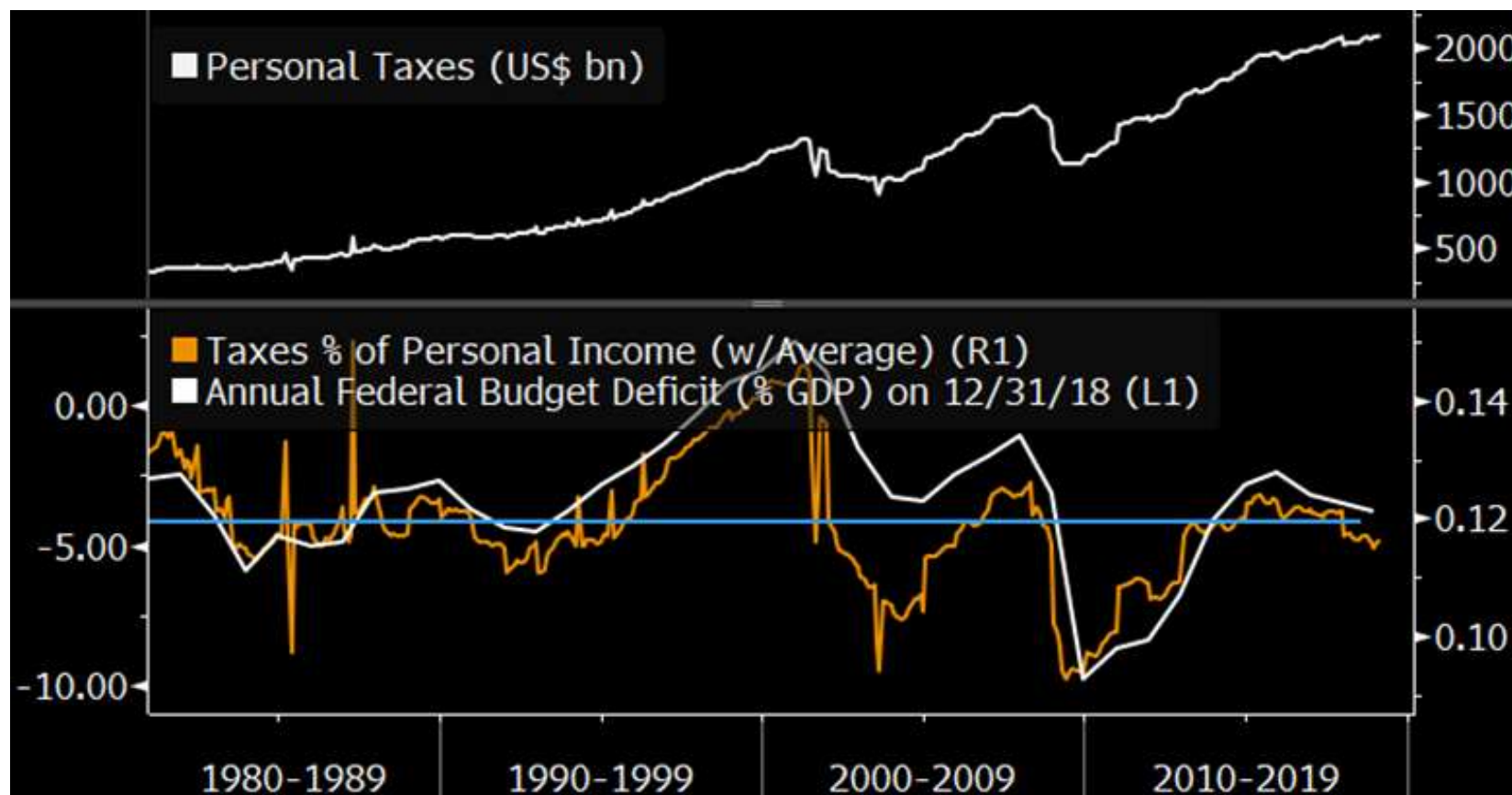
## Aggregate SOFR Issuance: \$82.7bn As of 4/25/19

Issuer Name	CUSIP	Ticker	Cpn	Amt Out	Maturity	DM	OAS Yield
Federal Home Loan Banks	3130AGA70	FHLB	2.55	1500000000	10/1/2020	10.38	2.37
JPMorgan Chase Bank NA	48125LRR5	JPM	2.99	800000000	10/19/2020	51.13	2.76
African Development Bank	00828EDE6	AFDB	2.76	150000000	11/18/2020	32.53	2.54
Federal Farm Credit Banks	3133EKHC3	FFCB	2.55	500000000	1/15/2021	4.77	2.23
Metropolitan Life Global Funding	59217GCW7	MET	3.29	265000000	1/15/2021	49.31	2.69
Metropolitan Life Global Funding	59217HBZ9	MET	3.29	265000000	1/15/2021	49.31	2.69
JPMorgan Chase Bank NA	48125LRT1	JPM	3.05	250000000	2/19/2021	22.76	2.64
Federal Home Loan Banks	3130AG3Q6	FHLB	2.56	3000000000	3/12/2021	11.72	2.32
Citibank NA	17325FAW8	C	3.04	1000000000	3/13/2021	59.02	2.81
Federal Farm Credit Banks	3133EKDM5	FFCB	2.56	500000000	3/18/2021	10.23	2.27
European Investment Bank	298785HU3	EIB	2.77	1000000000	10/8/2021	32.75	2.43
Landeskreditbank Baden-Wuerttemberg	AX5234981	LBANK	2.80	500000000	3/15/2022	31.80	2.44
Federal Farm Credit Banks	3133EKHW9	FFCB	2.64	200000000	4/22/2022	23.75	2.31

\* Source: Bloomberg

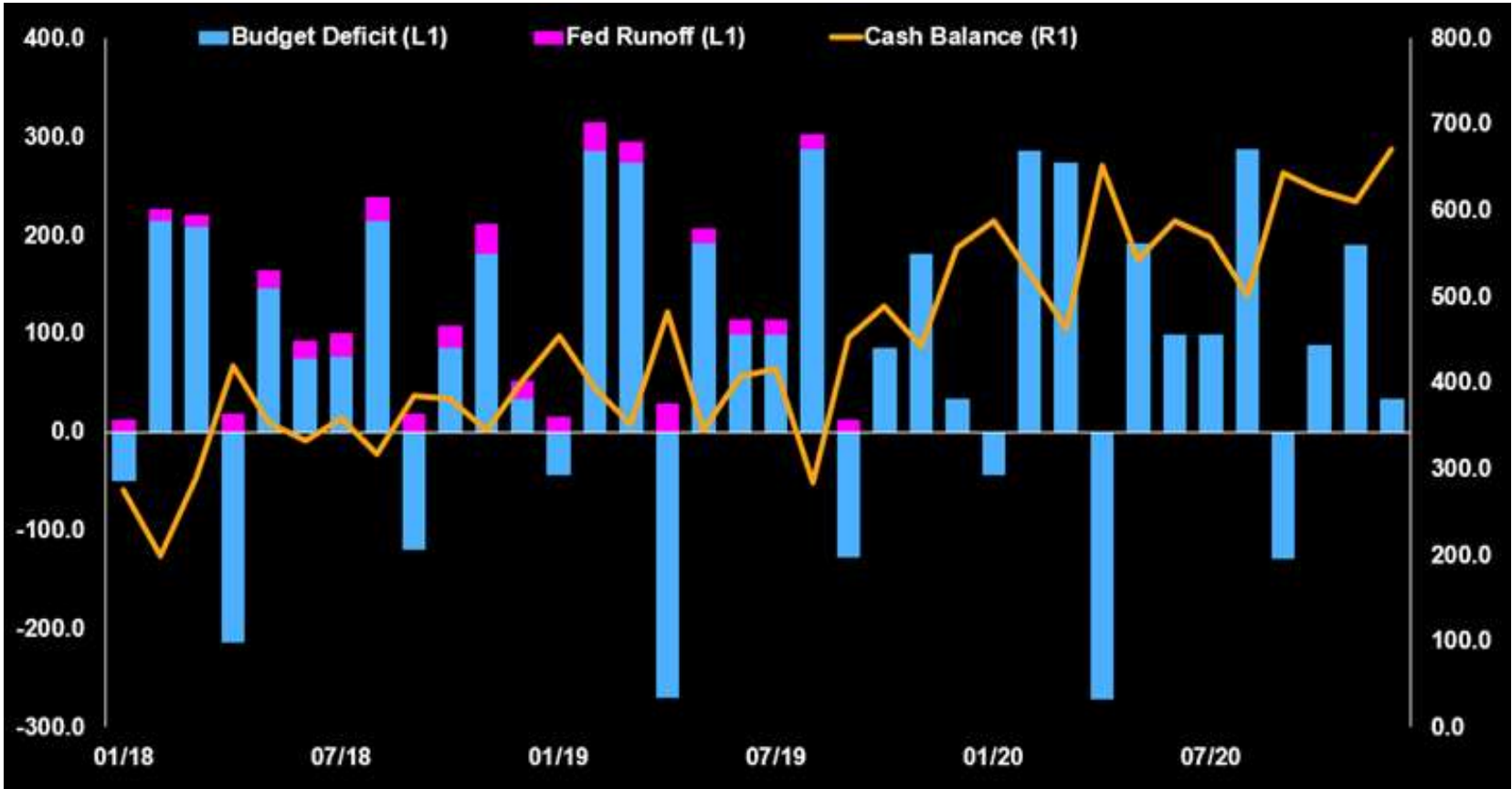
# Supply/Demand

## Taxes and Budget Deficit



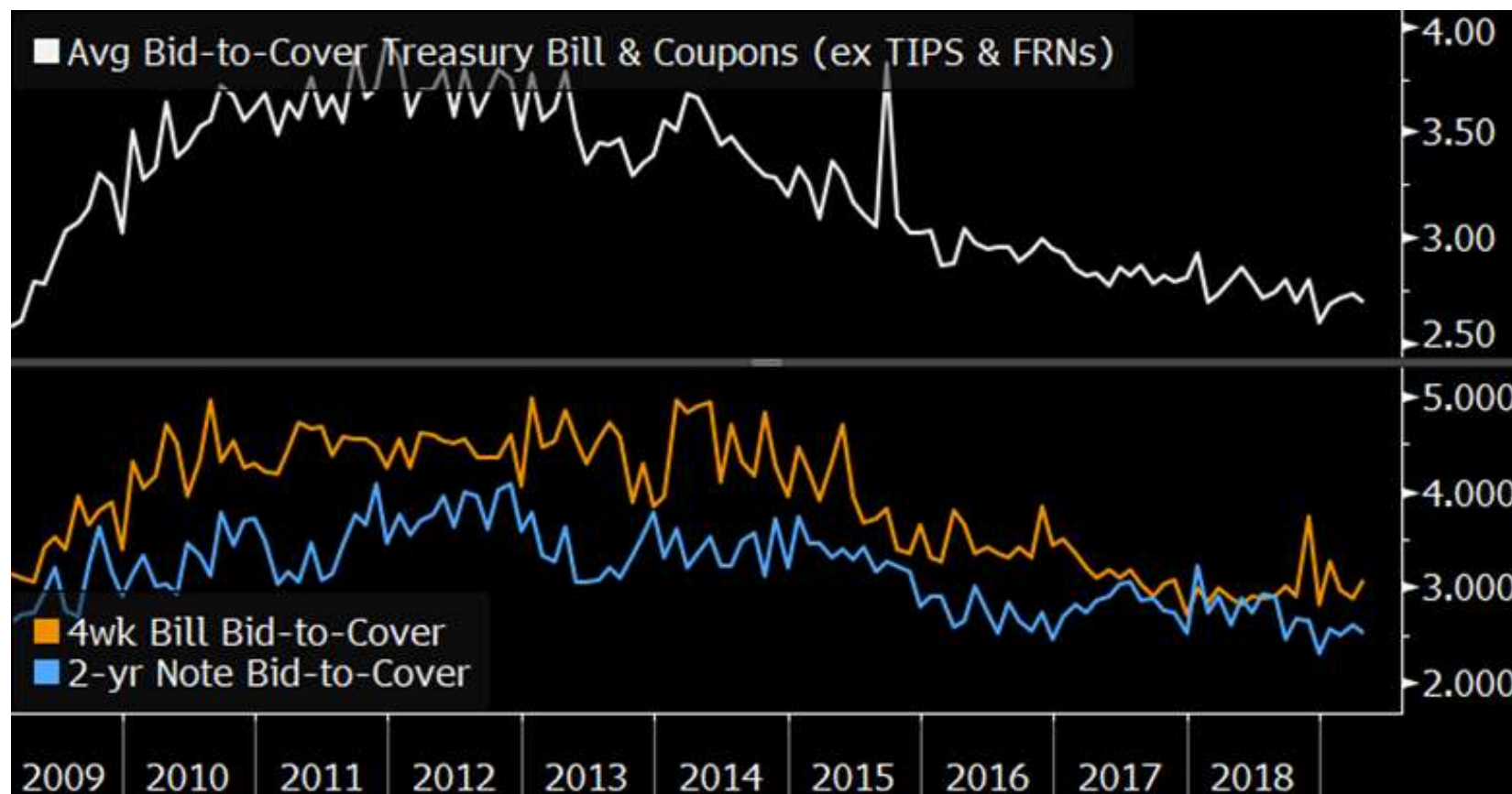
\* Source: Bloomberg, G #BI 11174

# Funding Needs and Cash Balance



\* Source: Bloomberg Intelligence

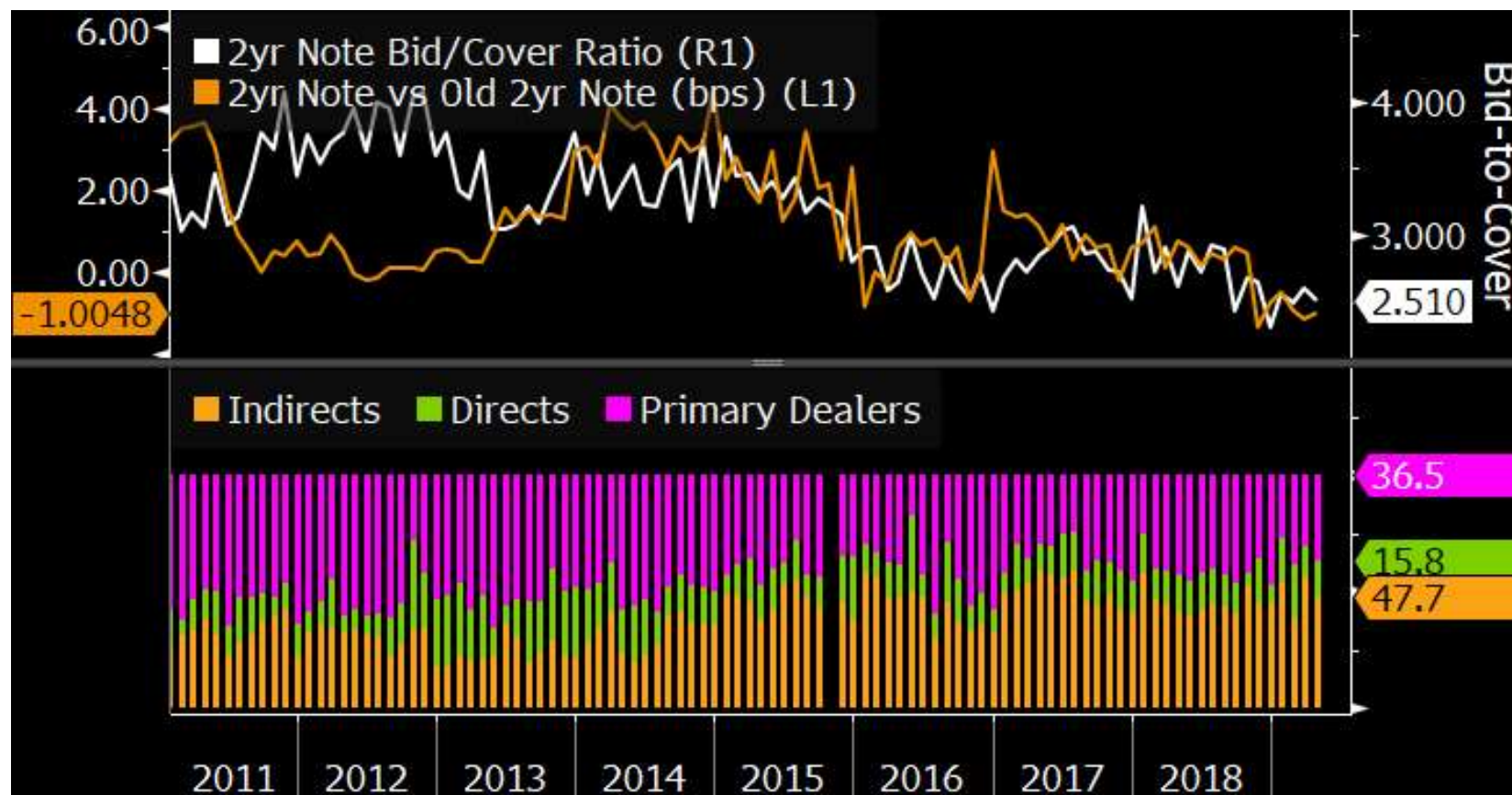
## Average Bid/Cover Ratio



\* Source: Bloomberg, G #BI 14349

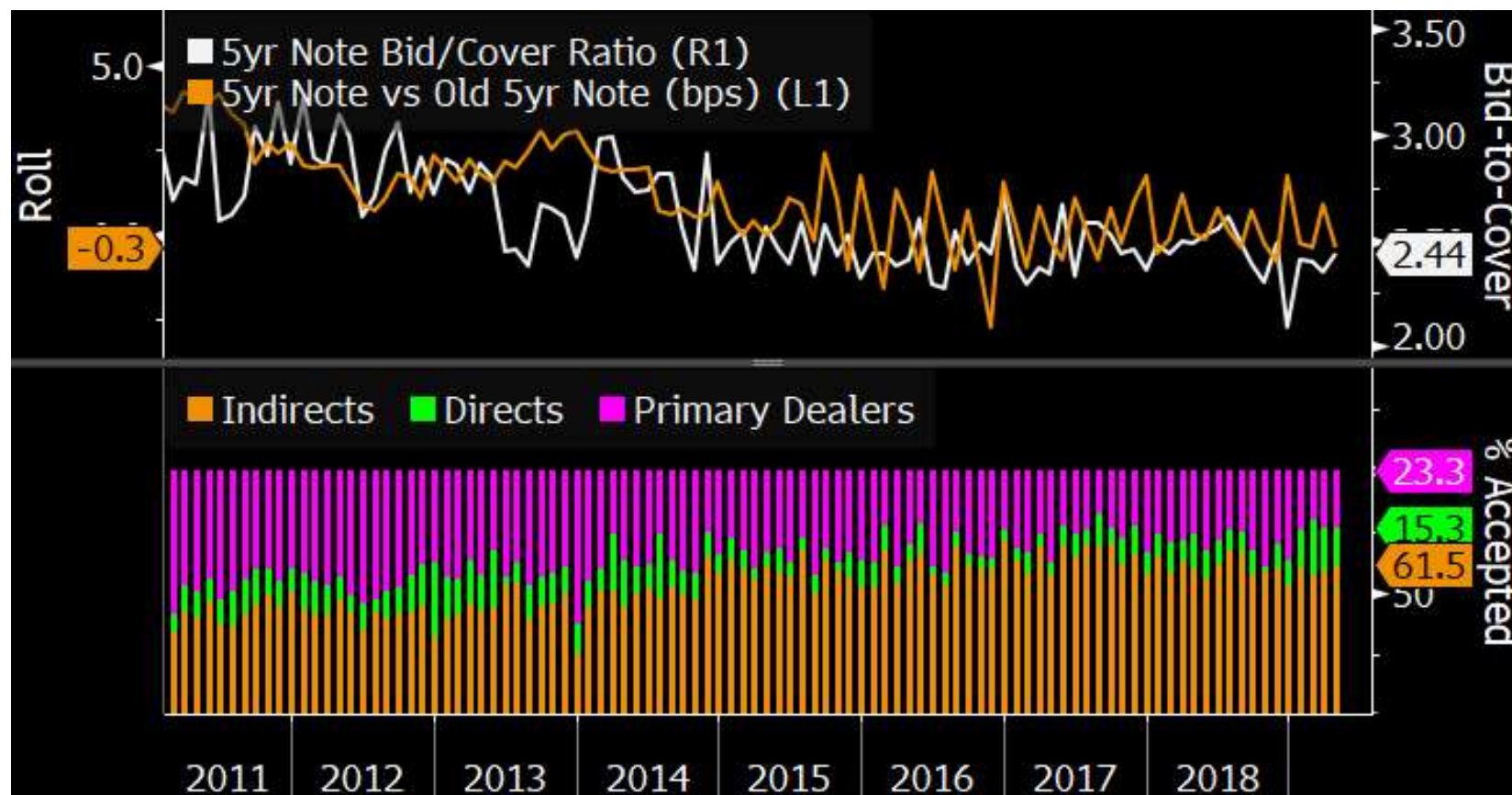


## 2-year Note Auction Stats



\* Source: Bloomberg, G #BI 13550

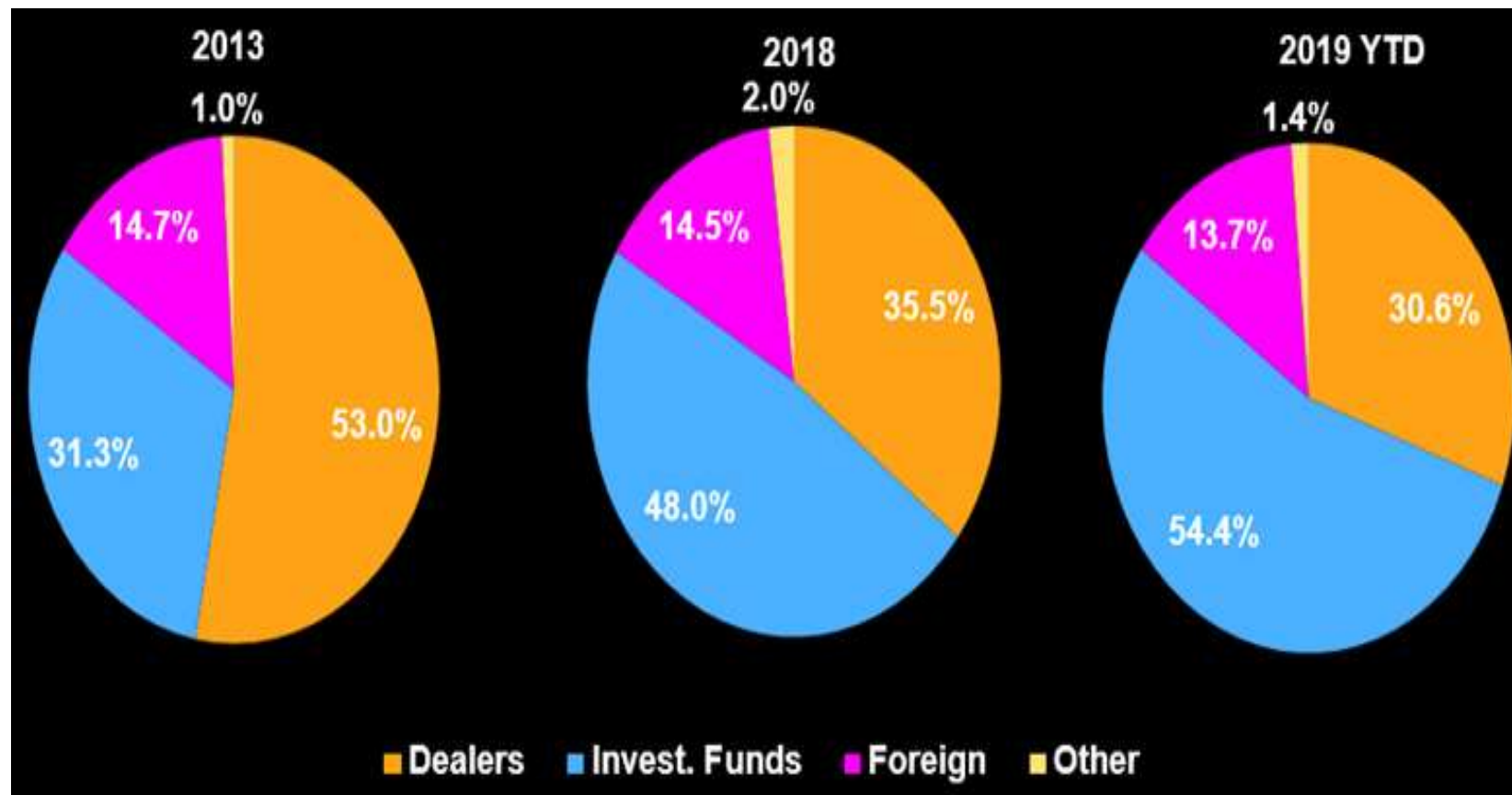
## 5-year Bond Auction Stats



• Source: Bloomberg, G #BI 13556

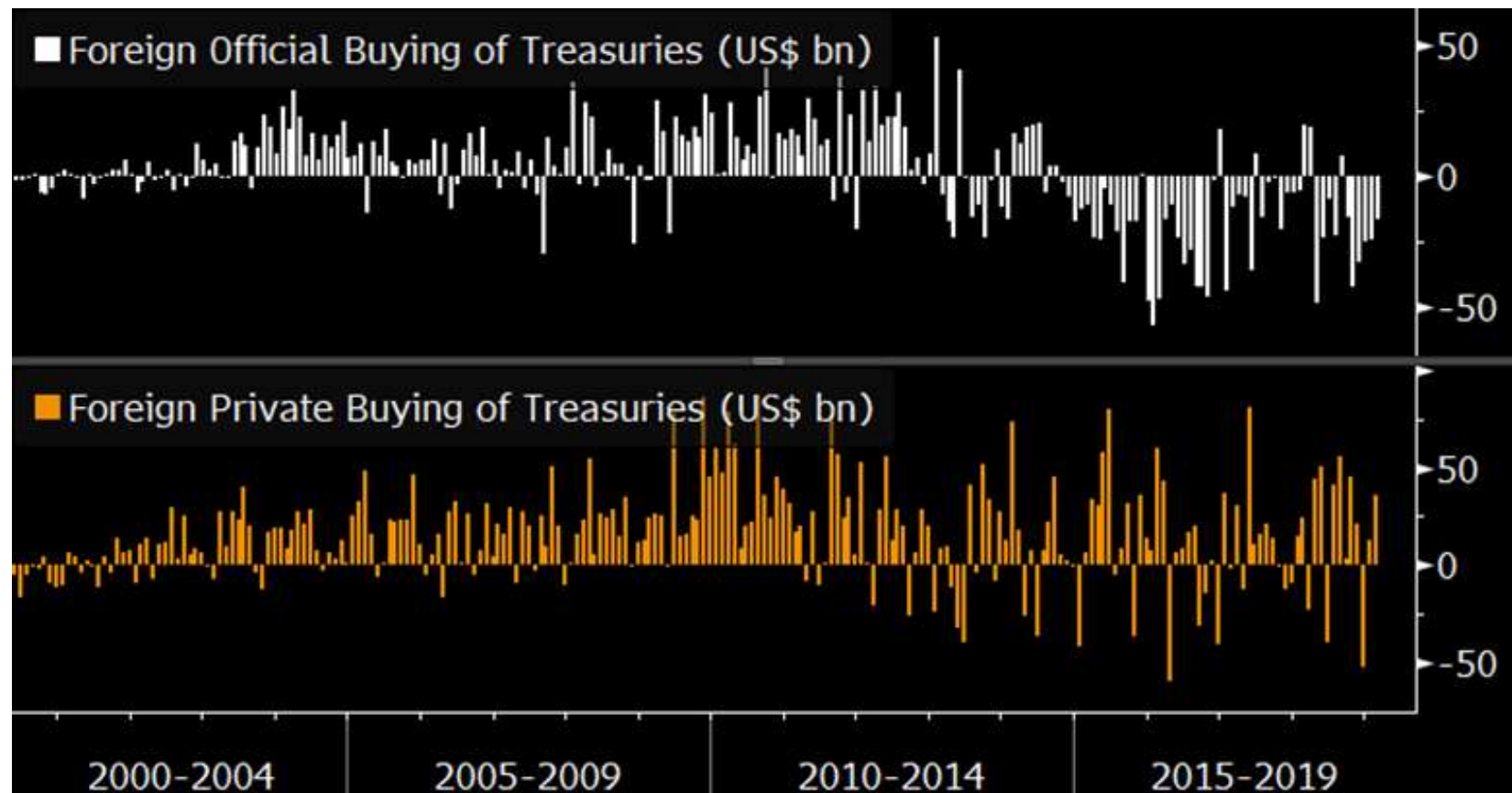


## Investment Funds Largest Buyer at Treasury Auctions



\* Source: Bloomberg Intelligence, Treasury Department

## Foreign Official vs. Private Flows into Treasuries



\* Source: Bloomberg Intelligence, G #BI 7829

## Detrended Foreign Holdings vs. Yield Change



\* Source: Bloomberg Intelligence,

## Global Economic Momentum Drives Overseas Demand



\* Source: Bloomberg Intelligence, Treasury Department, JPMorgan

## Treasury Coupon Sizes Have Temporarily Stabilized

	Month End Cash Balance	Net Monthly Bill Issuance	Gross Monthly Coupon Issuance (\$bn)									
			2-year	3-year	5-year	7-year	10-year	30-year	5-Year TIPS	10-Year TIPS	30-Year TIPS	2-Year FRN
11/30/2018 (A)	345	180	39	37	40	32	27	19		11		18
12/31/2018 (A)	402	40	40	38	41	32	24	16	14			18
1/31/2019 (A)	454	-25	40	38	41	32	24	16		13		20
2/28/2019	394	225	40	38	41	32	27	19			8	18
3/31/2019	352	150	40	38	41	32	24	16		11		18
4/30/2019	482	-125	40	38	41	32	24	16	17			20
5/31/2019	345	30	40	38	41	32	27	19		12		18
6/30/2019	407	70	40	38	41	32	24	16	15			18
7/31/2019	417	75	40	38	41	32	24	16		14		20
8/31/2019	284	150	40	38	41	32	27	19			8	18
9/30/2019	452	-50	40	38	41	32	24	16		12		18
10/31/2019	489	50	40	38	41	32	24	16	17			20
11/30/2019	443	100	40	38	41	32	27	19		12		18
12/31/2019	556	40	40	38	41	32	24	16	15			18

\* Source: Bloomberg Intelligence, Treasury Department

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