

BDA Bond  
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THE BOND BUYER'S

# NATIONAL MUNI BOND SUMMIT

March 25-27, 2019 | Nashville, TN

## 2019 ECONOMIC OUTLOOK

How Much Longer Can the Second Longest Economic Expansion on Record Last?

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VINING  SPARKS

THE BOND BUYER

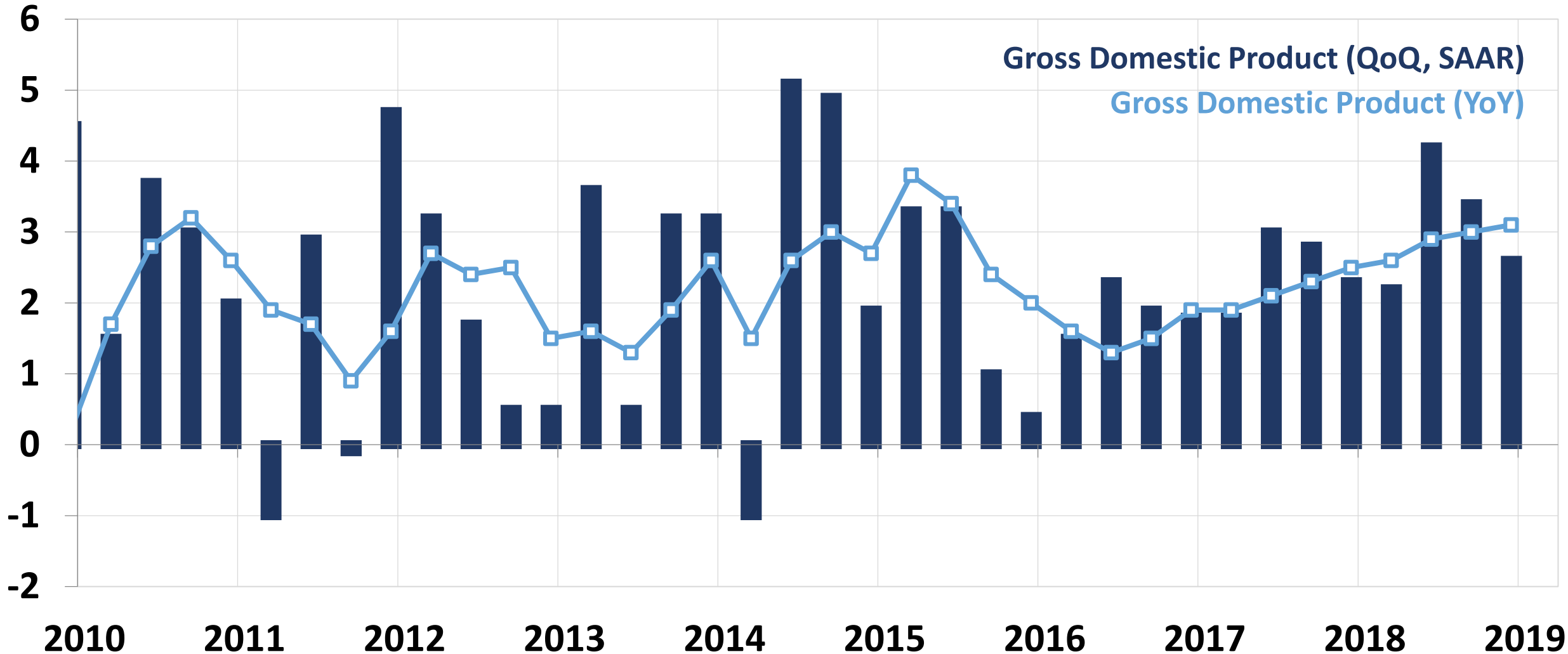
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EVENTS

# NATIONAL MUNI BOND SUMMIT

# UNPRECEDENTED ACCELERATION

RECORD 10 CONSECUTIVE QUARTERS OF YEAR-OVER-YEAR GROWTH ACCELERATING; 2.9% GROWTH FOR FULL-YEAR 2018

VOLATILE MARKETS → STABLE GROWTH → TRADE UNCERTAINTY → FISCAL POLICY → MONETARY POLICY → GLOBAL HEADWINDS → SUMMARY AND PROJECTIONS



Sources: BEA, Vining Sparks

# NATIONAL MUNI BOND SUMMIT LABOR MARKET REMAINS STRONG

PAYROLL GROWTH AVERAGED 220K IN 2018 AND THE UNEMPLOYMENT RATE DROPPED AS LOW AS 3.69%

VOLATILE MARKETS

STABLE GROWTH

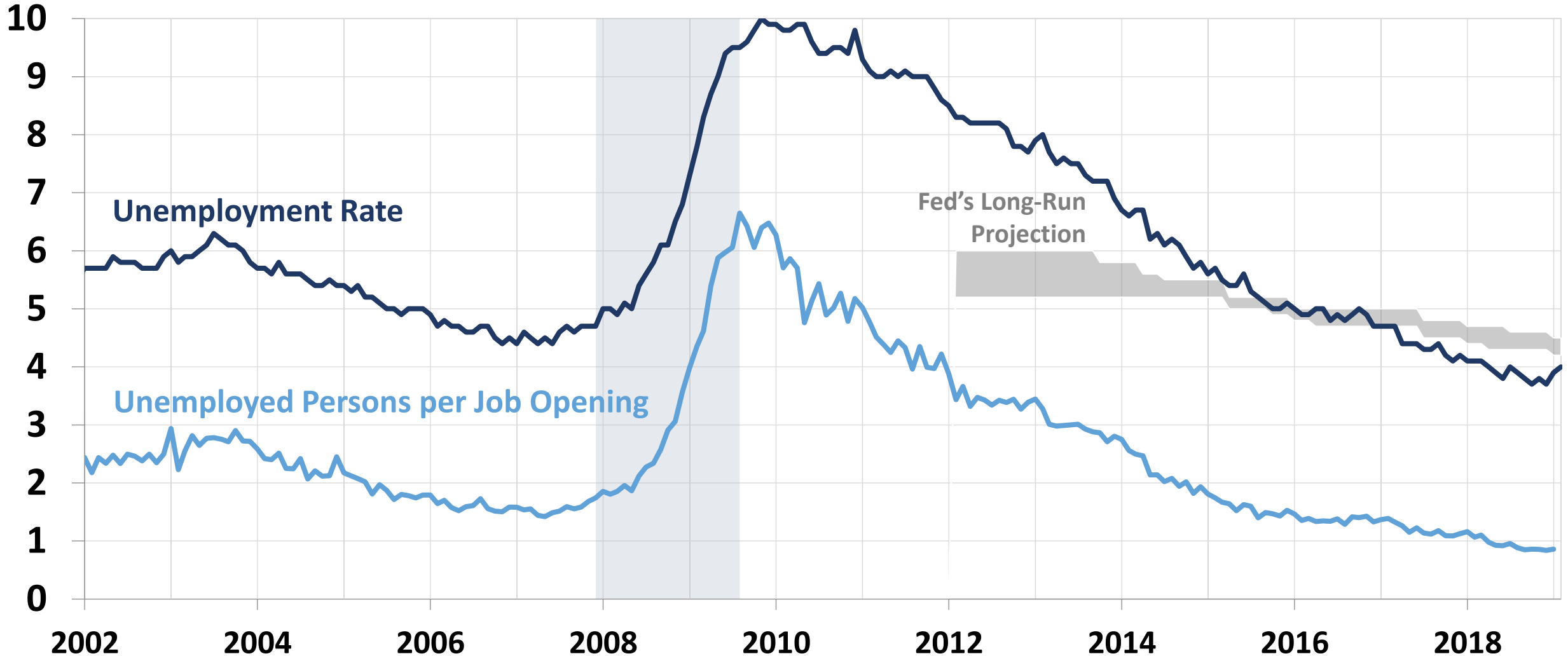
TRADE UNCERTAINTY

FISCAL POLICY

MONETARY POLICY

GLOBAL HEADWINDS

SUMMARY AND PROJECTIONS



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# WAGE GROWTH IMPROVES

WHILE WAGE GROWTH HAS BEEN SLOW TO PICK UP, THE TREND IS POSITIVE AND IMPROVED IN LATE 2018

VOLATILE MARKETS

STABLE GROWTH

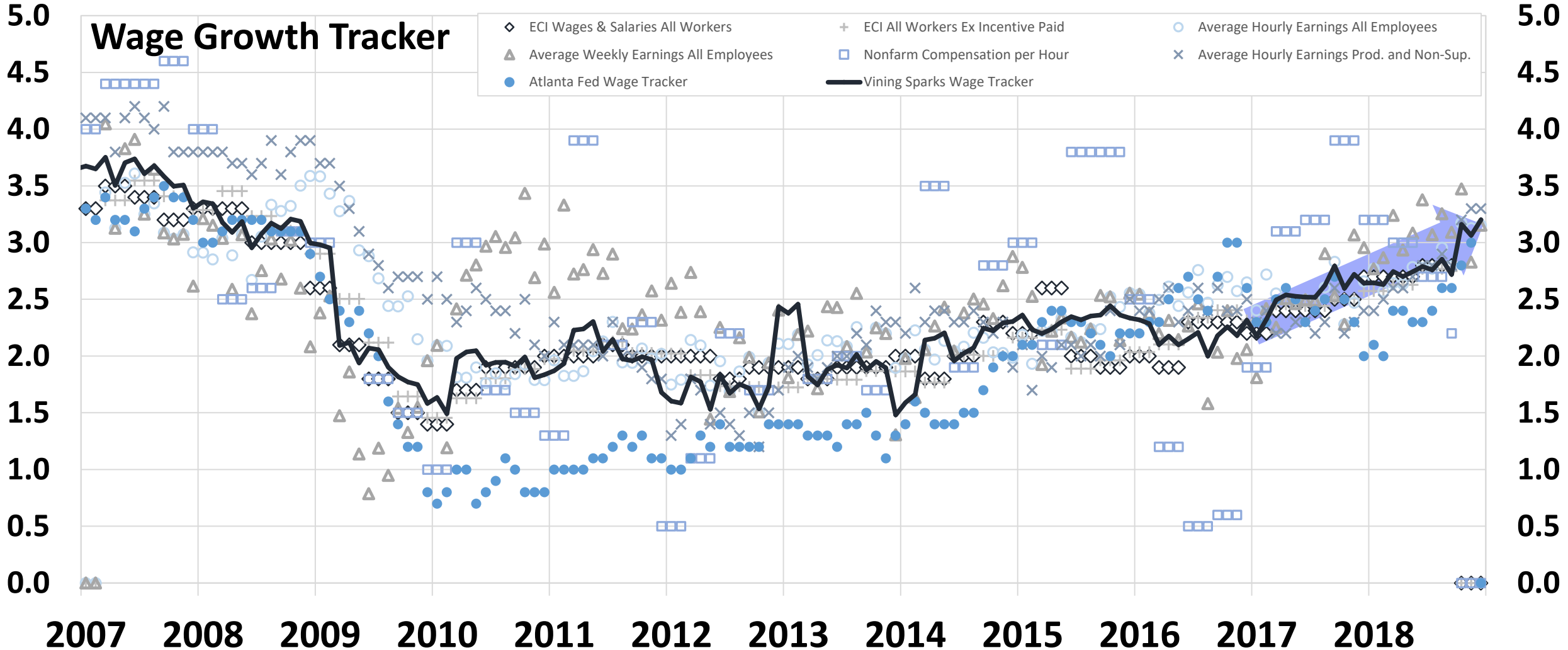
TRADE UNCERTAINTY

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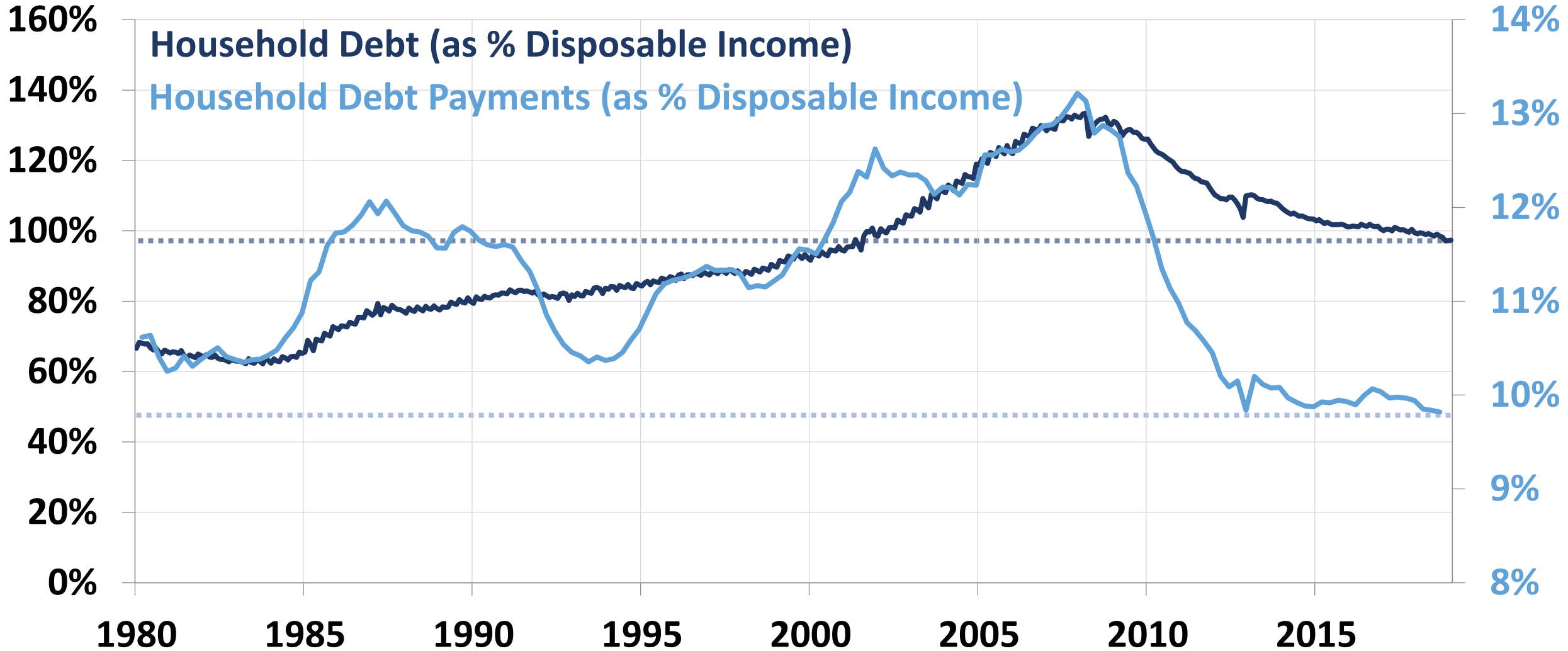
Sources: BLS, BEA, Atlanta Fed, Vining Sparks

# NATIONAL MUNI BOND SUMMIT

# DEBT REMAINS MANAGEABLE

THIS ECONOMIC CYCLE HAS NOT SEEN THE EXCESSIVE HOUSEHOLD LEVERAGING OF THE PREVIOUS CYCLE

VOLATILE MARKETS | STABLE GROWTH | TRADE UNCERTAINTY | FISCAL POLICY | MONETARY POLICY | GLOBAL HEADWINDS | SUMMARY AND PROJECTIONS



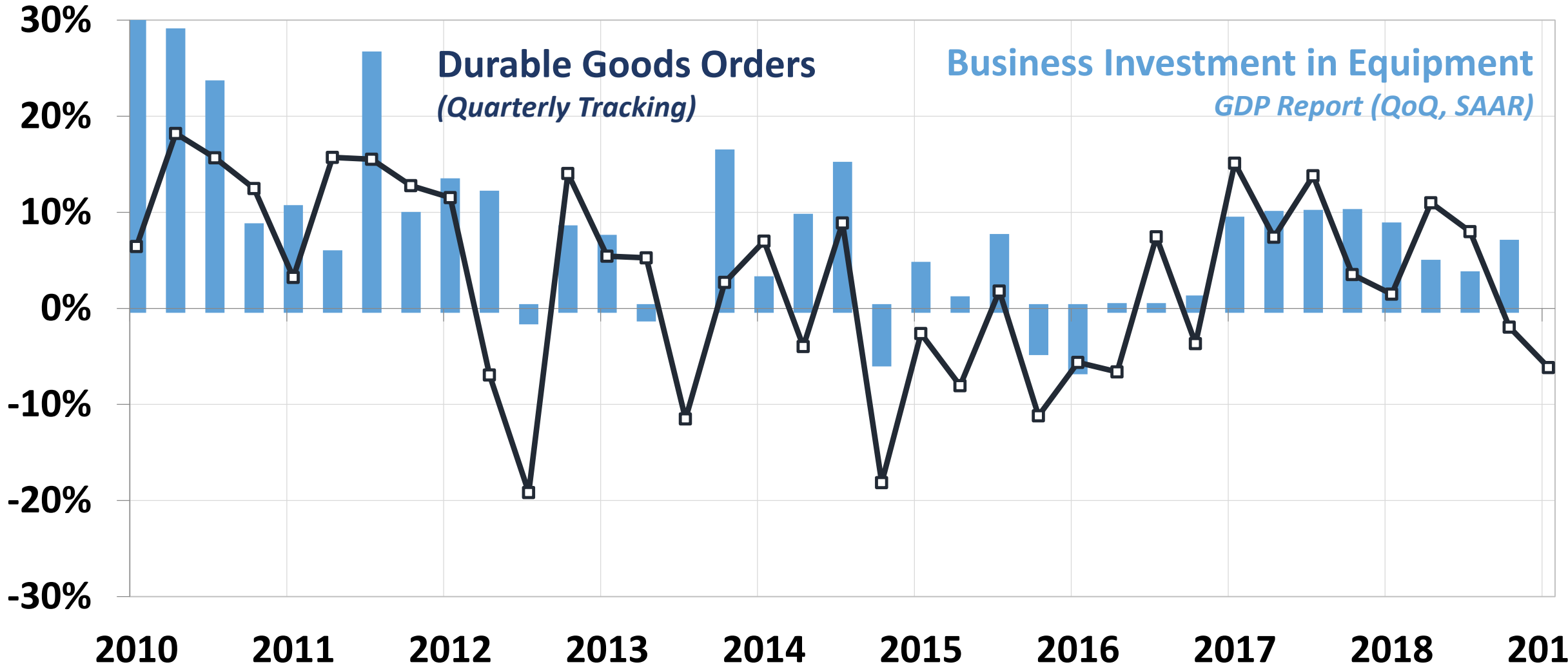
Sources: Federal Reserve, Vining Sparks

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# BUSINESS INVESTMENT SOFT

DESPITE TAX LAW CHANGES, INVESTMENT HAS SLOWED ACROSS ALL CATEGORIES, INCLUDING STRUCTURES

VOLATILE MARKETS | STABLE GROWTH | TRADE UNCERTAINTY | FISCAL POLICY | MONETARY POLICY | GLOBAL HEADWINDS | SUMMARY AND PROJECTIONS



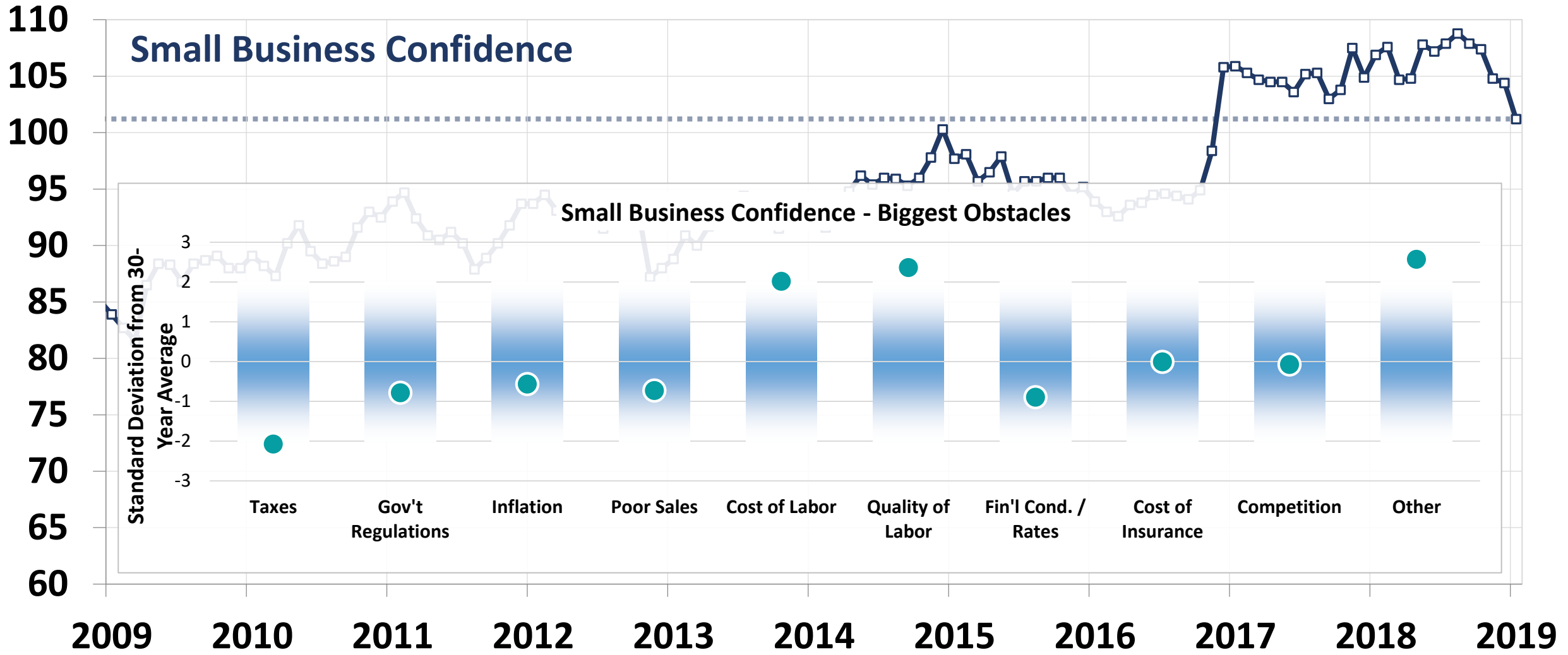
Sources: BEA, Vining Sparks

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# TRADE WEIGHS ON CONFIDENCE

SMALL BUSINESS CONFIDENCE DROPPED FROM BEST-IN-30-YEARS ON GROWING CONCERNS OF "OTHER" OBSTACLES

VOLATILE MARKETS | STABLE GROWTH | TRADE UNCERTAINTY | FISCAL POLICY | MONETARY POLICY | GLOBAL HEADWINDS | SUMMARY AND PROJECTIONS



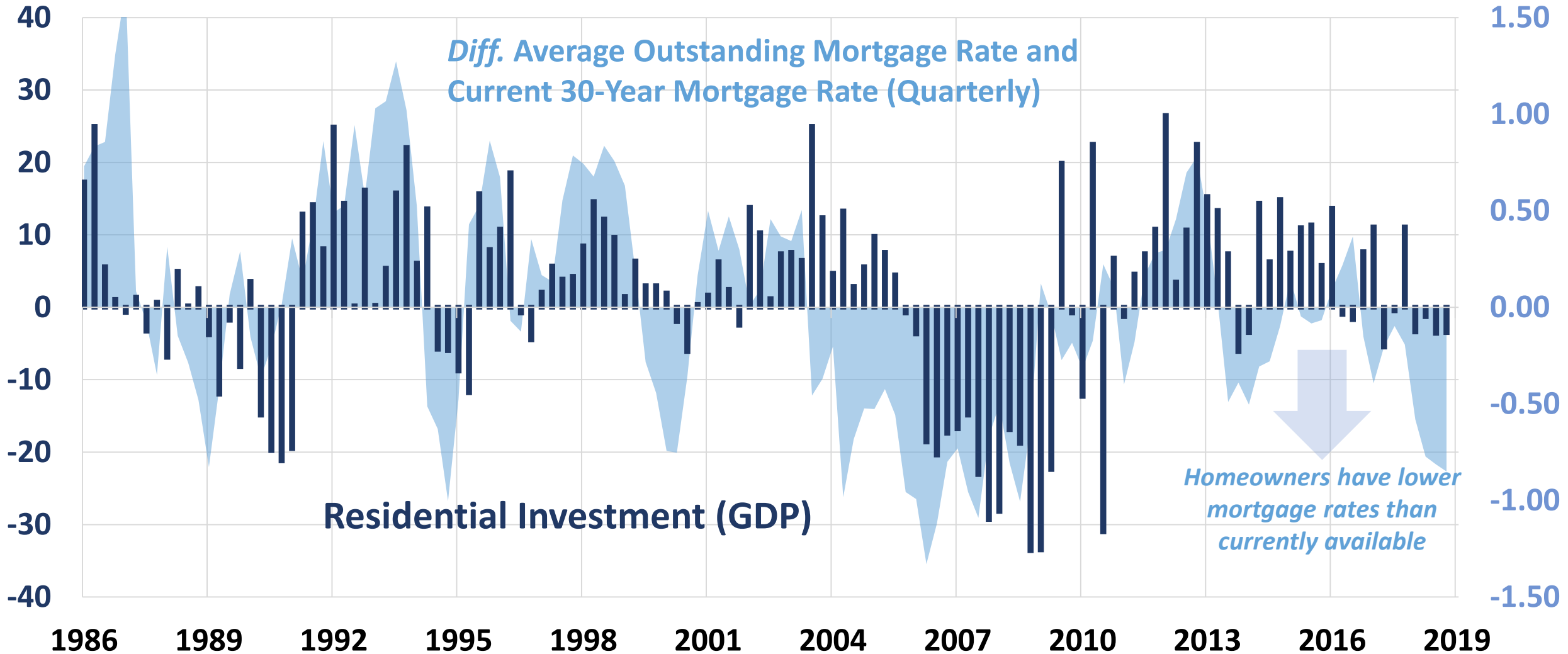
Sources: NFIB, Vining Sparks



# NATIONAL MUNI BOND SUMMIT HIGHER RATES HURTING HOUSING

AVERAGE OUTSTANDING MORTGAGE RATE OF 3.79% LIKELY TO KEEP PRESSURE ON HOUSING UNTIL RATES PULL BACK

VOLATILE MARKETS → STABLE GROWTH → TRADE UNCERTAINTY → FISCAL POLICY → MONETARY POLICY → GLOBAL HEADWINDS → SUMMARY AND PROJECTIONS





# NATIONAL MUNI BOND SUMMIT

# GOVERNMENT SPENDING BOOST

GOVERNMENT TURNED BACK INTO A POSITIVE ENGINE OF GROWTH IN 2018

VOLATILE MARKETS

STABLE GROWTH

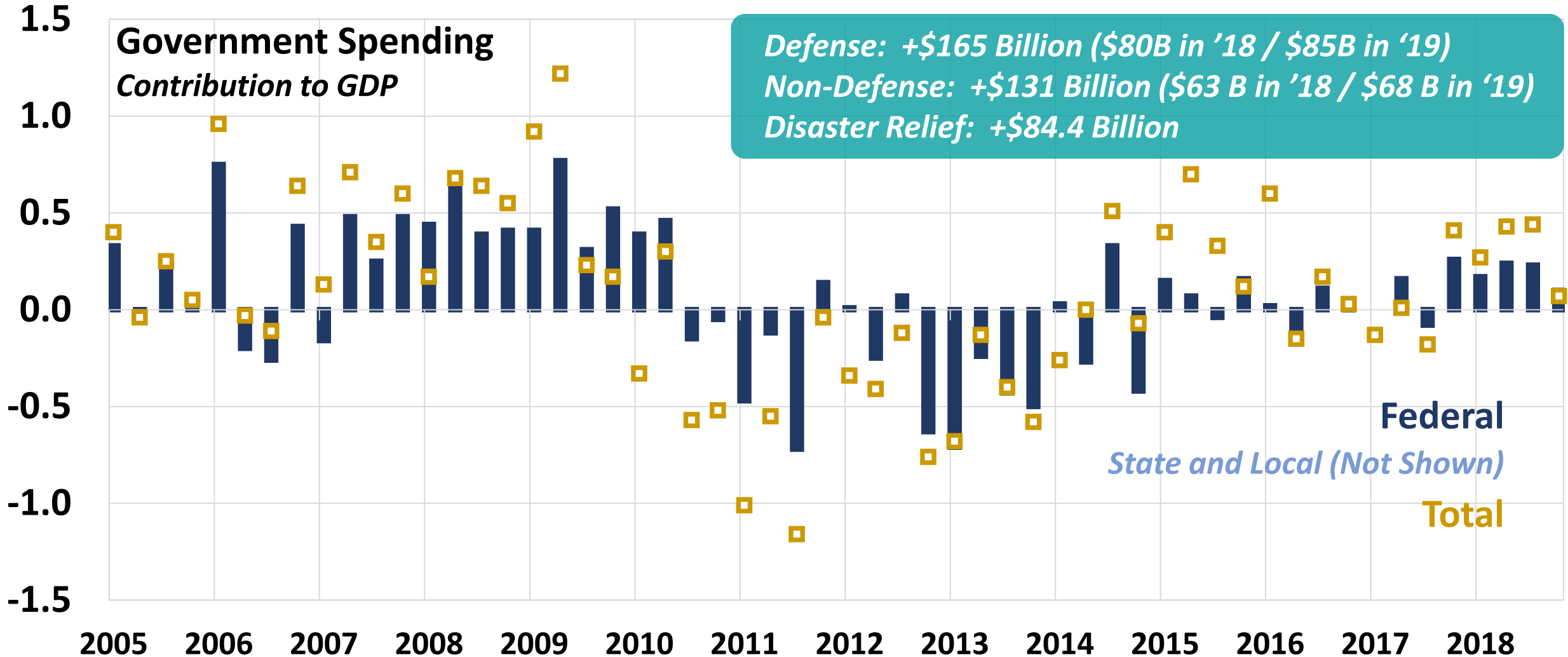
TRADE UNCERTAINTY

FISCAL POLICY

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Sources: BEA, Vining Sparks

# NATIONAL MUNI BOND SUMMIT

# INFLATION NEAR TARGET

CONSUMER PRICE INFLATION IS NOW RUNNING NEAR 2% BUT IS NOT EXPECTED TO SHOOT MATERIALLY HIGHER

VOLATILE MARKETS

STABLE GROWTH

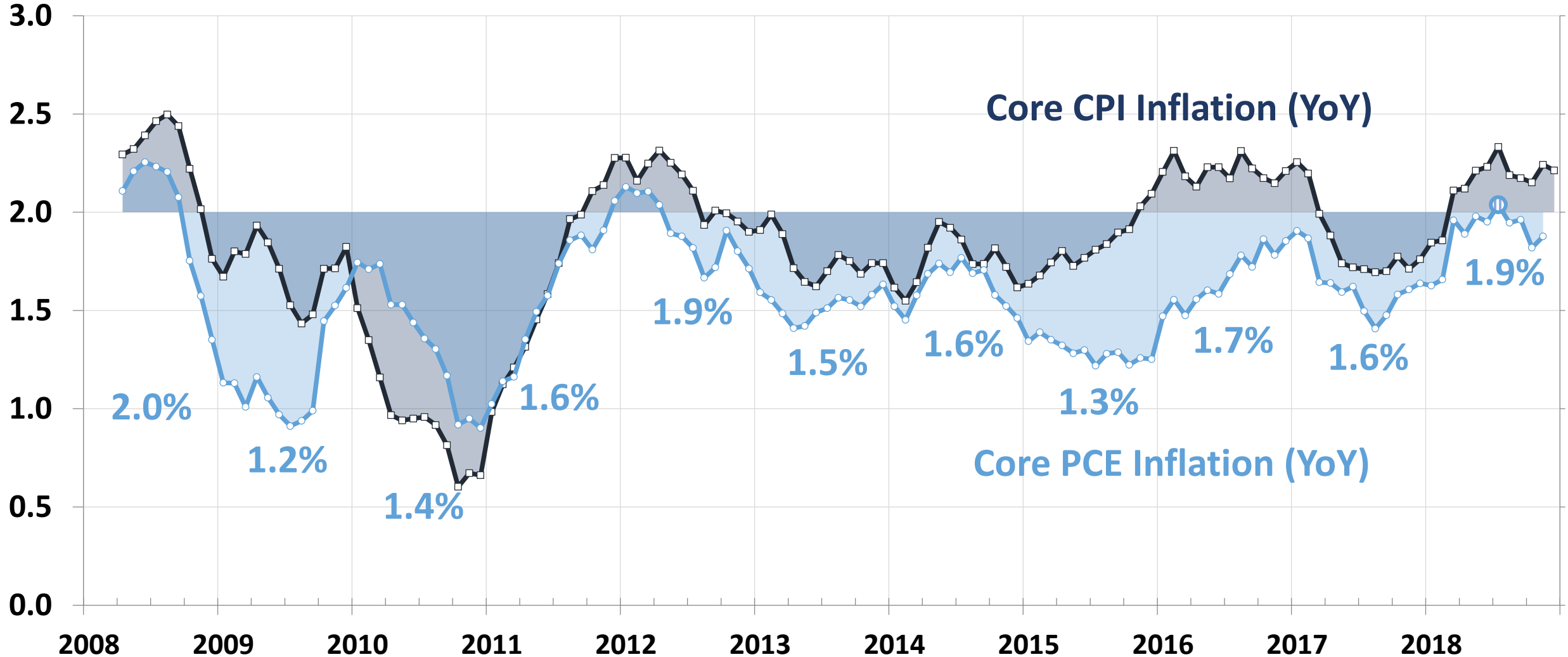
TRADE UNCERTAINTY

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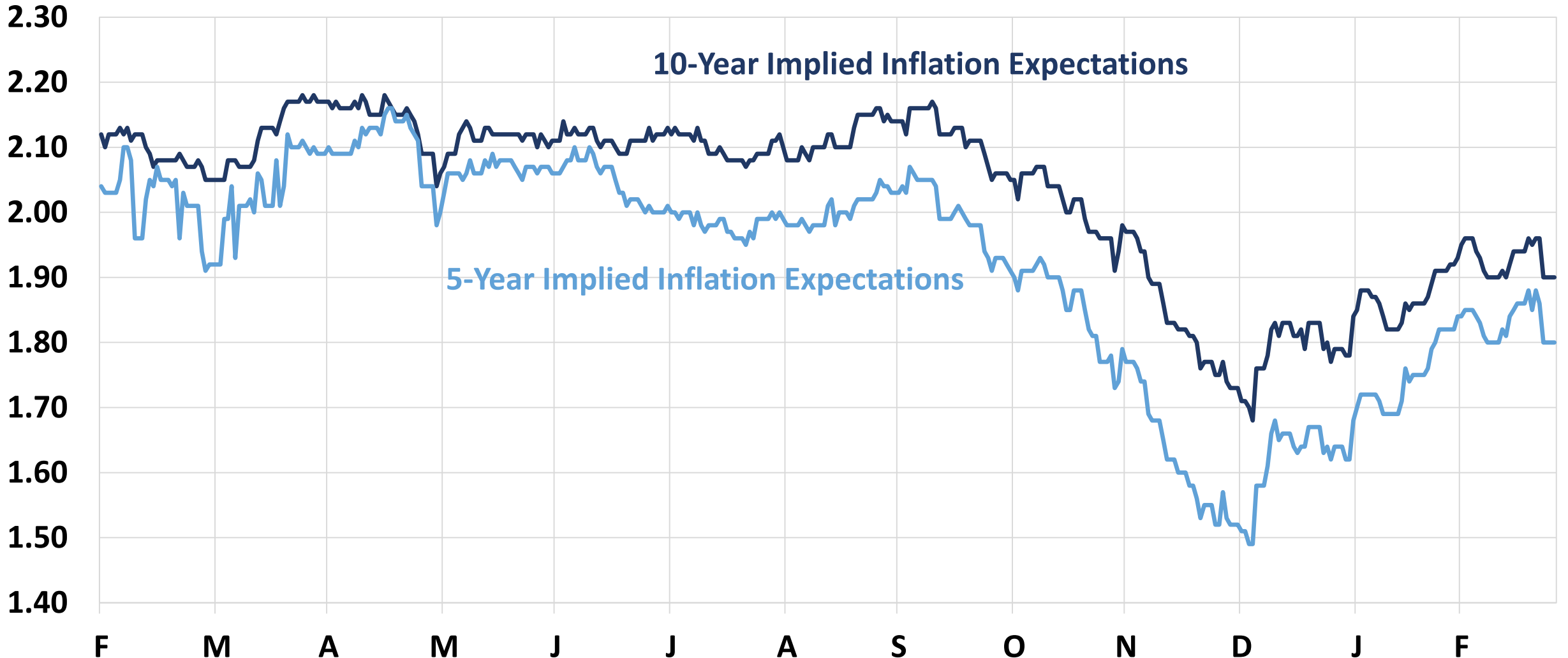
Sources: BLS, BEA, Vining Sparks

# NATIONAL MUNI BOND SUMMIT

# INFLATION EXPECTATIONS TAME

INFLATION EXPECTATIONS FELL IN THE 4<sup>TH</sup> QUARTER AS OIL PRICES DROPPED AND GLOBAL GROWTH CONCERNS GREW

VOLATILE MARKETS → STABLE GROWTH → TRADE UNCERTAINTY → FISCAL POLICY → MONETARY POLICY → GLOBAL HEADWINDS → SUMMARY AND PROJECTIONS



Sources: Bloomberg, Vining Sparks

GROWING LIST OF FACTORS EXPECTED TO WEIGH ON GROWTH AND INCREASE THE RISKS TO RECESSION

VOLATILE MARKETS

STABLE GROWTH

TRADE UNCERTAINTY

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SUMMARY AND PROJECTIONS

## Trade Policy

## Fiscal Policy

- 2020 Fiscal Cliff

- Limitations on Future Fiscal Stimulus

## Monetary Policy and Interest Rates

- Monetary Policy Closer to “Neutral”, Possibly Already Restrictive

- Lagged Impact of Monetary Tightening

## Global Headwinds

- Net Quantitative Tightening

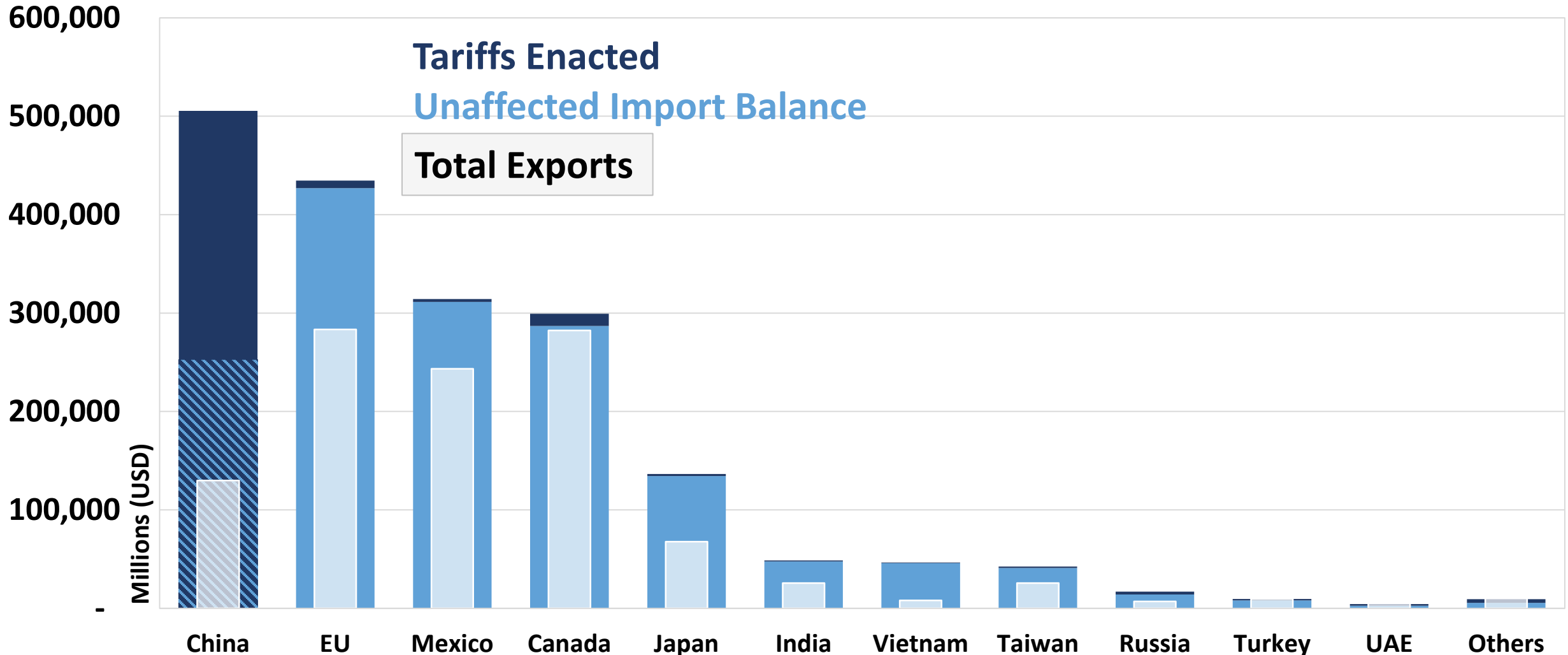
- Growth of Global Debt

- Slowing Global Economic Growth

# NATIONAL MUNI BOND SUMMIT

# TRADE POLICY - UNCERTAINTY

THE RISK OF TRADE NEGOTIATIONS HURTING ECONOMIC ACTIVITY HAVE GROWN AS THE THREATS HAVE INCREASED



Sources: Census Bureau, Peterson Institute for International Economics, Vining Sparks

# NATIONAL MUNI BOND SUMMIT

# TRADE POLICY - UNCERTAINTY

TRADE TENSIONS TOOK A TOLL ON THE MANUFACTURING OUTLOOK FOR EVERY MAJOR ECONOMY

VOLATILE MARKETS

STABLE GROWTH

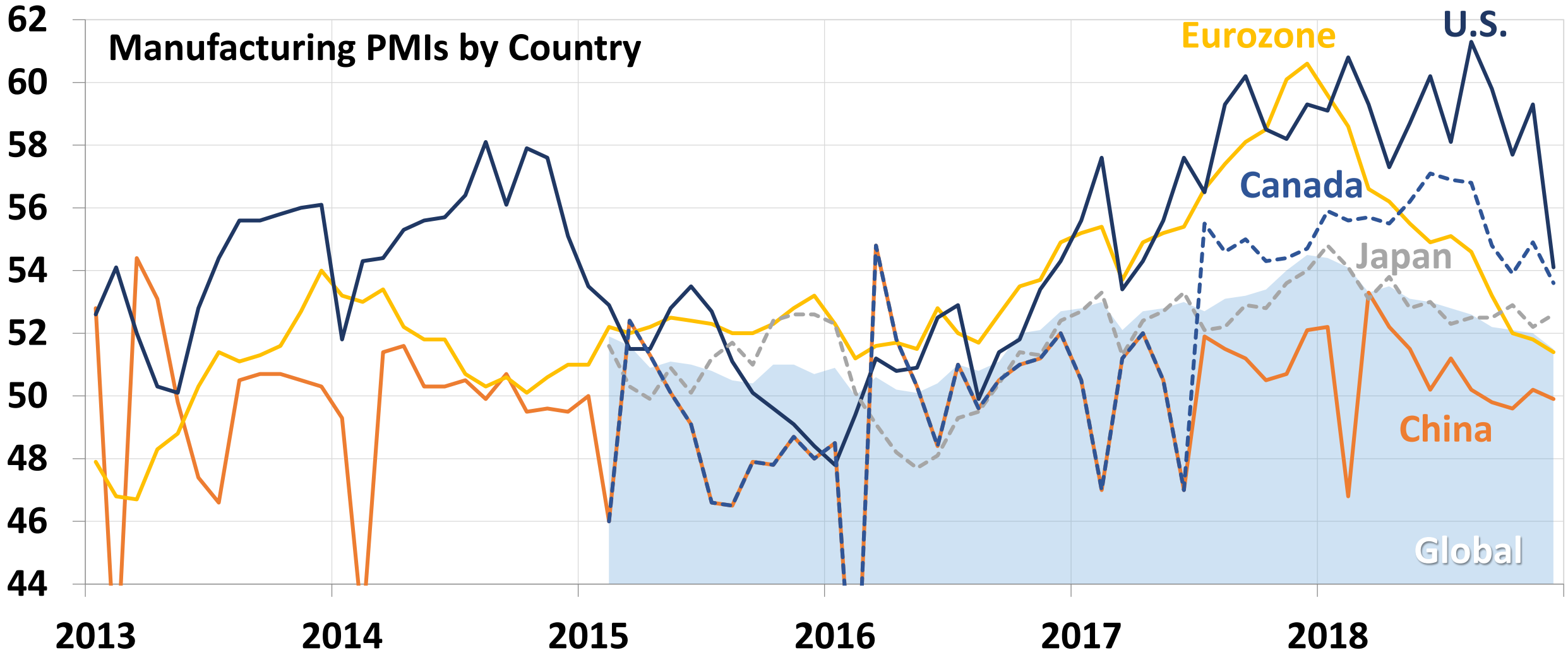
TRADE UNCERTAINTY

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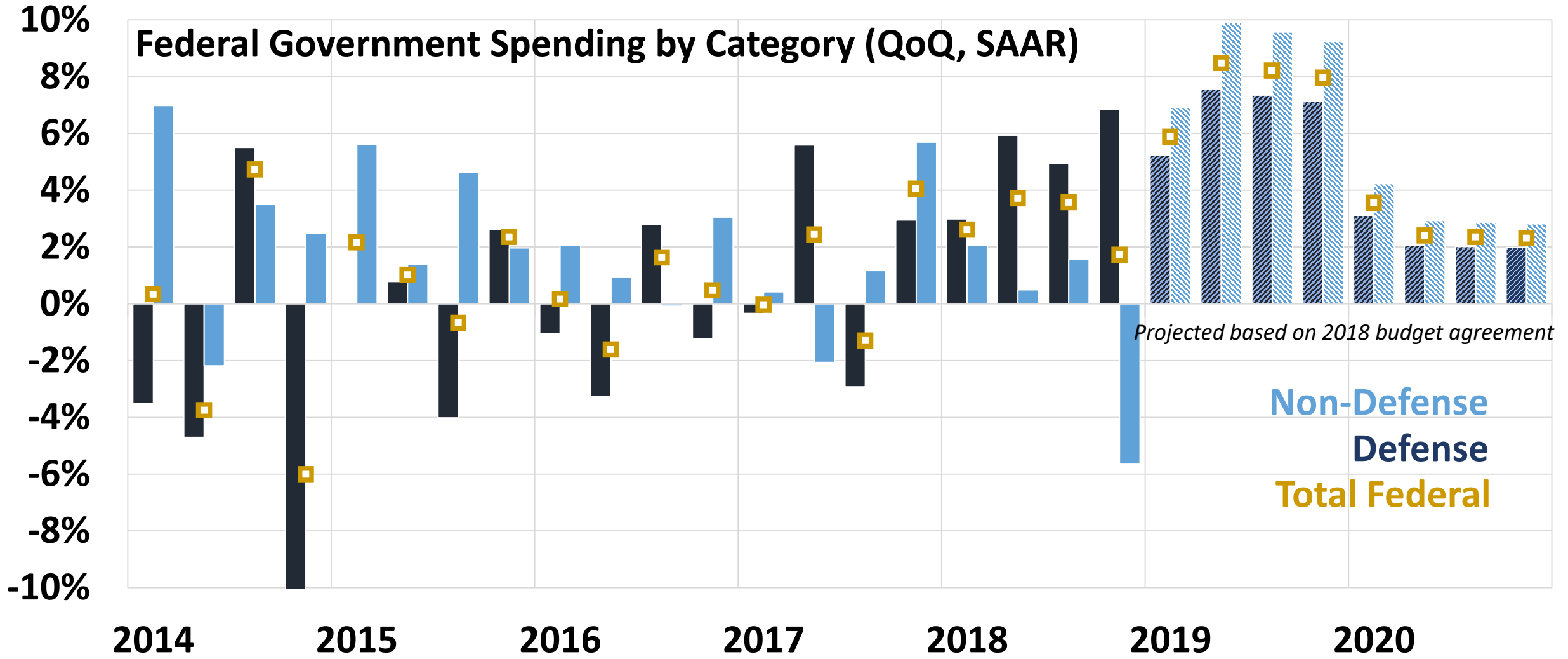


Sources: ISM, Caixin, Markit, Vining Sparks

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# FISCAL POLICY – 2020 CLIFF

FISCAL BOOST EXPECTED TO FADE AS INCREASED FEDERAL SPENDING CAPS SCHEDULED TO REVERT IN 2020



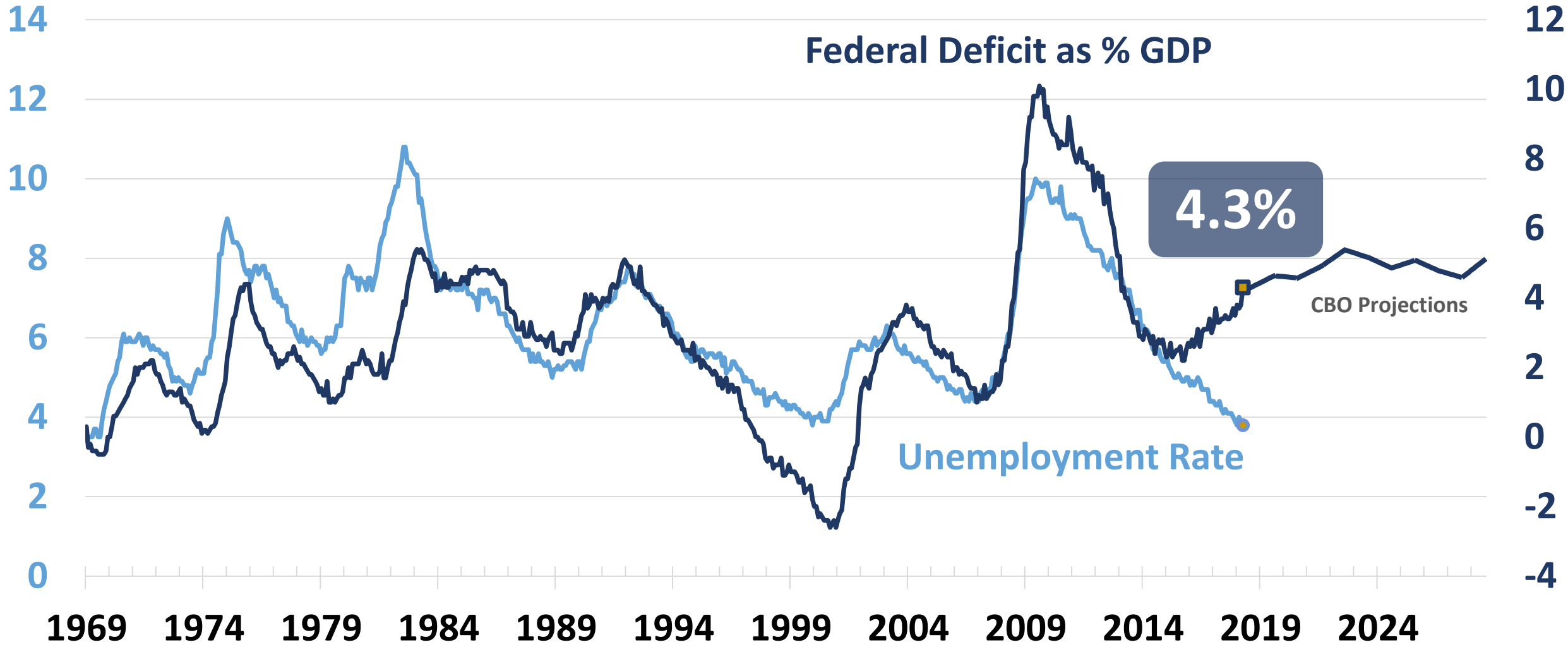


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# FISCAL POLICY - LIMITATIONS

PROCYCLICAL FISCAL STIMULUS BALLOONING DEBT FURTHER – LIMITING FISCAL POLICYMAKERS' OPTIONS IN FUTURE

VOLATILE MARKETS > STABLE GROWTH > TRADE UNCERTAINTY > **FISCAL POLICY** > MONETARY POLICY > GLOBAL HEADWINDS > SUMMARY AND PROJECTIONS



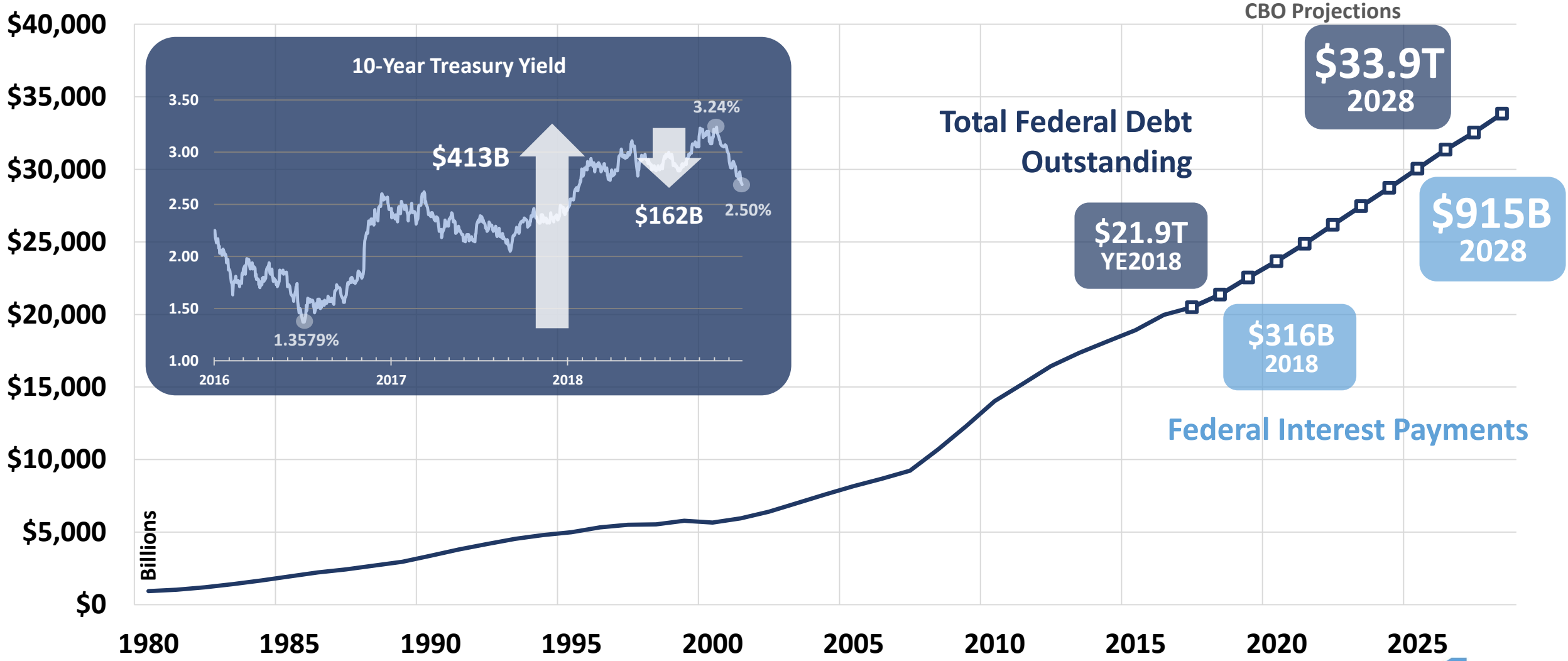
Sources: BLS, BEA, CBO, Vining Sparks

# NATIONAL MUNI BOND SUMMIT

# FISCAL POLICY - LIMITATIONS

U.S. FEDERAL DEBT NOW UP TO \$21.9 TRILLION WITH INTEREST EXPENSE PROJECTED TO ALMOST TRIPLE BY 2028

VOLATILE MARKETS > STABLE GROWTH > TRADE UNCERTAINTY > **FISCAL POLICY** > MONETARY POLICY > GLOBAL HEADWINDS > SUMMARY AND PROJECTIONS

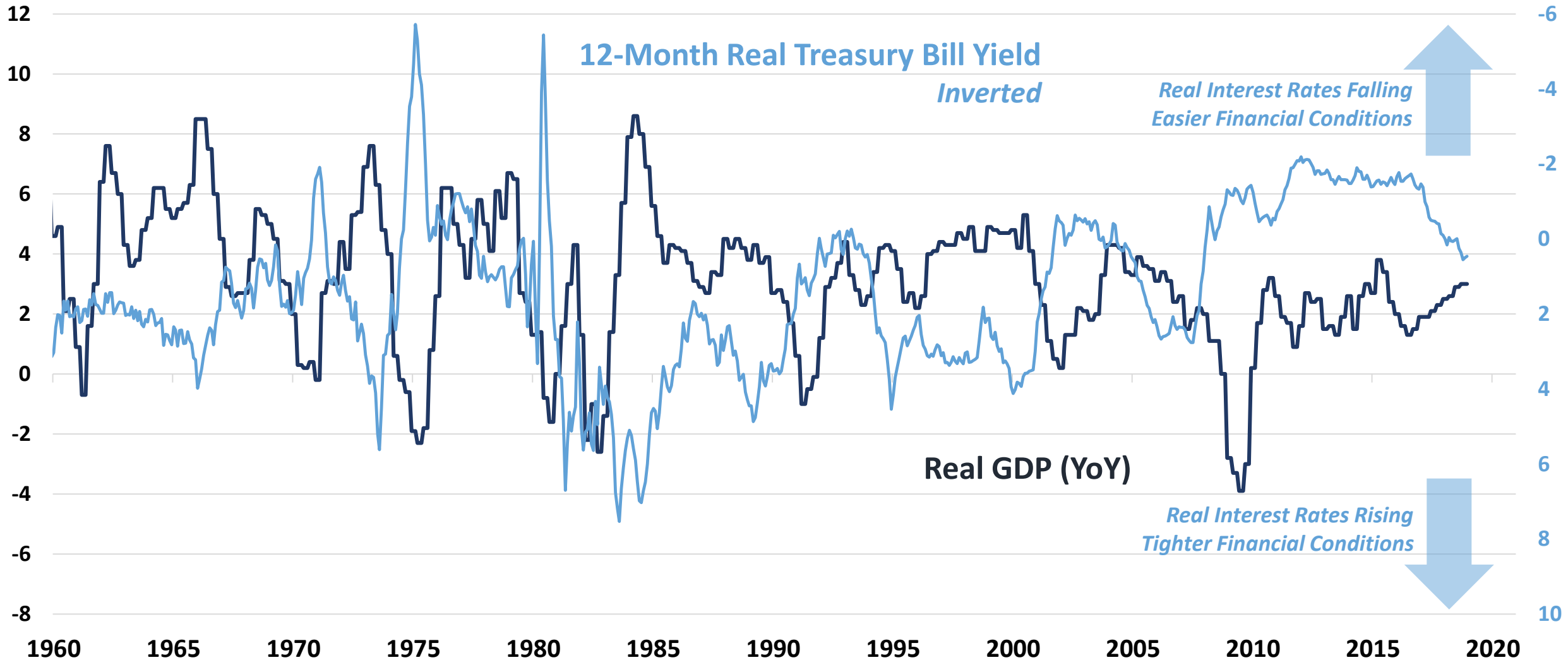


Sources: Federal Reserve, US Debt Clock.org, Bloomberg, Vining Sparks

# NATIONAL MUNI BOND SUMMIT

# FED POLICY – LAGGED IMPACT

CHANGES IN MONETARY POLICY HAVE HISTORICALLY HAD A 12- TO 24-MONTH LAGGED EFFECT ON ECONOMIC ACTIVITY

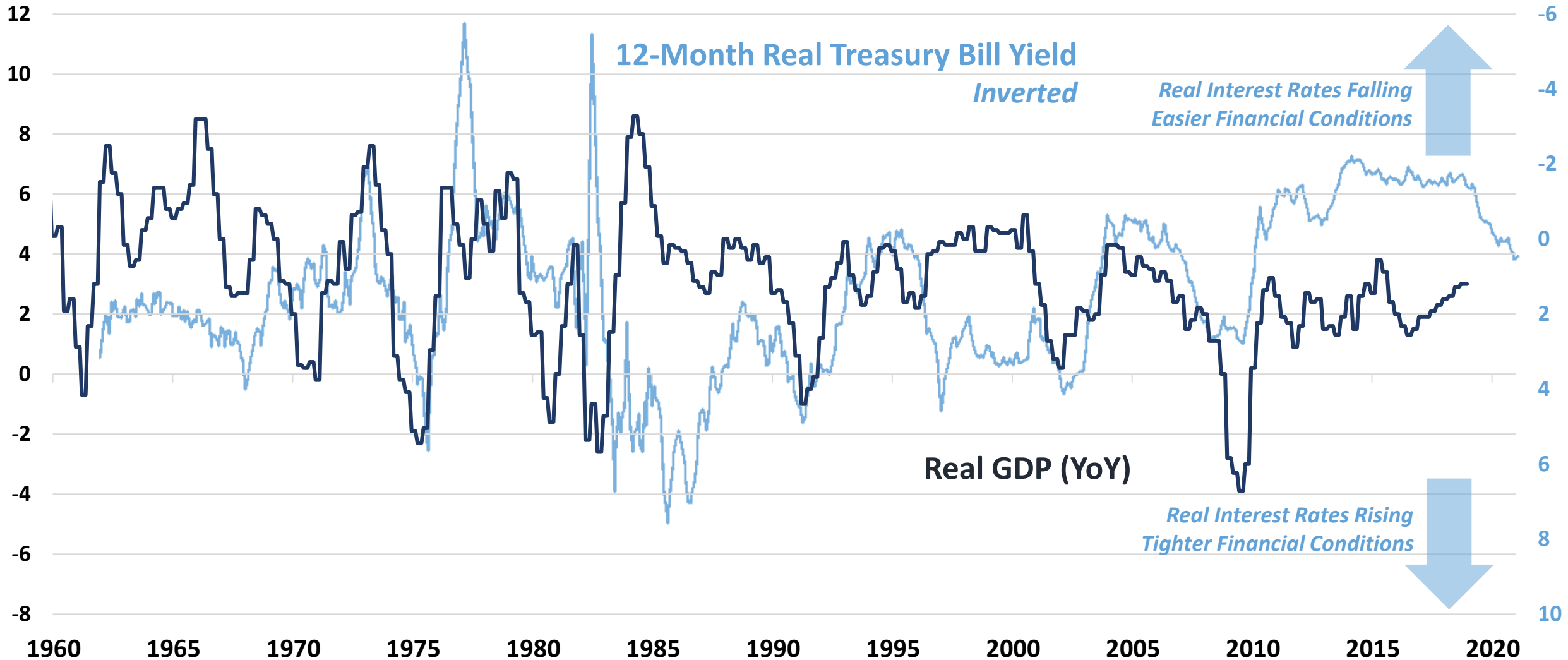


Sources: Federal Reserve, BEA, Bloomberg, Vining Sparks

# NATIONAL MUNI BOND SUMMIT

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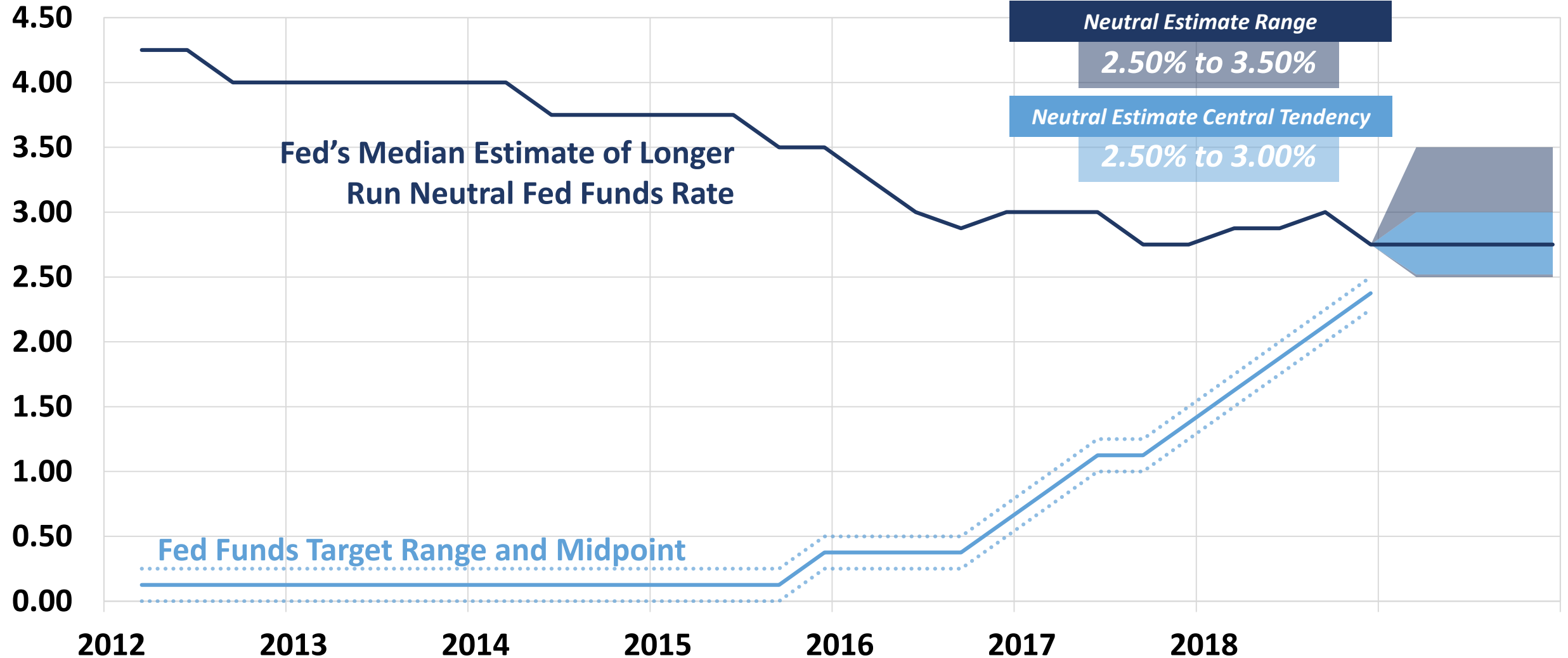


Sources: Federal Reserve, BEA, Bloomberg, Vining Sparks

# NATIONAL MUNI BOND SUMMIT FED POLICY - CLOSER TO NEUTRAL

THE 9 RATE HIKES SINCE 2015 HAVE PUSHED THE FED FUNDS RATE UP CLOSER TO NEUTRAL ESTIMATES

VOLATILE MARKETS > STABLE GROWTH > TRADE UNCERTAINTY > FISCAL POLICY > MONETARY POLICY > GLOBAL HEADWINDS > SUMMARY AND PROJECTIONS

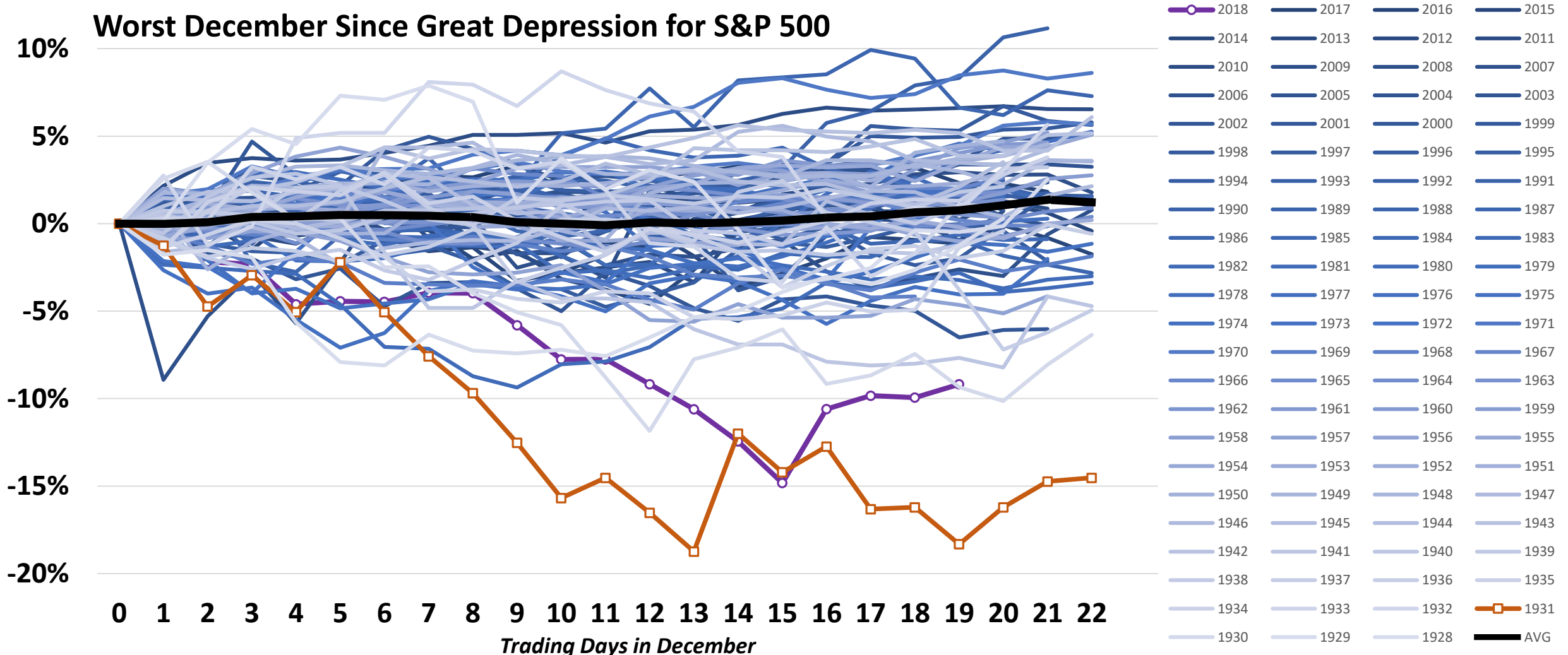


# NATIONAL MUNI BOND SUMMIT FED POLICY – CLOSER TO NEUTRAL

MARKET SIGNALS – MARKET TEMORS HAVE ILLUSTRATED THE HEIGHTENED FRAGILITY IN TODAY'S ENVIRONMENT

VOLATILE MARKETS → STABLE GROWTH → TRADE UNCERTAINTY → FISCAL POLICY → MONETARY POLICY → GLOBAL HEADWINDS → SUMMARY AND PROJECTIONS

## Worst December Since Great Depression for S&P 500

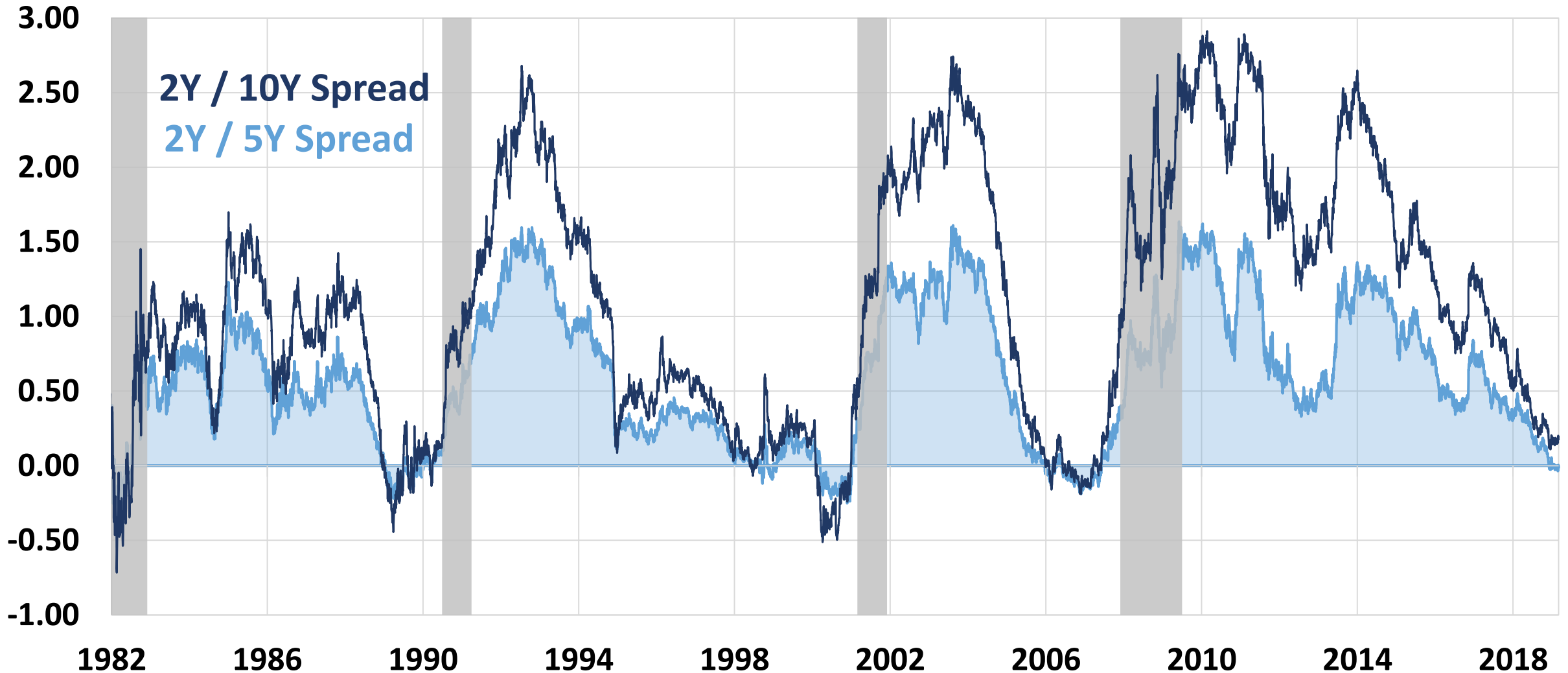


Sources: S&P 500 Index, Vining Sparks

# NATIONAL MUNI BOND SUMMIT FED POLICY – CLOSER TO NEUTRAL

MARKET SIGNALS - FLATTENING OF THE YIELD CURVE HAS RAISED THE RISKS TO A POLICY MISTAKE

VOLATILE MARKETS > STABLE GROWTH > TRADE UNCERTAINTY > FISCAL POLICY > MONETARY POLICY > GLOBAL HEADWINDS > SUMMARY AND PROJECTIONS



Sources: Bloomberg, NBER, Vining Sparks

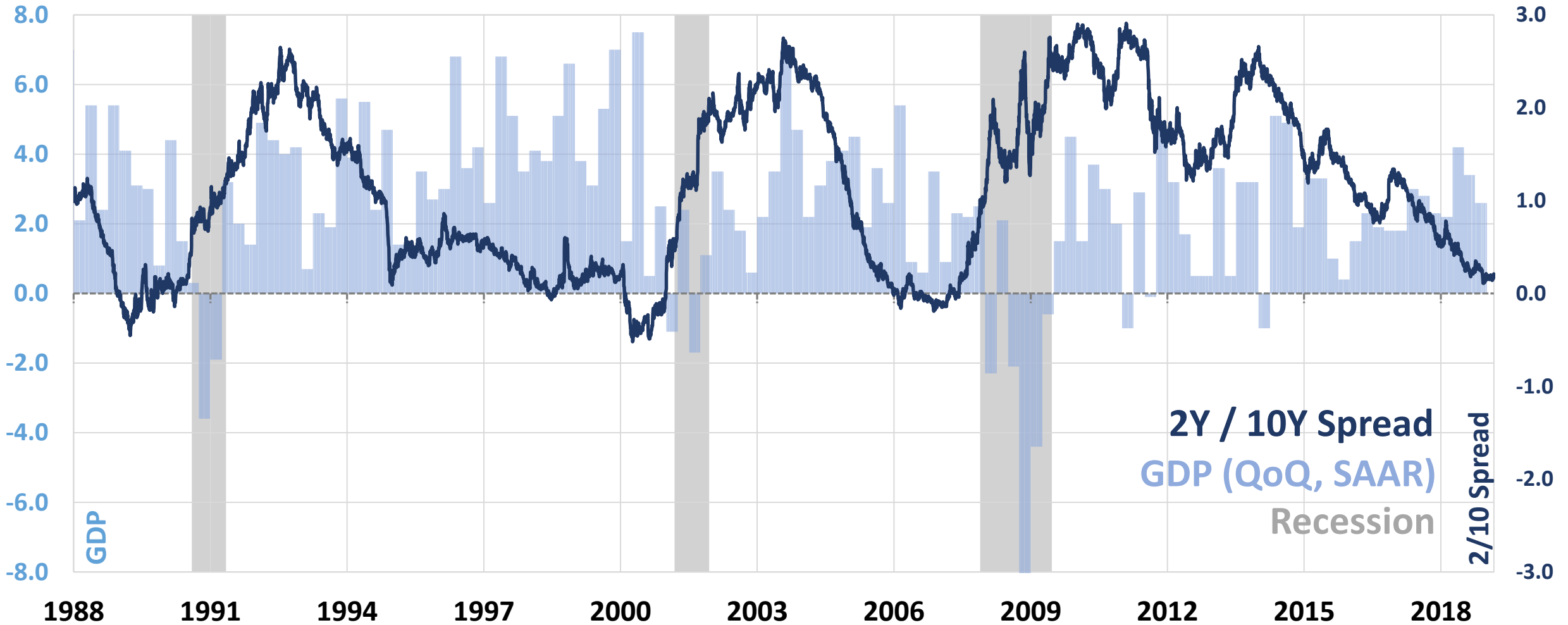


# NATIONAL MUNI BOND SUMMIT

# LESSONS FROM YIELD CURVE

#1 MOST ACCURATE LEADING INDICATOR, #2 CAN BE A FALSE FLAG, #3 CAN REMAIN FLAT FOR AN EXTENDED PERIOD

VOLATILE MARKETS > STABLE GROWTH > TRADE UNCERTAINTY > FISCAL POLICY > MONETARY POLICY > GLOBAL HEADWINDS > SUMMARY AND PROJECTIONS

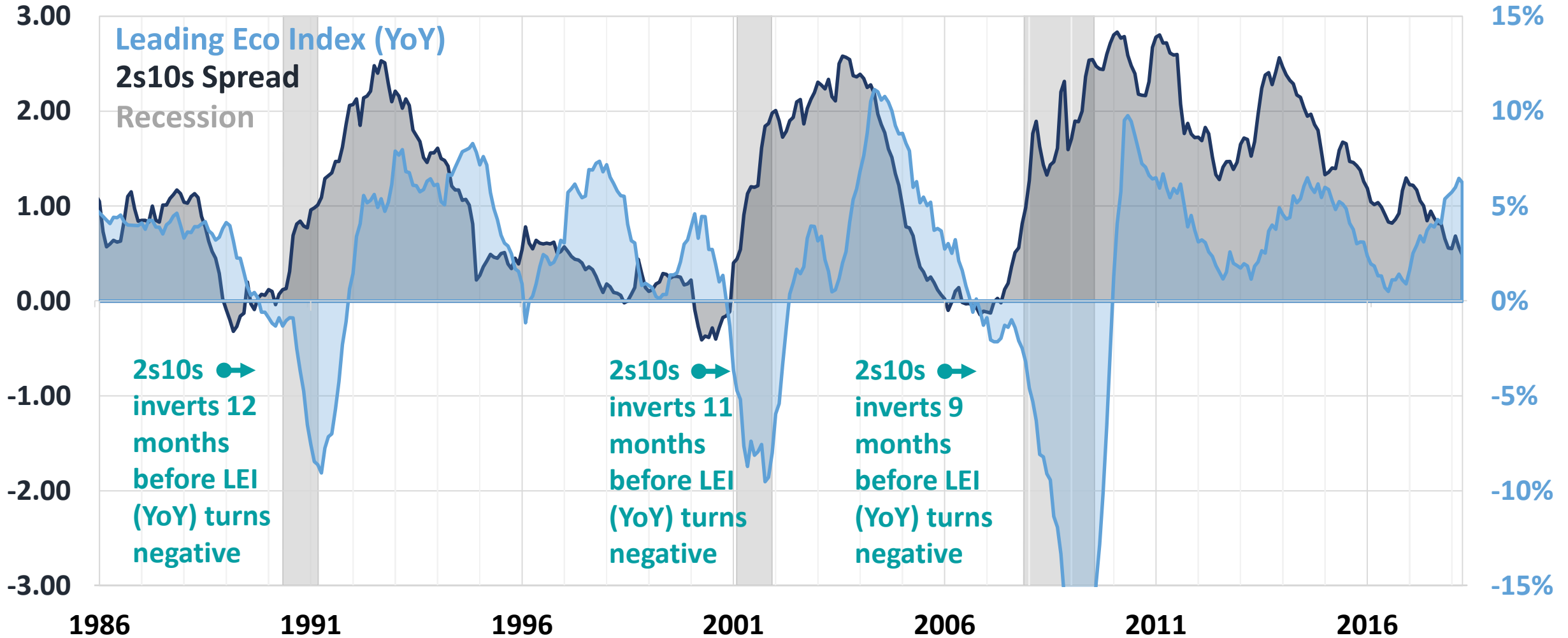


# NATIONAL MUNI BOND SUMMIT

# LESSONS FROM YIELD CURVE

## #4 YIELD CURVE TENDS TO INVERT BEFORE THE ECONOMIC DATA TURN LOWER

VOLATILE MARKETS → STABLE GROWTH → TRADE UNCERTAINTY → FISCAL POLICY → MONETARY POLICY → GLOBAL HEADWINDS → SUMMARY AND PROJECTIONS



Sources: Conference Board, NBER, Bloomberg, Vining Sparks

# NATIONAL MUNI BOND SUMMIT

# LESSONS FROM YIELD CURVE

## #4 YIELD CURVE TENDS TO INVERT BEFORE THE ECONOMIC DATA TURN LOWER

VOLATILE MARKETS

STABLE GROWTH

TRADE UNCERTAINTY

FISCAL POLICY

MONETARY POLICY

GLOBAL HEADWINDS

SUMMARY AND PROJECTIONS

### Leading Economic Indicators

### Signal for Recession

*Level at Time of Initial Yield Curve Inversion*

**Leading Indicator Index (YoY Change)**

YoY Change Declines

**1989**

**2000**

**2006**

**Current**

**+4.1%**

**+3.3%**

**+2.7%**

**+2.9%**

**Initial Jobless Claims (YoY Change)**

YoY Change Declines for Consecutive Months

**-8.1%**

**-2.4%**

**-4.1%**

**+0.2%**

**Weekly Hours Worked (Hours)**

Hours Fall below 40.8

**41.1**

**41.5**

**40.9**

**42.0**

**Consumer Confidence - Expectations (YoY)**

YoY Change Declines

**+5.4%**

**+2.3%**

**+1.6%**

**+1.1%**

**New Orders - Consumer Goods (YoY Change)**

YoY Change Declines for 3+ Consecutive Months

**+6.2%**

**-2.3%**

**+3.3%**

**+2.2%**

**Building Permits (YoY Change)**

YoY Change Declines

**+11.6%**

**-1.6%**

**+1.8%**

**+0.5%**

**New Orders - Core Capital Goods (YoY Change)**

YoY Change Declines

**+1.4%**

**+11.4%**

**+6.7%**

**+0.8%**

**ISM Manufacturing New Orders (Index)**

Index Falls below 47.2

**57.3**

**56.2**

**58.9**

**55.5**

**Stock Prices (YoY Change)**

YoY Change Declines

**+14.8%**

**+11.4%**

**+5.2%**

**-3.6%**

### Yield Curve

### Signal for Recession

**2-Year / 10-Year Treasury (Spread)**

Turns Negative

**19 Mos**

**13 Mos**

**26 Mos**

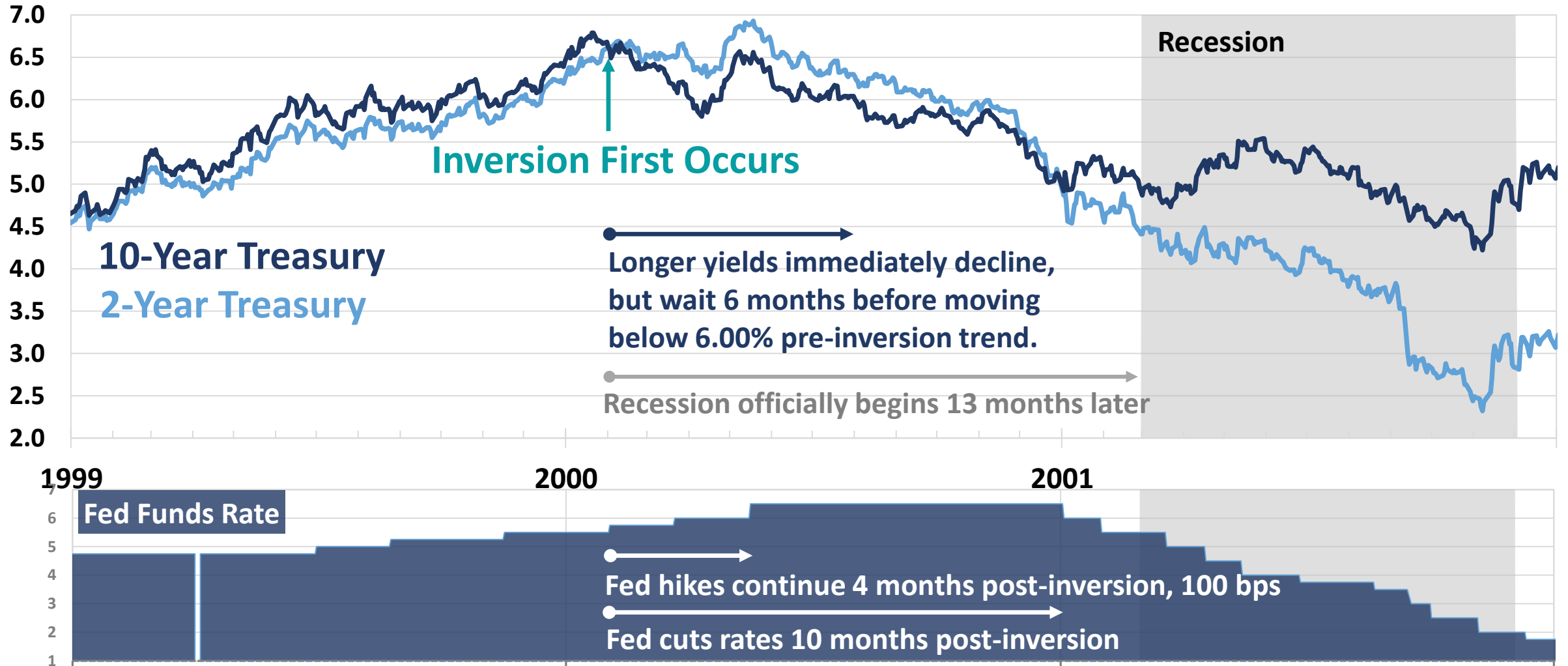
**0.17%**

# NATIONAL MUNI BOND SUMMIT

# LESSONS FROM YIELD CURVE

#5 FED TENDS TO CONTINUE HIKING AFTER CURVE FIRST INVERTS, AND #6 YIELDS ARE LIKELY NEAR THEIR CYCLE-PEAK

VOLATILE MARKETS > STABLE GROWTH > TRADE UNCERTAINTY > FISCAL POLICY > MONETARY POLICY > GLOBAL HEADWINDS > SUMMARY AND PROJECTIONS



# NATIONAL MUNI BOND SUMMIT

# LESSONS FROM YIELD CURVE

## #7 ECONOMIC BACKDROP WHICH PUSHES FED TO HIKE THROUGH LONGER RATES INCLUDES FEAR OF RISING INFLATION

VOLATILE MARKETS

STABLE GROWTH

TRADE UNCERTAINTY

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SUMMARY AND PROJECTIONS

### 2s10s Yield Curve Inversions

Labor	<u>1989</u>	<u>2000</u>	<u>2006</u>	<u>Current</u>
<b>Unemployment Rate</b>	5.3%	4.0%	5.0%	4.0%
<i>Year-over-Year Change in Unemployment Rate</i>	-0.5%	-0.3%	-0.4%	-0.1%
<b>Nonfarm Payroll Growth (6M Average)</b>	276k	266k	218k	231k
<i>Year-over-Year Change in Nonfarm Payroll Growth (6M Average)</i>	+2k	+13k	+82k	+59k
<b>Inflation and Inputs</b>				
<b>PCE Inflation (Year-over-Year)</b>	4.2%	2.2%	2.9%	1.9%
<i>Year-over-Year Change in Core PCE Inflation</i>	+0.5%	+1.2%	-0.1%	+0.3%
<b>Wage Growth (Year-over-Year)</b>	3.3%	3.6%	2.9%	3.2%
<i>Year-over-Year Change in Wage Growth (YoY)</i>	+0.3%	-0.2%	+0.5%	+0.4%
<b>Oil Price (Year-over-Year)</b>	-17%	+117%	+17%	-10%
<b>Commodity Prices (Year-over-Year)</b>	+8%	-3%	-3%	-8%
<b>10-Year TIPs Breakeven Inflation Rate</b>	N/A	2.4%	2.4%	2.0%
<i>Year-over-Year Change in TIPs-Implied Inflation Rate</i>	N/A	+1.5%	Unch.	-0.2%
<b>FOMC Concerns (As Described in Official Communications)</b>	N/A	Heightened inflation risk	Risks for faster inflation	Risks appear roughly balanced

ABSENT RISING INFLATION FEARS, FED WILL HAVE THE OPPORTUNITY TO BE RESPONSIVE TO FINANCIAL CONDITIONS

VOLATILE MARKETS

STABLE GROWTH

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SUMMARY AND PROJECTIONS

- ▶ **Most Accurate, Most Leading Indicator of Change in Economic Cycle**
- ▶ **2yr/10yr and 3m/10yr Have Proven to Be Most Reliable Measures**
- ▶ **Inverted Curve Can Be a False Flag**
- ▶ **Curve Can Remain Flat for an Extended Period**
- ▶ **Economic Data Tend to Look Strong When Yield Curve Inverts**
- ▶ **Yields Are Likely Near the Cycle Peak Once Curve Inverts**
- ▶ **Fed Tends to Continue Hiking after 2yr/10yr Inverts**
- ▶ **Heightened Inflation Risk Has Accompanied Previous Curve Inversions**



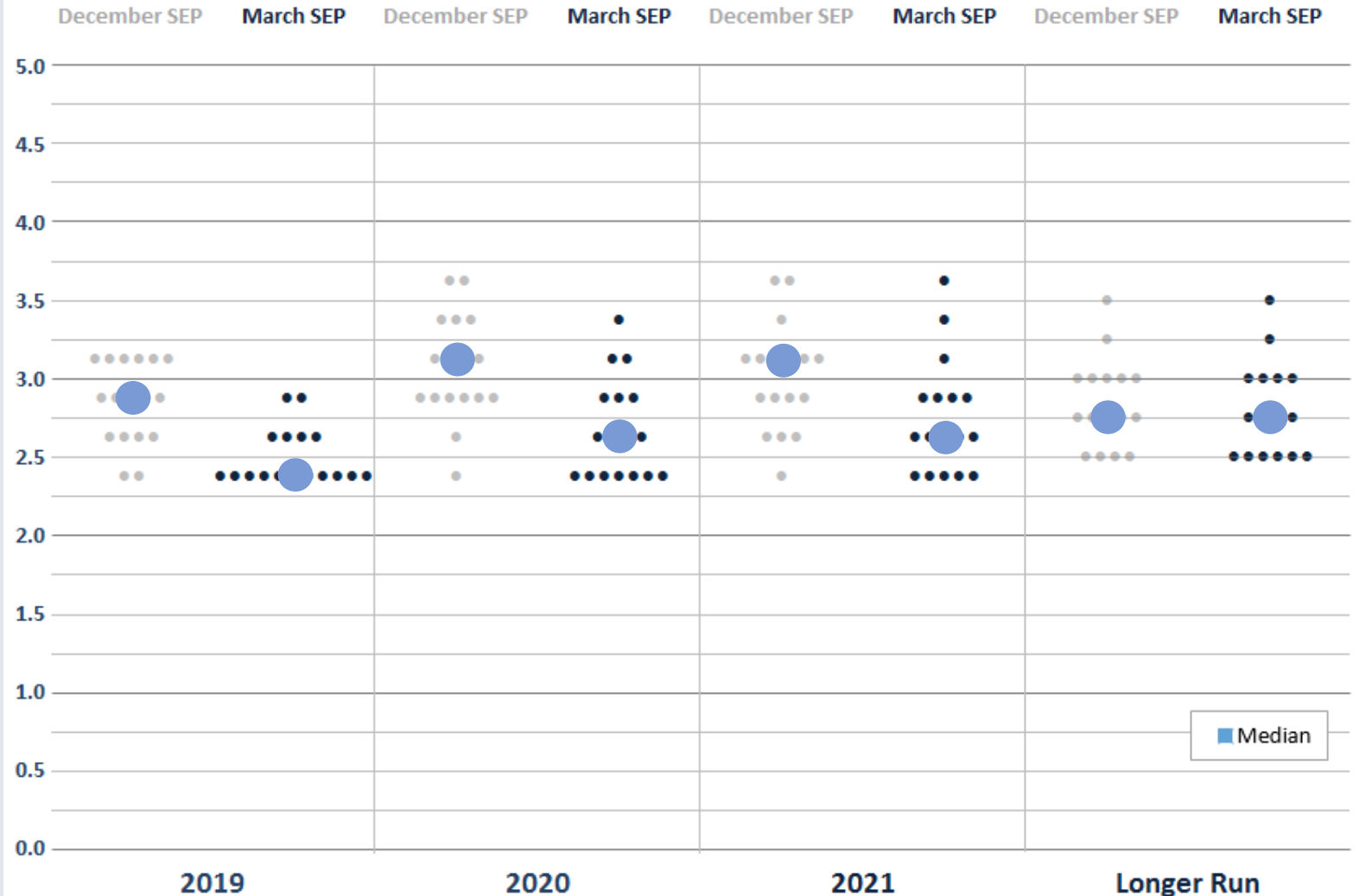
# NATIONAL MUNI BOND SUMMIT

# FED PROVING RESPONSIVE

FED COMPLETES POLICY REVERSAL FROM SEPTEMBER TO MARCH; DECIDEDLY DIFFERENT POSTURE GOING FORWARD

VOLATILE MARKETS → STABLE GROWTH → TRADE UNCERTAINTY → FISCAL POLICY → MONETARY POLICY → GLOBAL HEADWINDS → SUMMARY AND PROJECTIONS

- GDP projections lowered
- Unemployment rate forecast raised
- NAIRU lowered to 4.3%
- March dot plot shows no rate hikes in 2019
- Policy projected to be restrictive - now marginally accommodative
- Likely moving to inflation averaging
- Treasury portfolio roll-off halved to \$15 billion beginning May 1
- Overall portfolio roll-off to end after September 30
- First \$20 billion in MBS roll-off reinvested into Treasurys



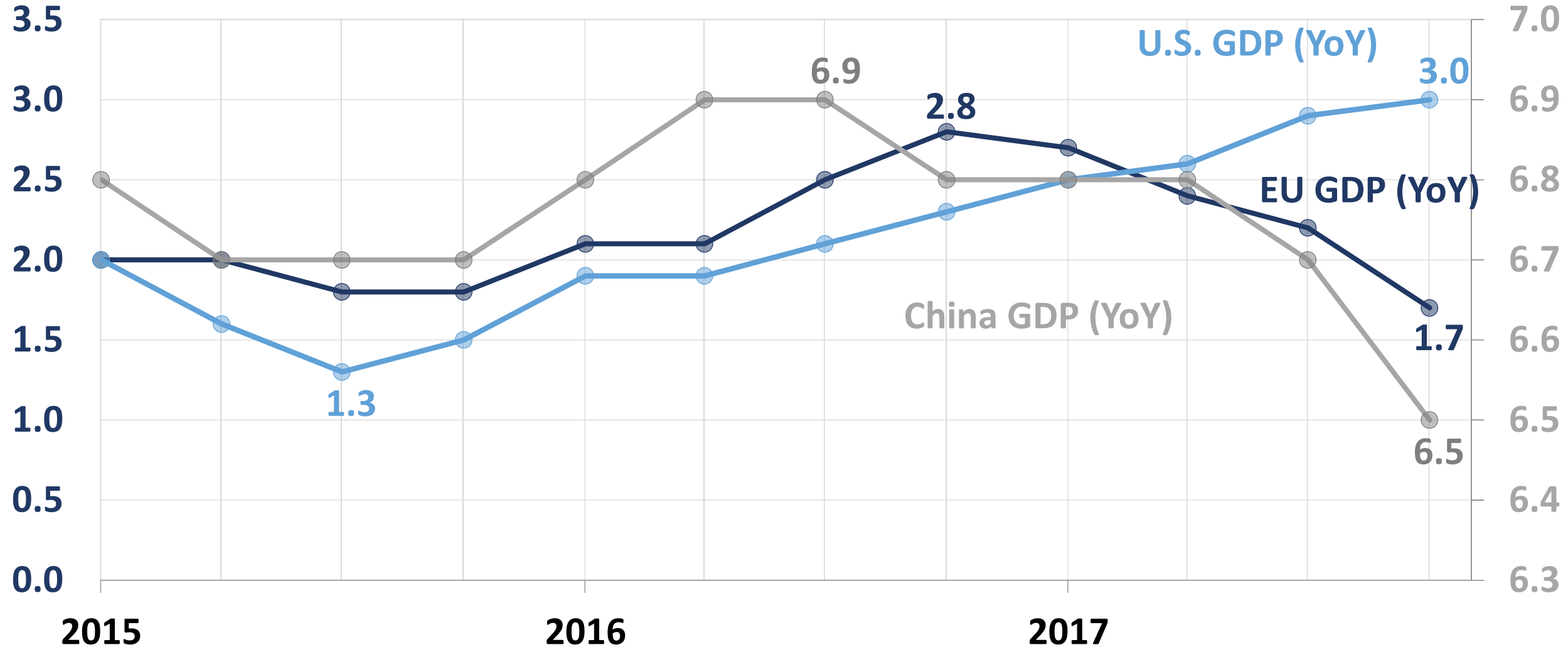


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# GLOBAL WEAKNESS TO SLOW U.S.

AS GLOBAL ECONOMIC GROWTH SLOWS, U.S. ACCELERATION WILL BE INCREASINGLY CHALLENGING

VOLATILE MARKETS > STABLE GROWTH > TRADE UNCERTAINTY > FISCAL POLICY > MONETARY POLICY > GLOBAL HEADWINDS > SUMMARY AND PROJECTIONS

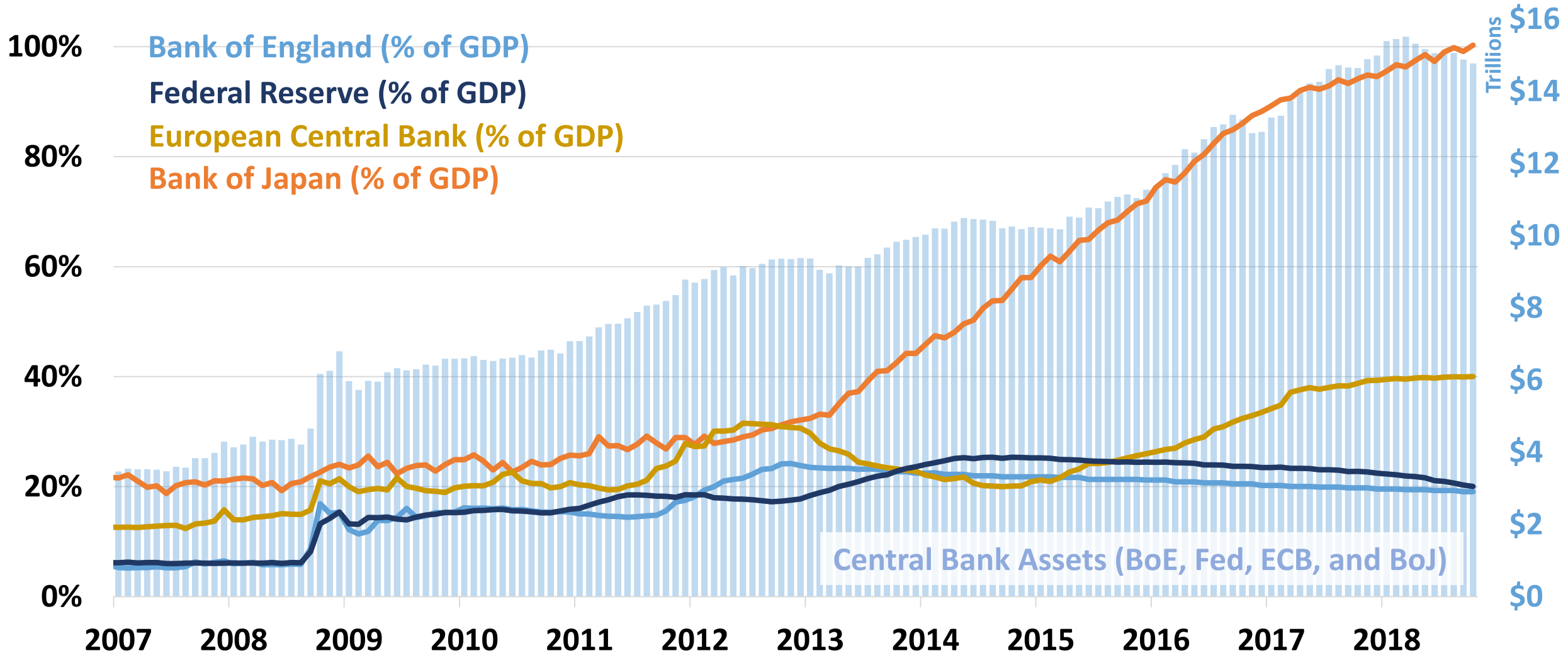


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# NET QUANTITATIVE TIGHTENING

FED REMAINS ONLY CENTRAL BANK ALLOWING PORTFOLIO TO SHRINK, NOW ECB HAS ENDED PORTFOLIO PURCHASES

VOLATILE MARKETS > STABLE GROWTH > TRADE UNCERTAINTY > FISCAL POLICY > MONETARY POLICY > GLOBAL HEADWINDS > SUMMARY AND PROJECTIONS

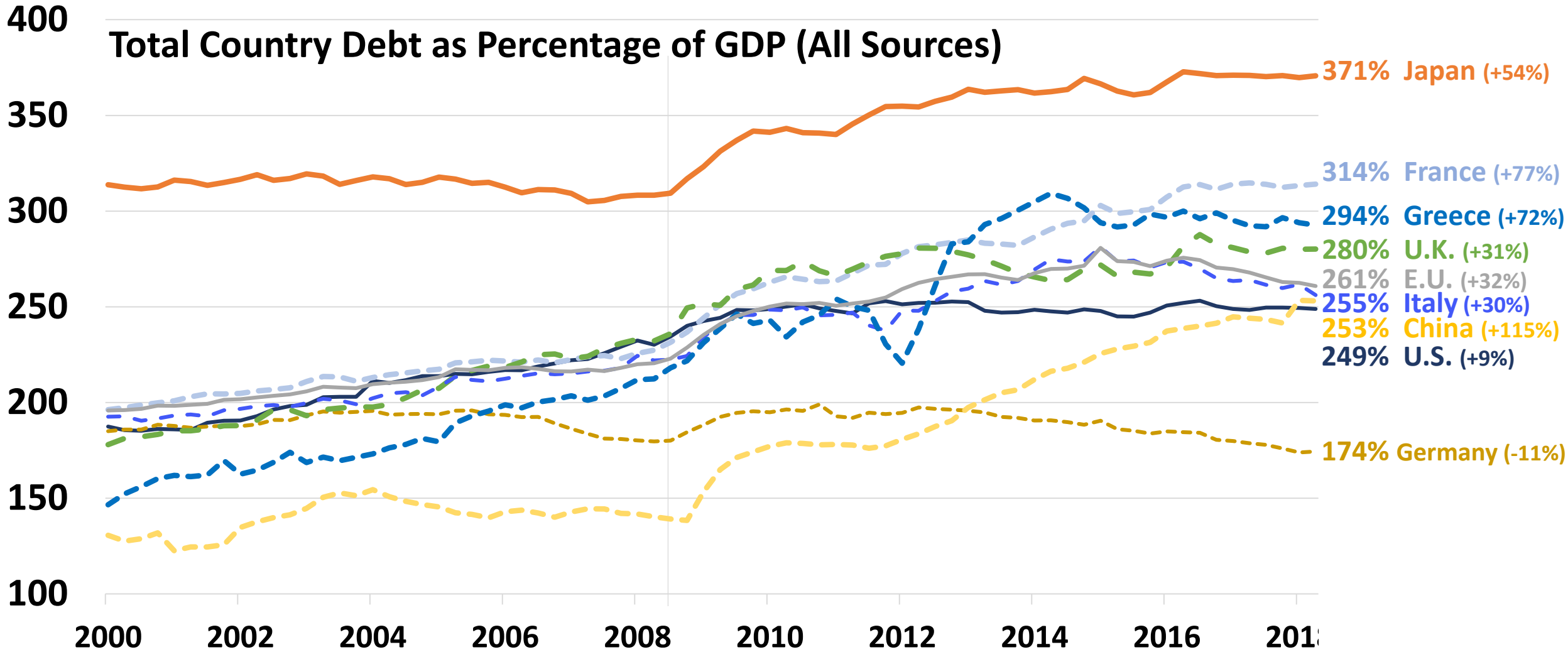


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# GLOBAL DEBT BINGE

GOVERNMENT AND CORPORATE DEBT LEVELS HAVE GROWN PERILOUSLY LARGE WITH UNKNOWN CONSEQUENCES

VOLATILE MARKETS > STABLE GROWTH > TRADE UNCERTAINTY > FISCAL POLICY > MONETARY POLICY > GLOBAL HEADWINDS > SUMMARY AND PROJECTIONS



Sources: Bank for International Settlements, Vining Sparks

ECONOMY STABLE FOR NOW, MARKETS BEGIN QUESTIONING DURABILITY OF EXPANSION AMIDST GROWING HEADWINDS

VOLATILE MARKETS

STABLE GROWTH

TRADE UNCERTAINTY

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MONETARY POLICY

GLOBAL HEADWINDS

SUMMARY AND PROJECTIONS

## TAILWINDS

- Strong U.S. Consumer
- Trade Deal Could Unleash Business Investment
- One More Year of Fiscal Boost
- Mild Inflation Likely to Persist

## INTEREST RATES

- Slower Pace of Gradual (0-1 Hike)
- Likely Near Peak for Rate Cycle

## HEADWINDS / RISKS

- Tax-Cut Benefits Fade over Time
- Fiscal Boost to Fade
- Housing to Remain Sluggish
- Potential Trade Policy Misstep
- Fed Policy Error More Likely as Rates Near Neutral
- Assets Prices Still Appear High
- Slowing Global Growth
- Higher Global Debt Loads
- Aging U.S. Population

SLOWER GROWTH, SLOWER PACE OF GRADUAL, AND SLIGHTLY HIGHER YIELDS AS HEADWINDS INCREASE

## Economic and Interest Rate Projections

### Vining Sparks Projections

March 2019

	Q119	Q219	Q319	Q419	Q120	Q220	2019	2020
<i>GDP (QoQ, SAAR)</i>	1.5	2.8	2.3	2.3	1.0	1.9	2.4	1.8
<i>Headline CPI (YoY)</i>	2.1	2.0	1.9	1.9	2.0	1.9	1.9	1.9
<i>Core PCE (YoY)</i>	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9
<i>Unemployment Rate</i>	3.8	3.7	3.8	3.8	3.9	3.9	3.8	3.9
<i>Nonfarm Payrolls (Monthly)</i>	175	155	155	150	140	130	167	130

	Q119	Q219	Q319	Q419	Q120	Q220	Q320	Q420
<i>Fed Funds Target</i>	2.38	2.38	2.63	2.63	2.63	2.63	2.63	2.63
<i>2-Year Treasury Yield</i>	2.55	2.60	2.65	2.65	2.65	2.50	2.50	2.50
<i>10-Year Treasury Yield</i>	2.75	2.90	2.90	2.85	2.75	2.70	2.70	2.70
<i>30-Year Treasury Yield</i>	2.82	3.00	2.98	2.92	2.78	2.77	2.77	2.77
<i>Prime Rate</i>	5.50	5.50	5.75	5.75	5.75	5.75	5.75	5.75
<i>30-Year Mortgage Rate</i>	4.40	4.55	4.55	4.50	4.40	4.35	4.35	4.35

# NATIONAL MUNI BOND SUMMIT

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