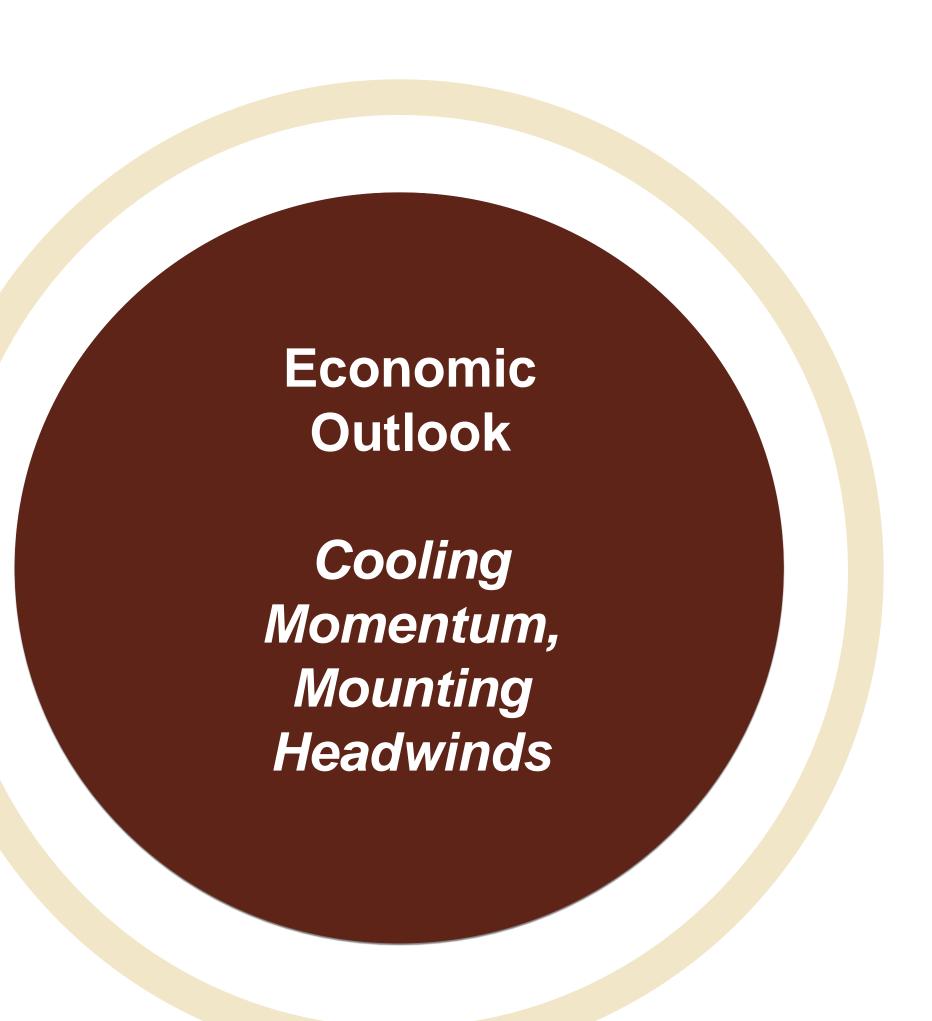


## Agenda

- I. Economic Outlook Cooling Momentum,
   Mounting Headwinds
- II. Market Dynamics Fundamentals vs. Valuation
- III. Market Distortions Challenging Expectations

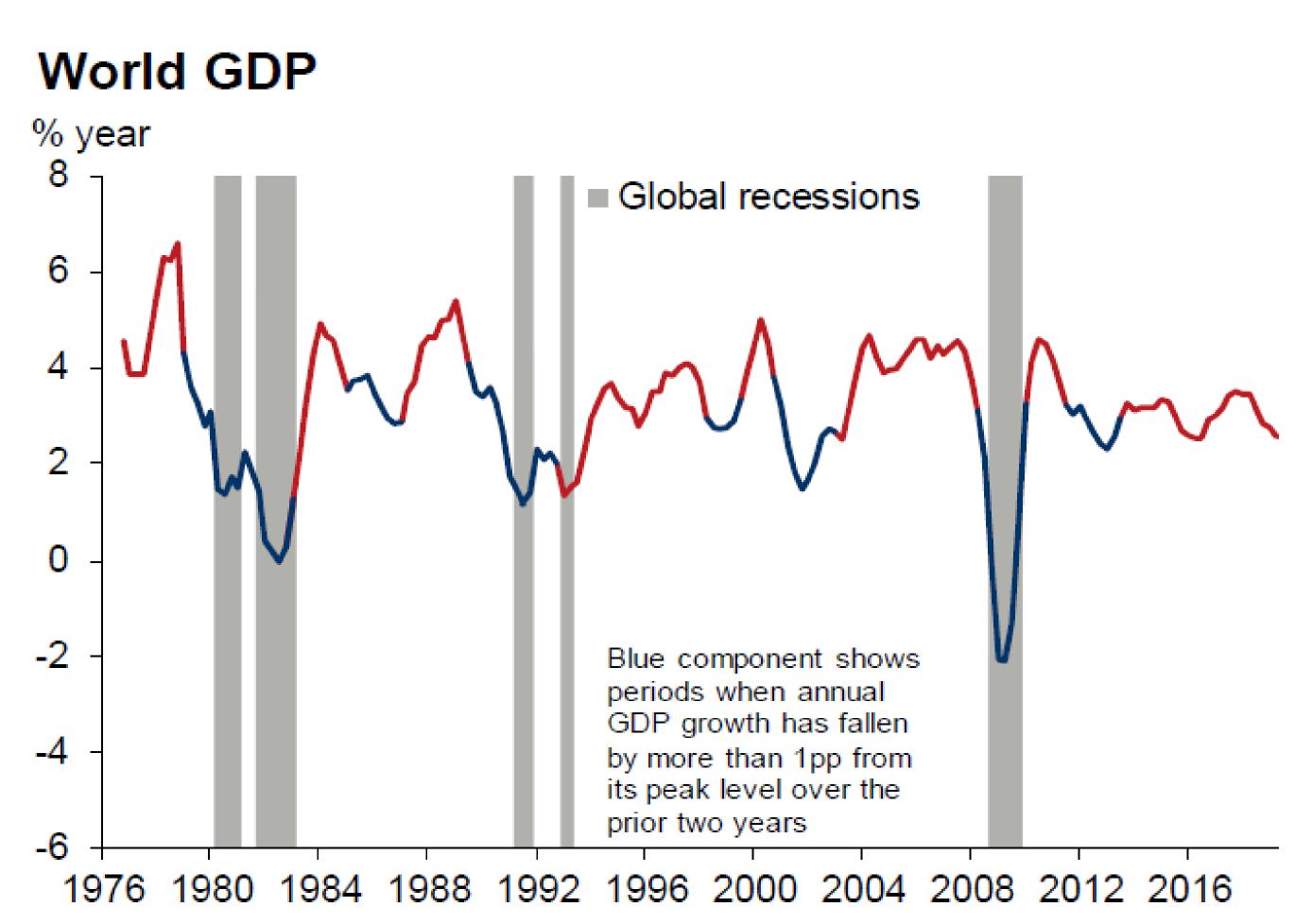




### Global Outlook

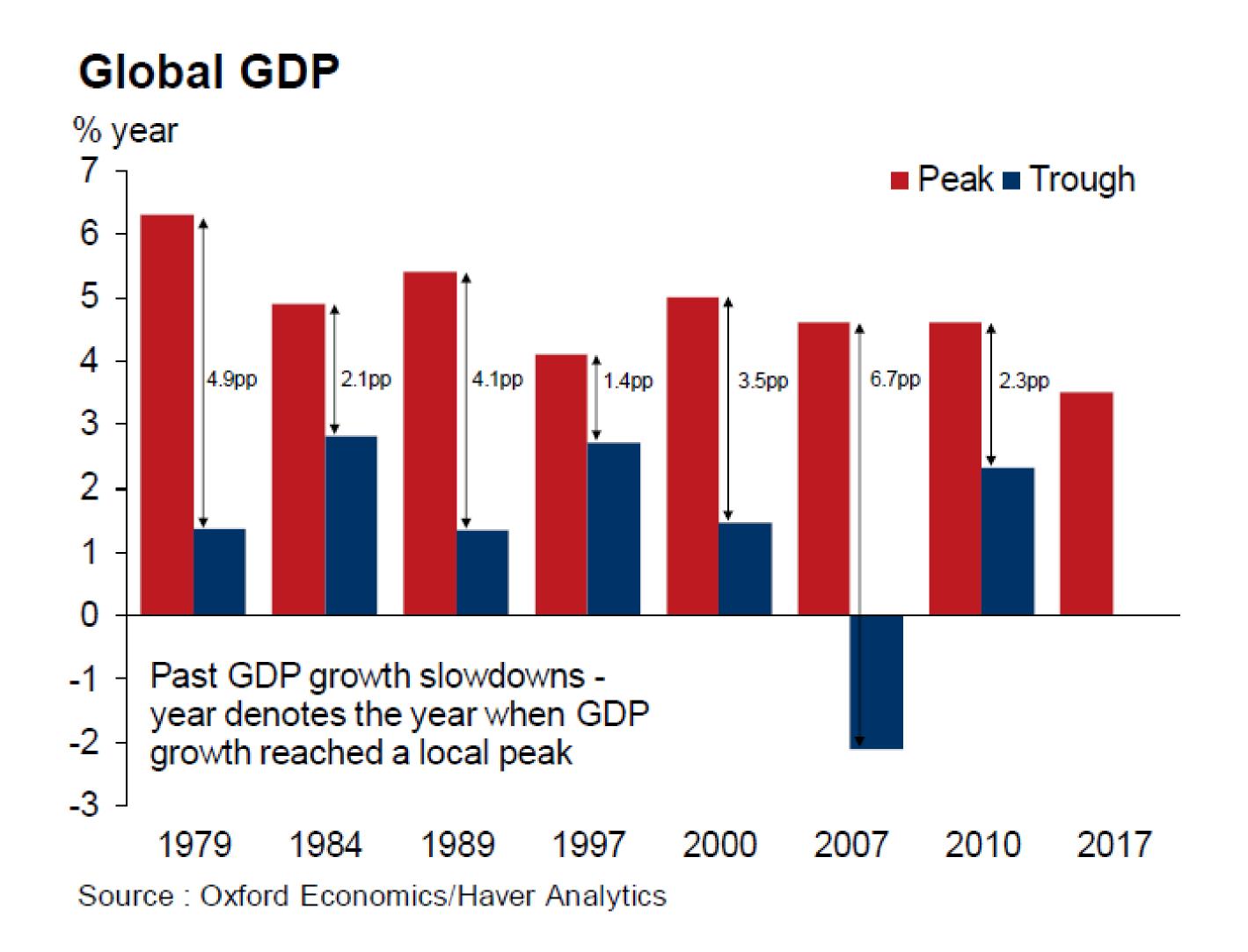
- The trade war has slowed global GDP growth estimates for 2019 to 2.6%.
- Central Bank policy loosening may counter tariff effects, but may also be less effective than before when it comes time for the rebound. Estimates for 2020 are now 2.5%.
- However, the risks continue to the downside if tariffs weigh on confidence or dollar strength.

## Global recession still unlikely



Source: Oxford Economics/Haver Analytics

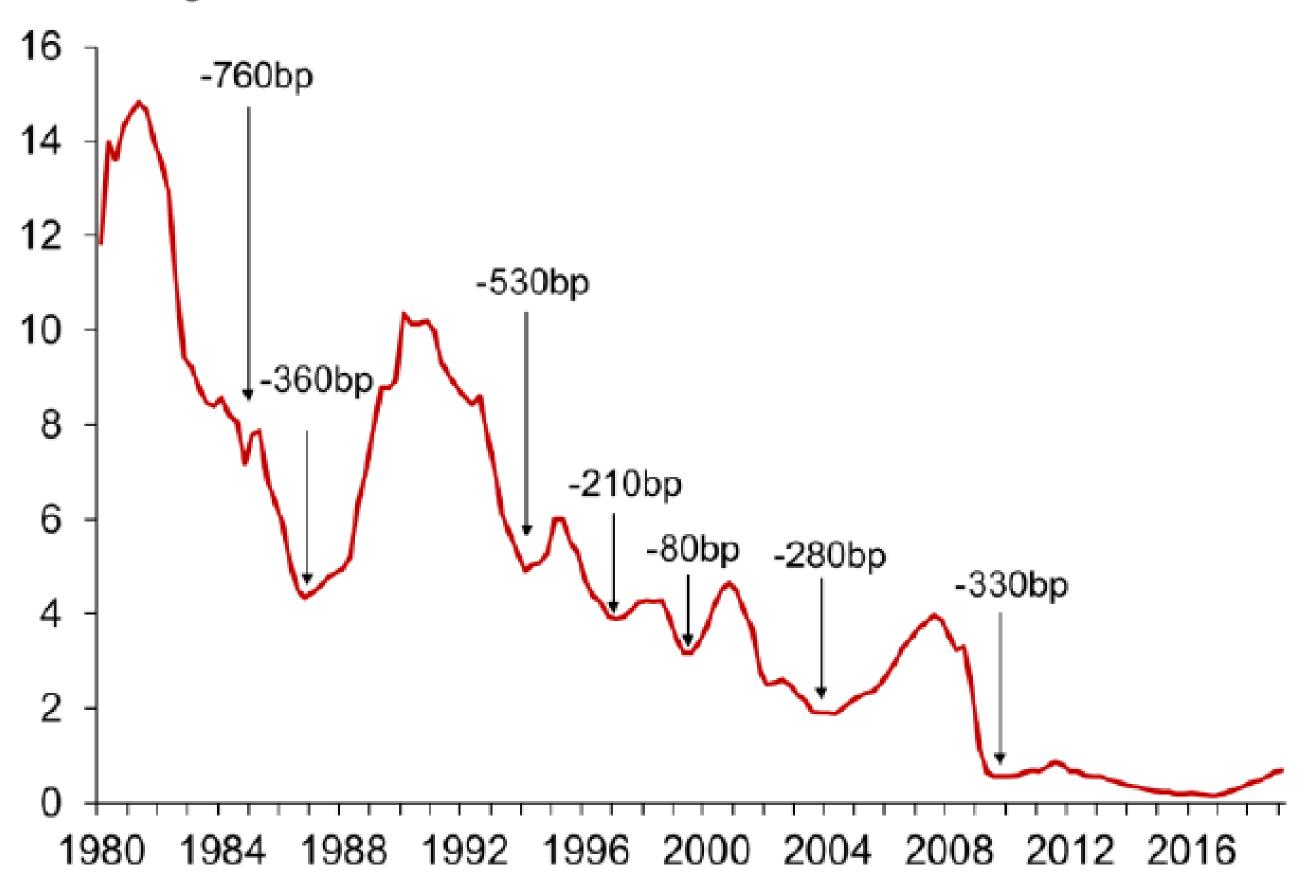
## Global growth slowing in successive cycles



## Monetary policy tools are less effective

### G7 central bank policy rate

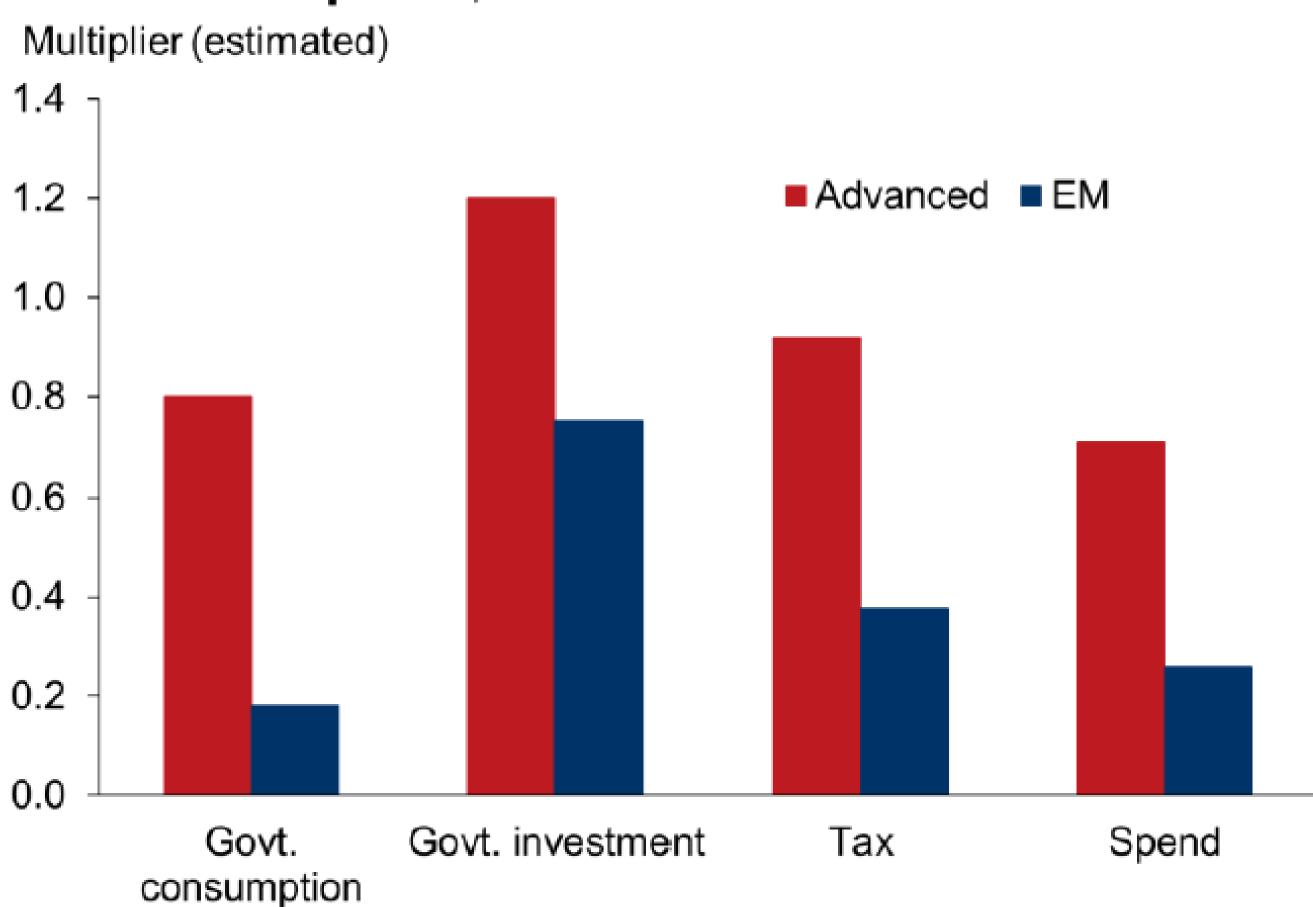
%, average across G7



Source: Oxford Economics/Haver Analytics

## But fiscal policy could still be an option

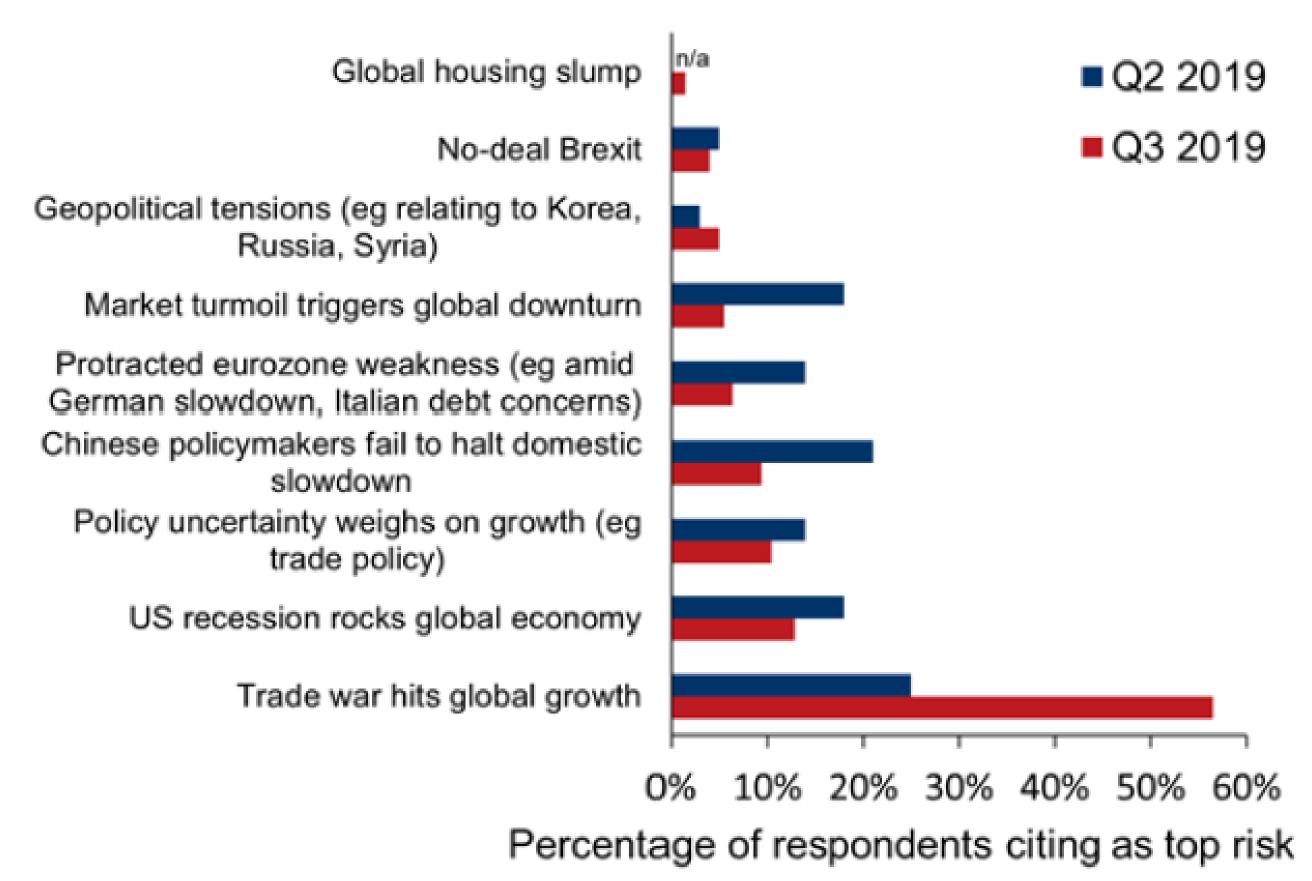
### Fiscal multipliers, advanced and EM economies



Source: Oxford Economics/Ilzetzki et al (2011), Batini et al (2014)

## Trade war remains highest downside risk

# What do you see as the top 3 downside global economic risks over the next two years?



Source: Oxford Economics Global Risk Survey

## Geopolitical tensions vs. economic fragility

#### No-deal Brexit (30%)

The UK leaves the EU in disorderly fashion at the end of October 2019

The UK slows sharply as confidence deteriorates and higher tariffs squeeze households

Financial markets respond negatively, with UK and (to a lesser extent) Eurozone asset prices hit hardest

But global spillovers are generally limited

# EM upturn as trade war fears fade (15%)

China loosens policy further

Monetary policy remains broadly supportive in advanced economies

At the same time, trade policy uncertainties fade on the back of a US-China deal

Emerging Markets benefit most against a backdrop of US dollar weakness

#### Trade war escalation (20%)

Trade tensions escalate as the US imposes new tariffs on China, Mexico and the EU, as well as the global auto sector

The US is hit by retaliatory tariff hikes

The US dollar strengthens and equities fall as market sentiment deteriorates

Growth slows in the US and globally

#### US recession (15%)

The US slows sharply as weaker profits hit business and household confidence

EMs are also badly hit as the shock spills over amid worsening market sentiment

#### Eurozone slowdown (10%)

EZ manufacturing weakness spills over to services as wage and jobs growth slows

Global growth falters as policymakers in Europe fail to prevent protracted slowdown

### Global Outlook – Advanced Economies

## United States

- GDP growth in 2019 will cool to 2% and 1.6% in 2020 as China weights on output.
- Current estimates include 0.3% drag from expected tariffs.

Eurozone

- GDP growth for 2020 has been revised down to 1.1% from 1.2% with industrial weakness and weak CPI at 0.9%.
- The ECB cut deposit rates 10% and re-activated asset purchases to combat the slowdown.

Japan

- Growth remains subdued given weak exports and a slow down in capital spending resulting in 0.8% GDP growth in 2019.
- GDP will slow to 0.2% in 2020 after the consumption tax hike.

United Kingdom

- The UK economy continues to look more fragile as Brexit drags on and impacts the domestic economy.
- GDP will likely only rise 1.2% in 2019 and 1.1% in 2020.

## Global Outlook – Emerging Economies

### China

- The economy continues to slow while the external outlook is clouded by weak global trade and US-China frictions.
- China will likely undertake further policy easing.

India

- Private consumption is dragging down GDP growth to 5.6% for 2019 and 5.6% in 2020.
- The central bank could cut 75 bps from the RBI.

Turkey

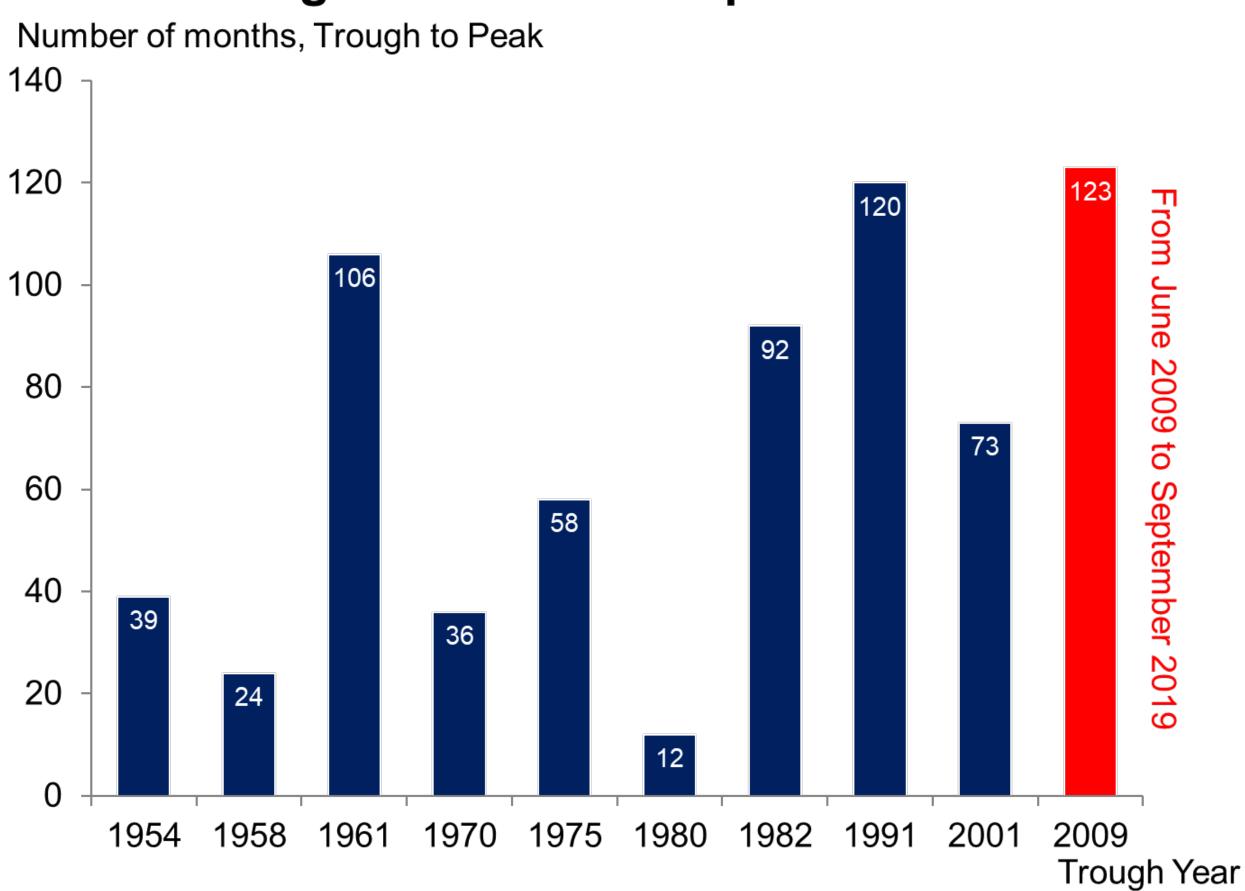
- Q2 GDP surprised to the upside and sentiment surveys are recovering.
- 2019 GDP growth is now expected to be 0.1% from -1.5%.

Mexico

- Industrial and investment data continue to miss expectations.
- The overall economic outlook remains uncertain.
- Consumption remans positive.

## US economic expansion – long...

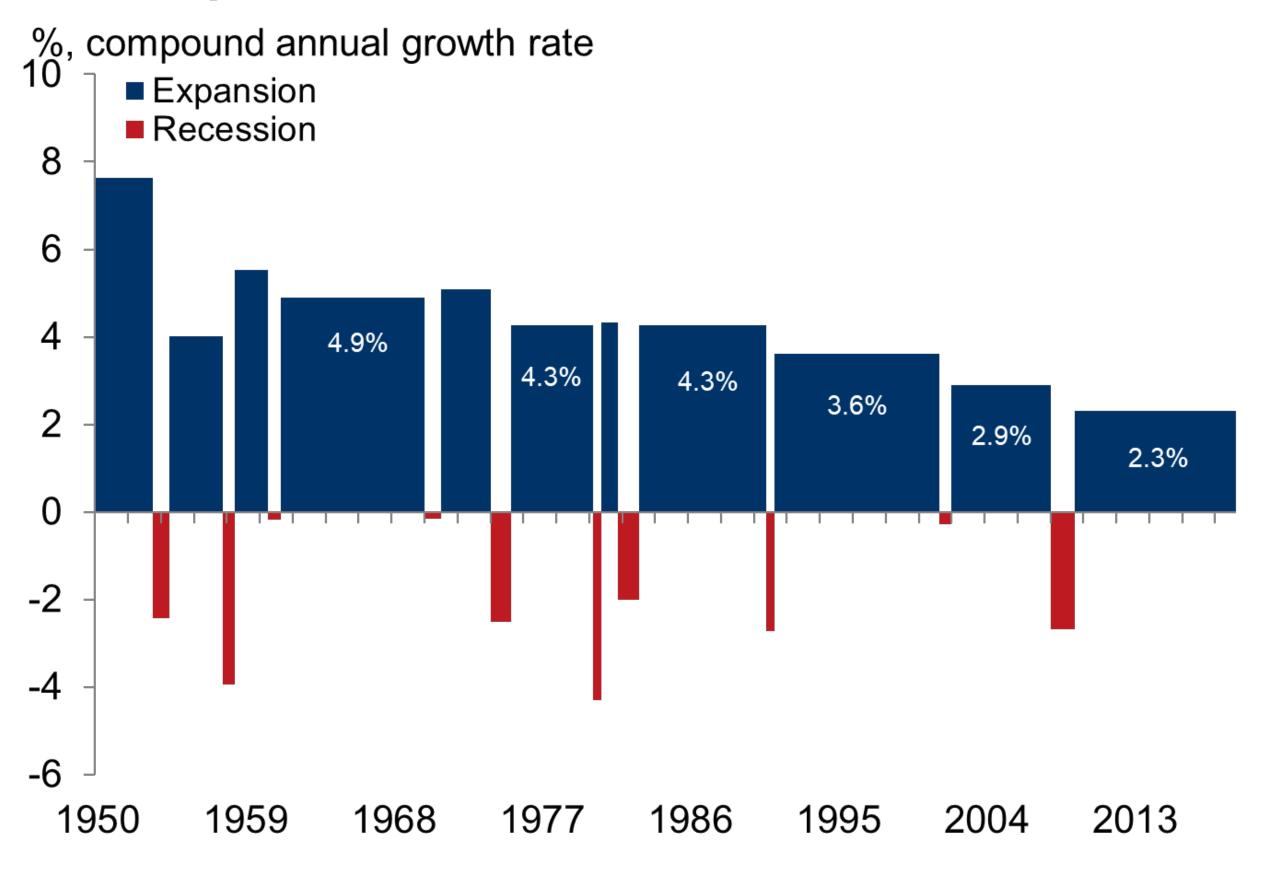
### US: The longest economic expansion on record



Source: Oxford Economics, NBER

### ...and slow

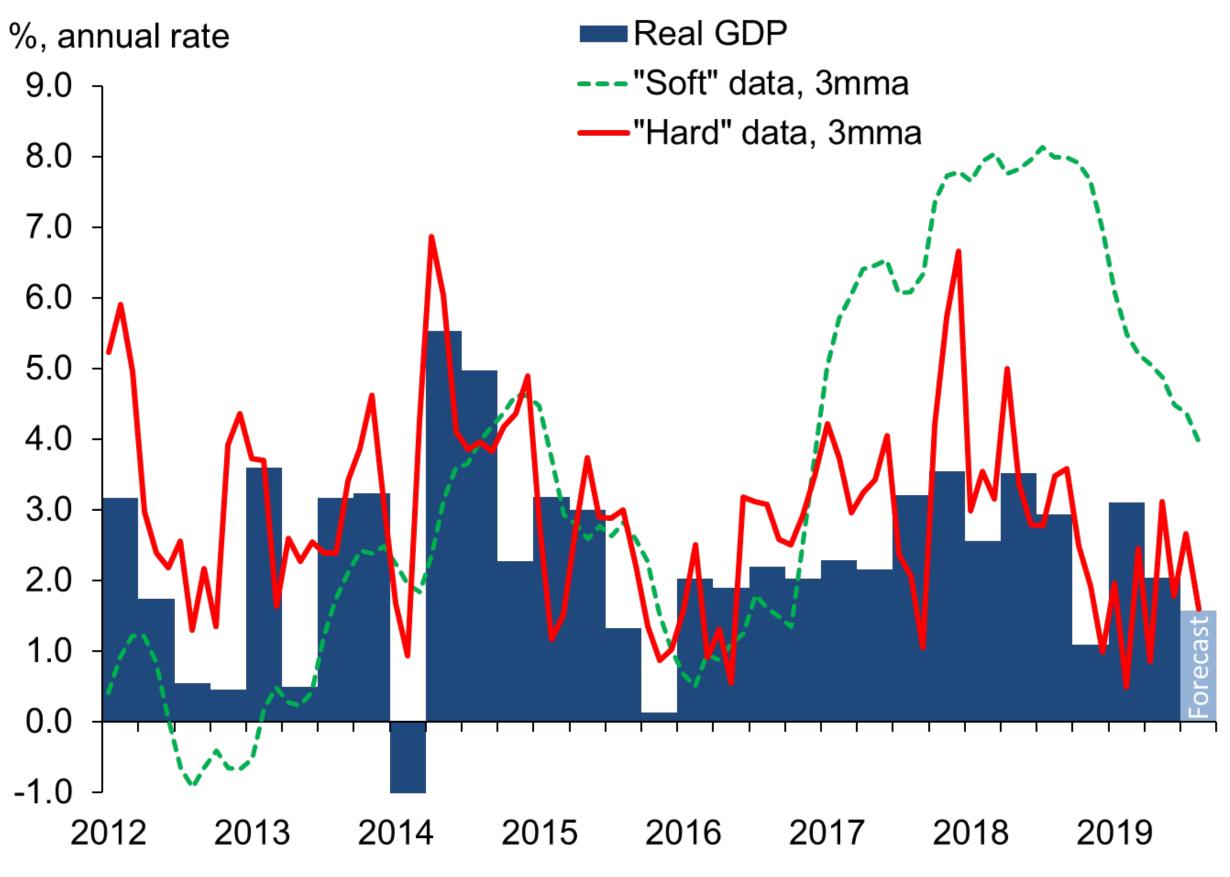
### **US: Expansions and Recessions**



Source: Oxford Economics/Haver Analytics

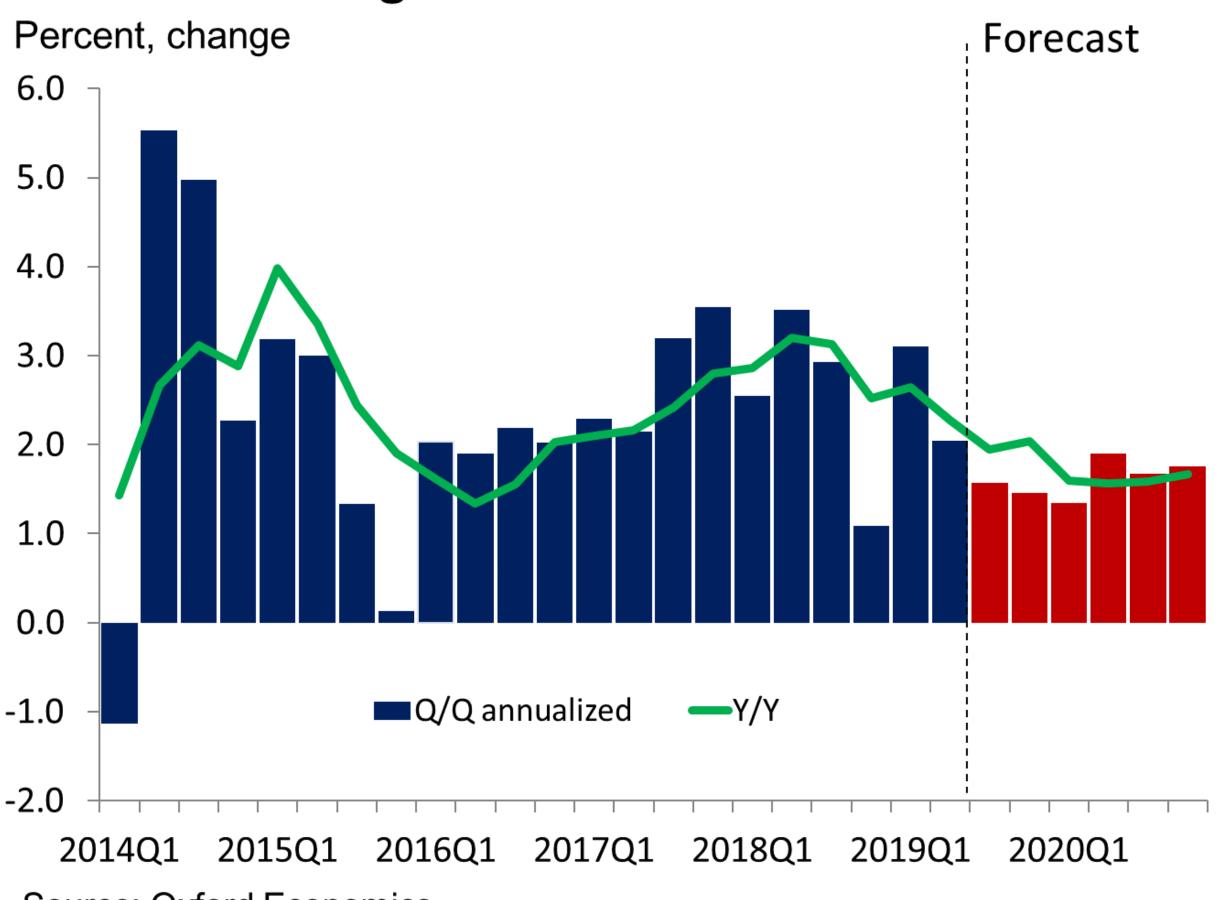
## US economic momentum falling

### **US: Economic Momentum Indicator**



## US Growth slowing to 1.6% in 2020



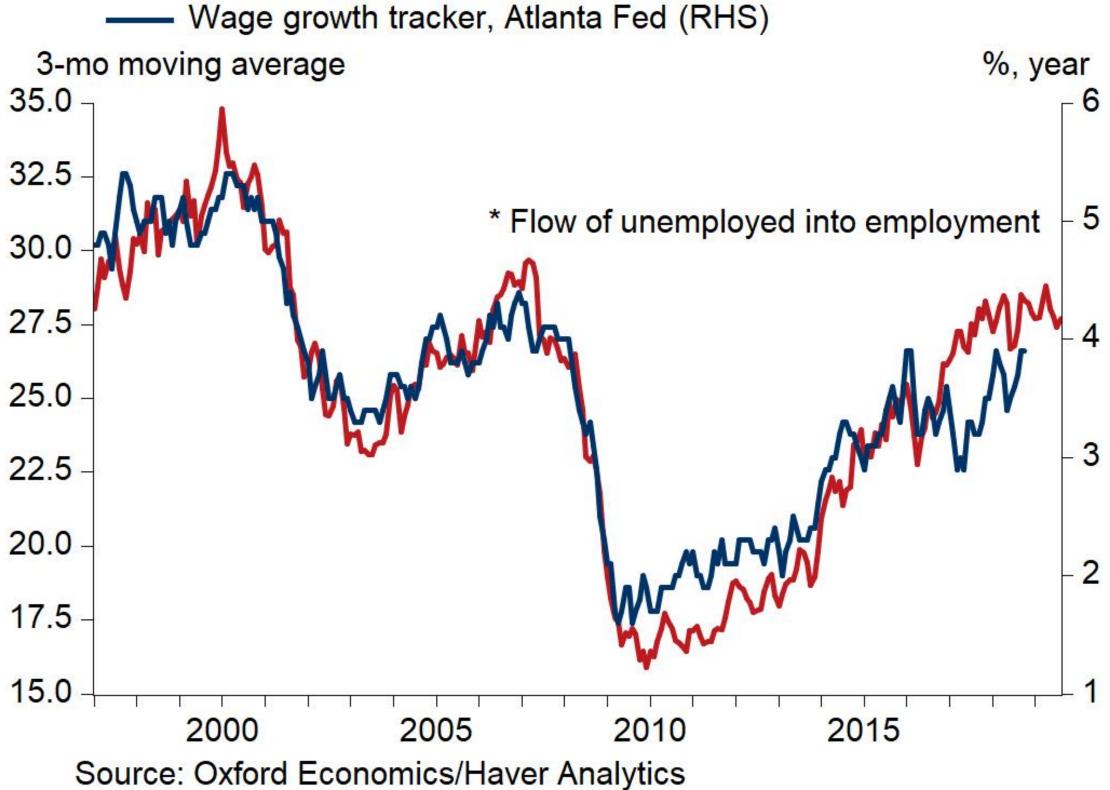


Source: Oxford Economics

## US wage growth stuck at 3%

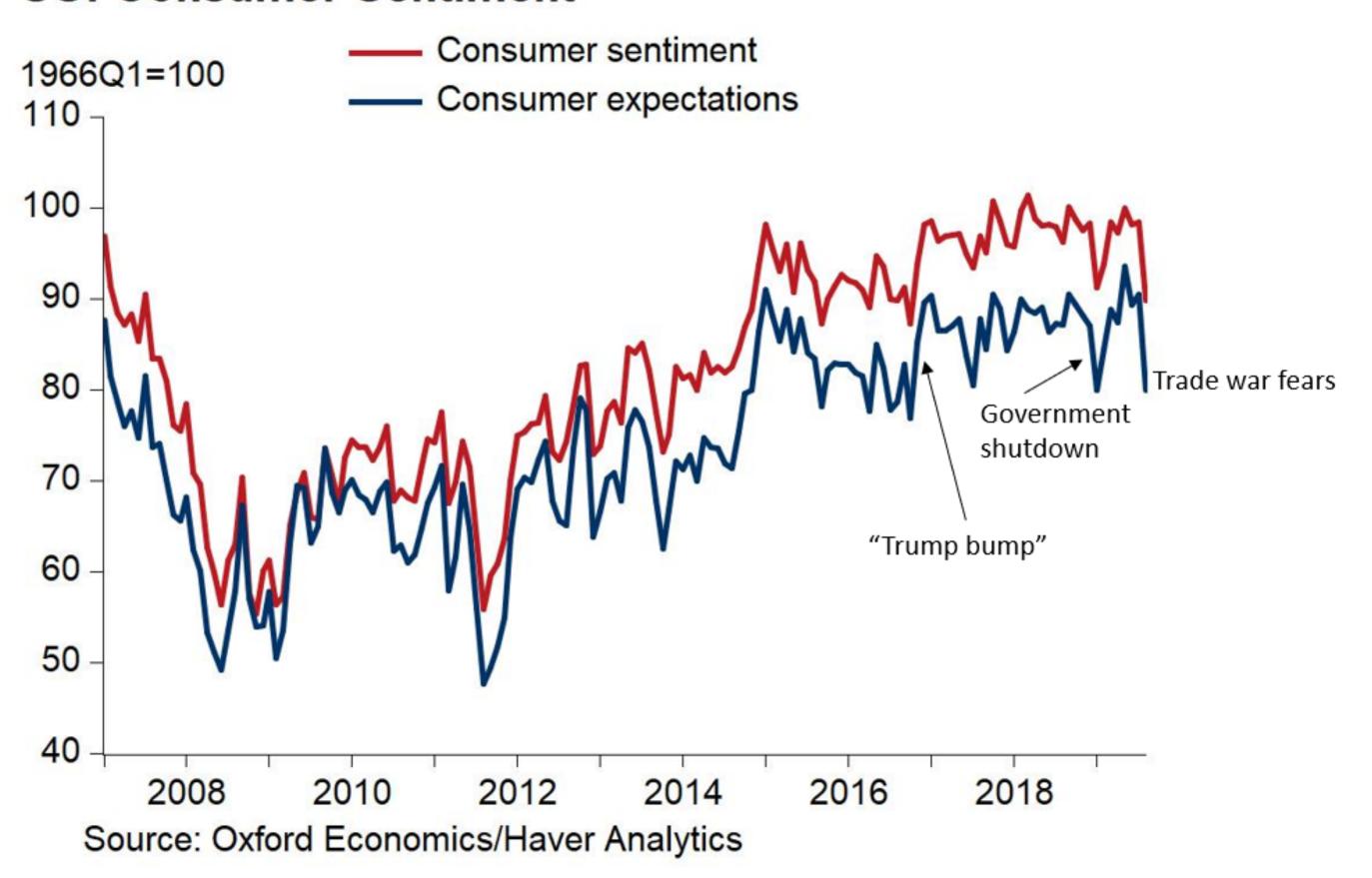
#### US: Wage growth not likely to accelerate much from here

Job finding rate\* (9months lead) (LHS)



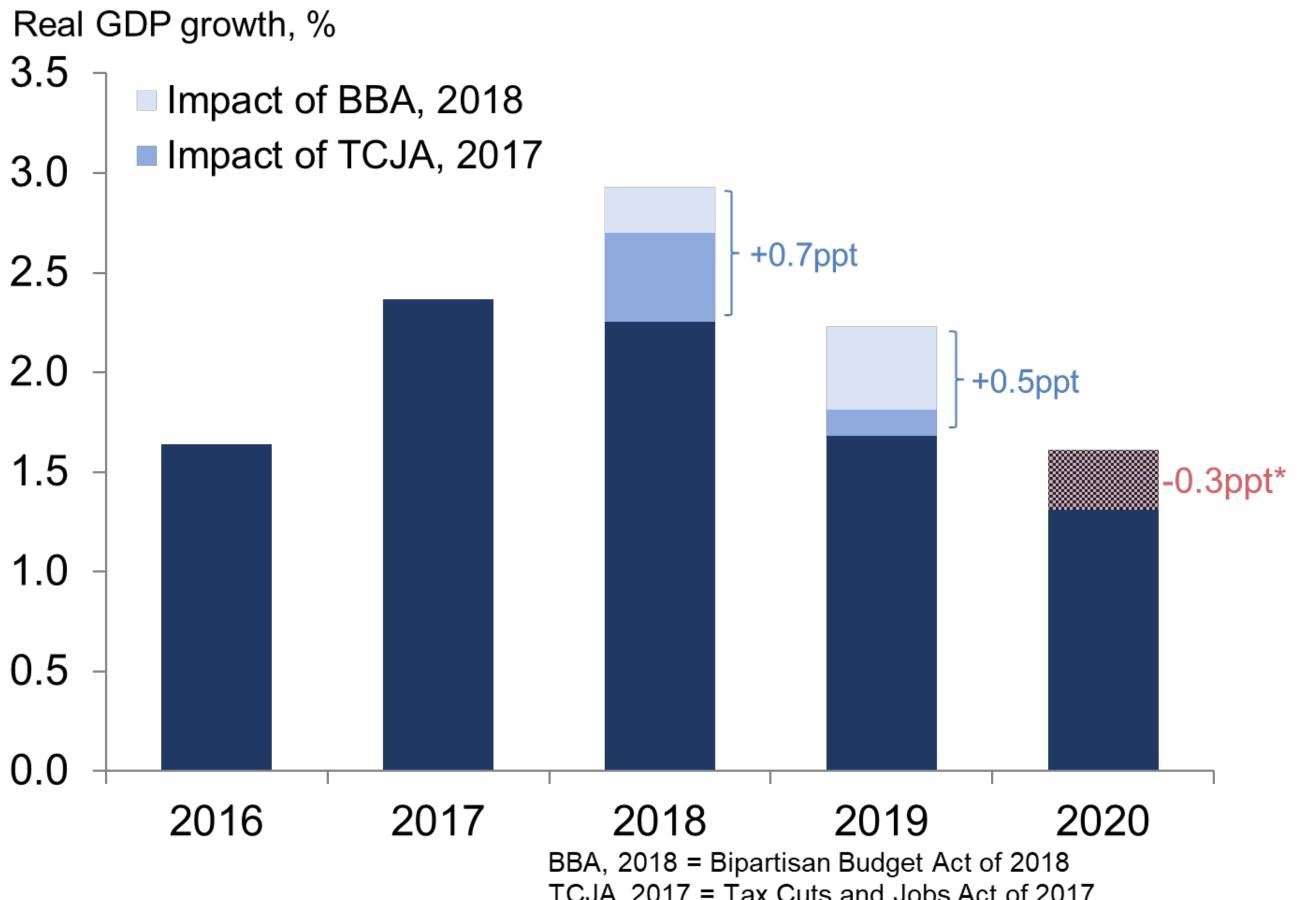
## Trade weighing on sentiment

#### **US: Consumer Sentiment**



## Fiscal stimulus fading

### US: Contribution of fiscal stimulus to growth

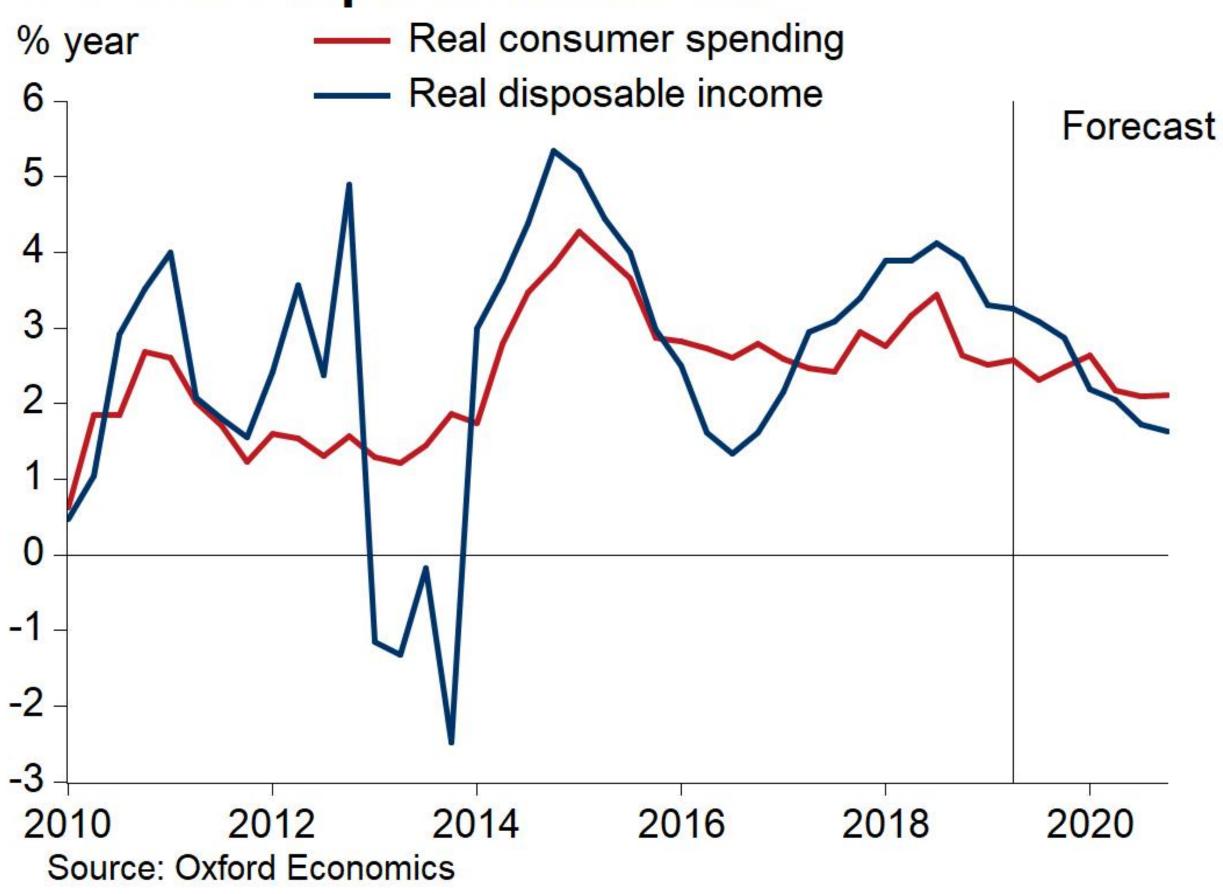


Source: Oxford Economics

TCJA, 2017 = Tax Cuts and Jobs Act of 2017
\*Fiscal cliff <u>risk</u> if Congress hadn't extended BBA spending

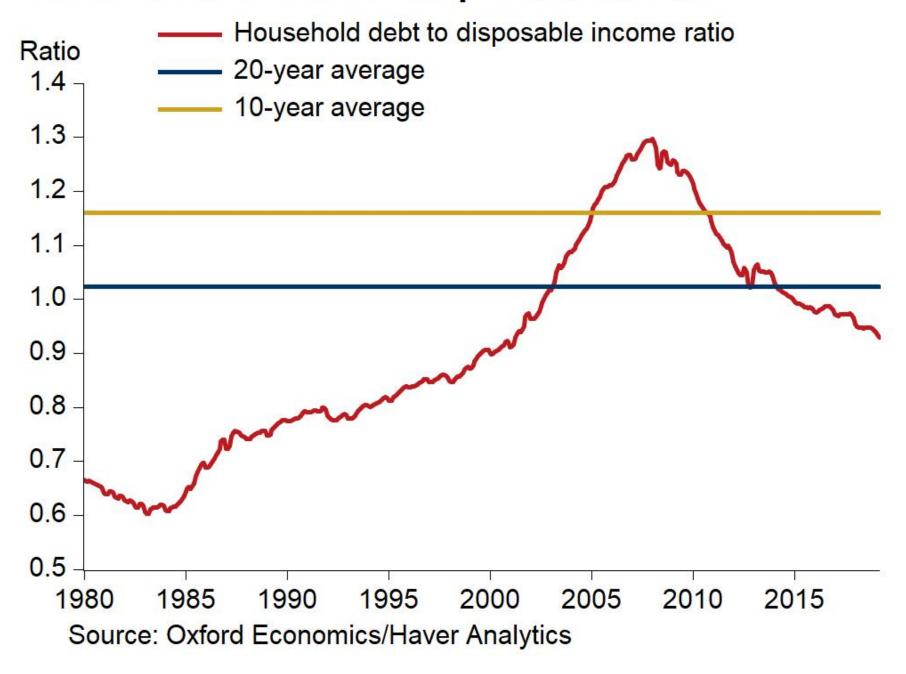
## Slower income growth means slower spending

### **US:** Consumption and income

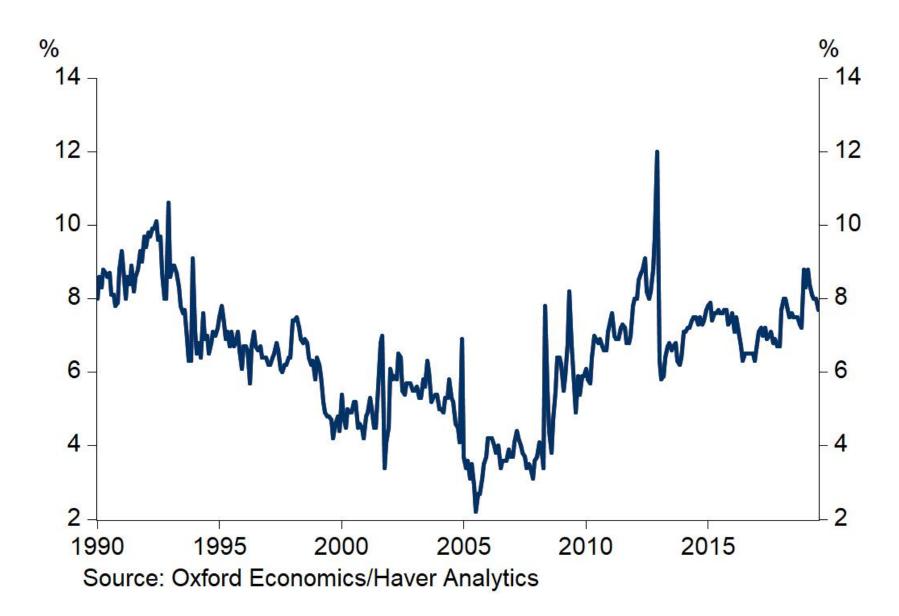


## Consumption buffers

#### US: Household debt to disposable income

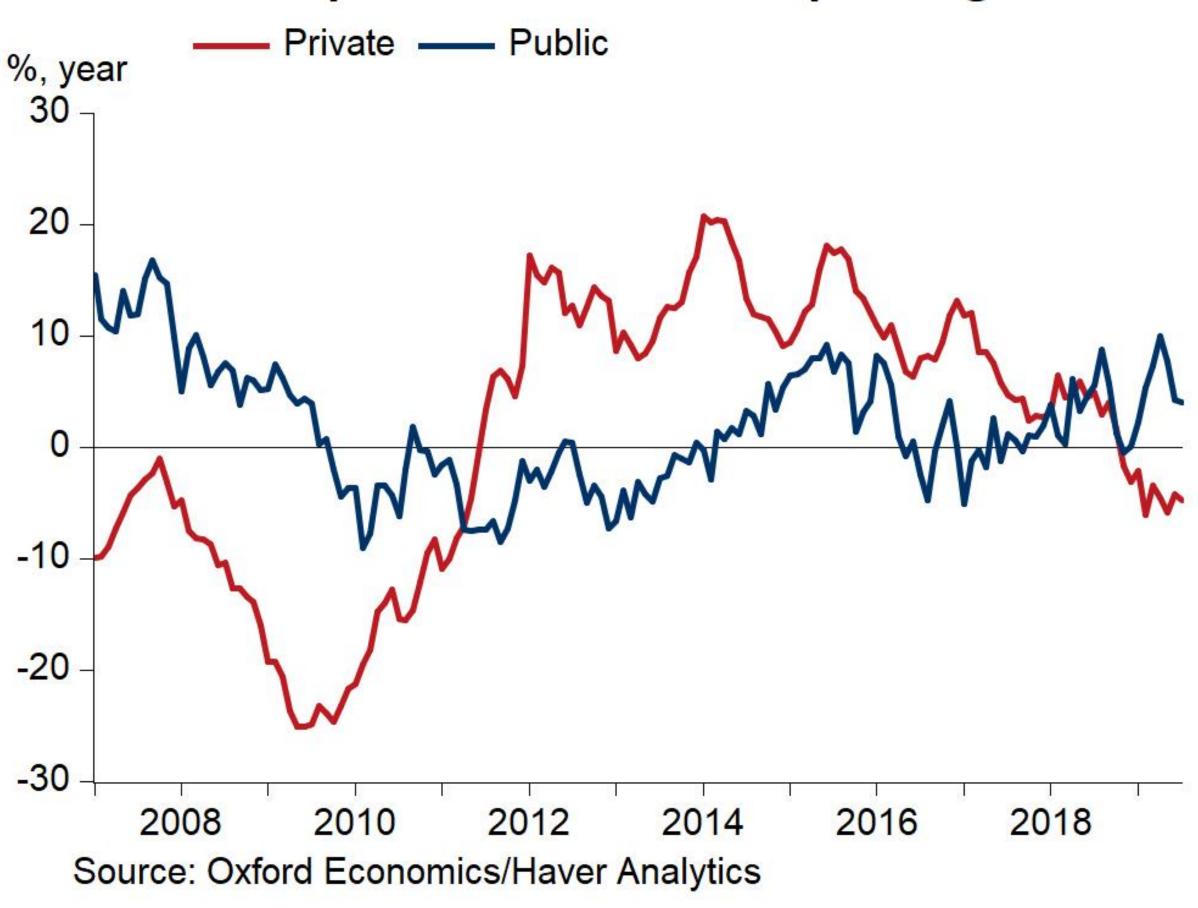


#### **US: Personal savings rate**



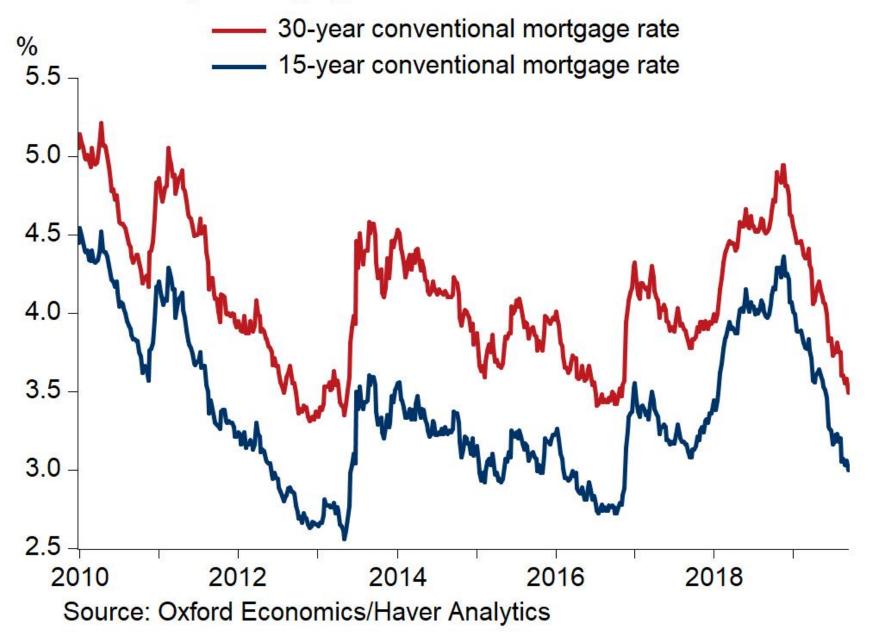
## Public construction offsetting private

### **US: Private & public construction spending**

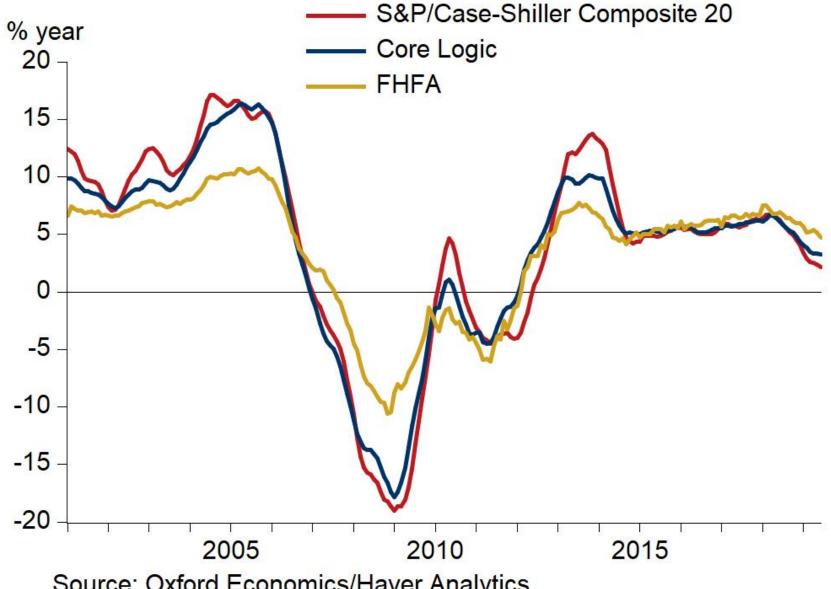


## Low mortgage rates and slow home price inflation

#### **US: Weekly mortgage rates**

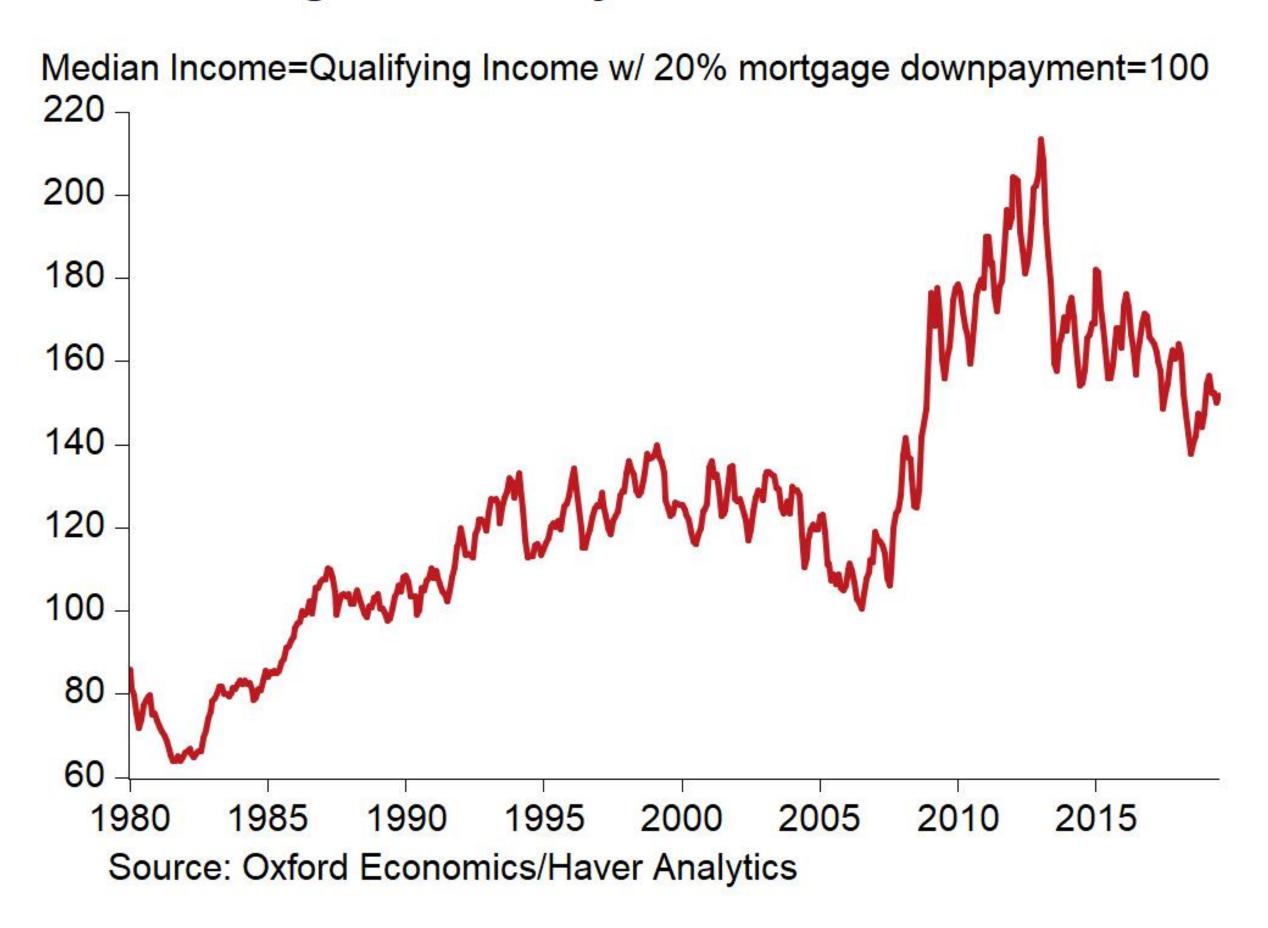


#### **US:** House price inflation



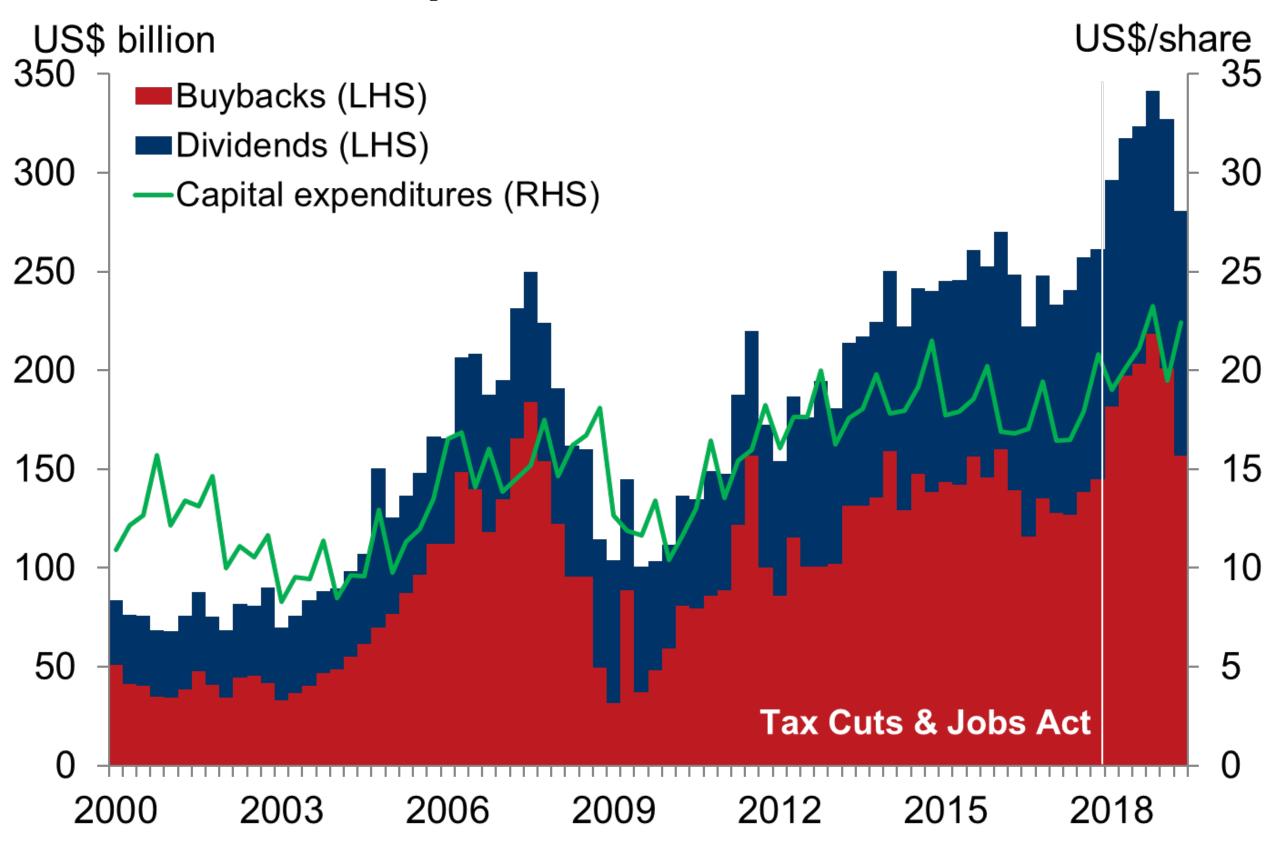
## Affordability rebounding

### **US: Housing affordability**



## Where the tax cuts really went...

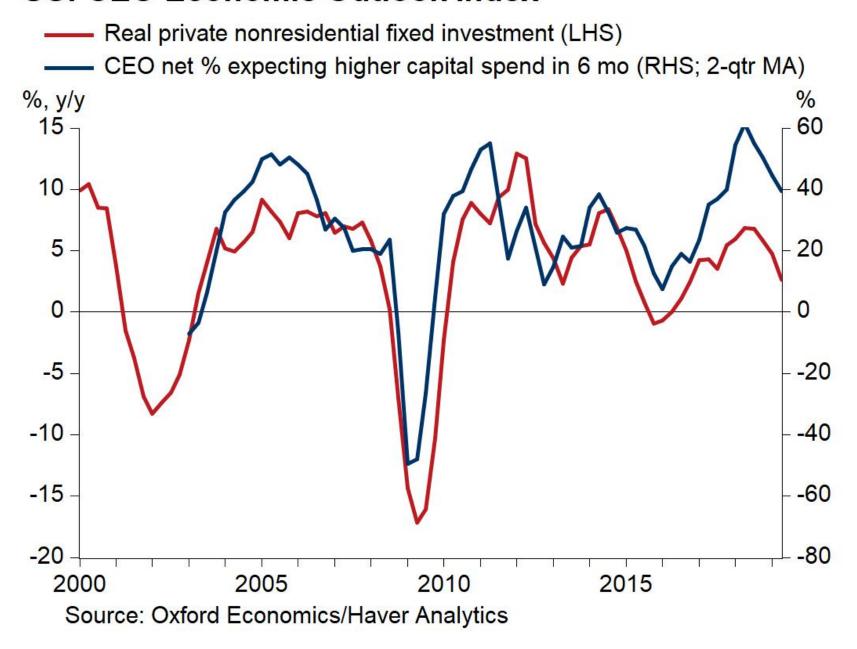




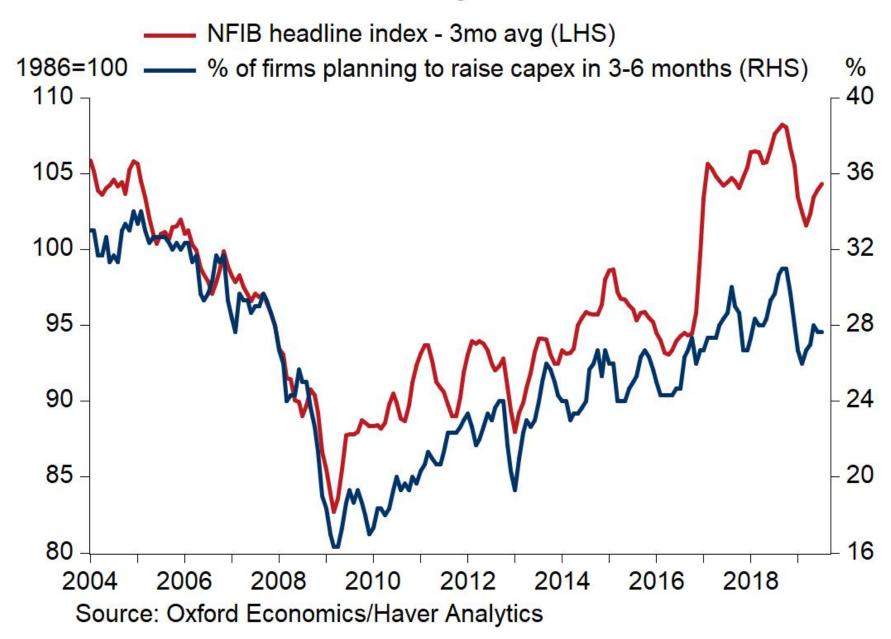
Source : Oxford Economics/Bloomberg

### Soft business confidence

#### **US: CEO Economic Outlook Index**

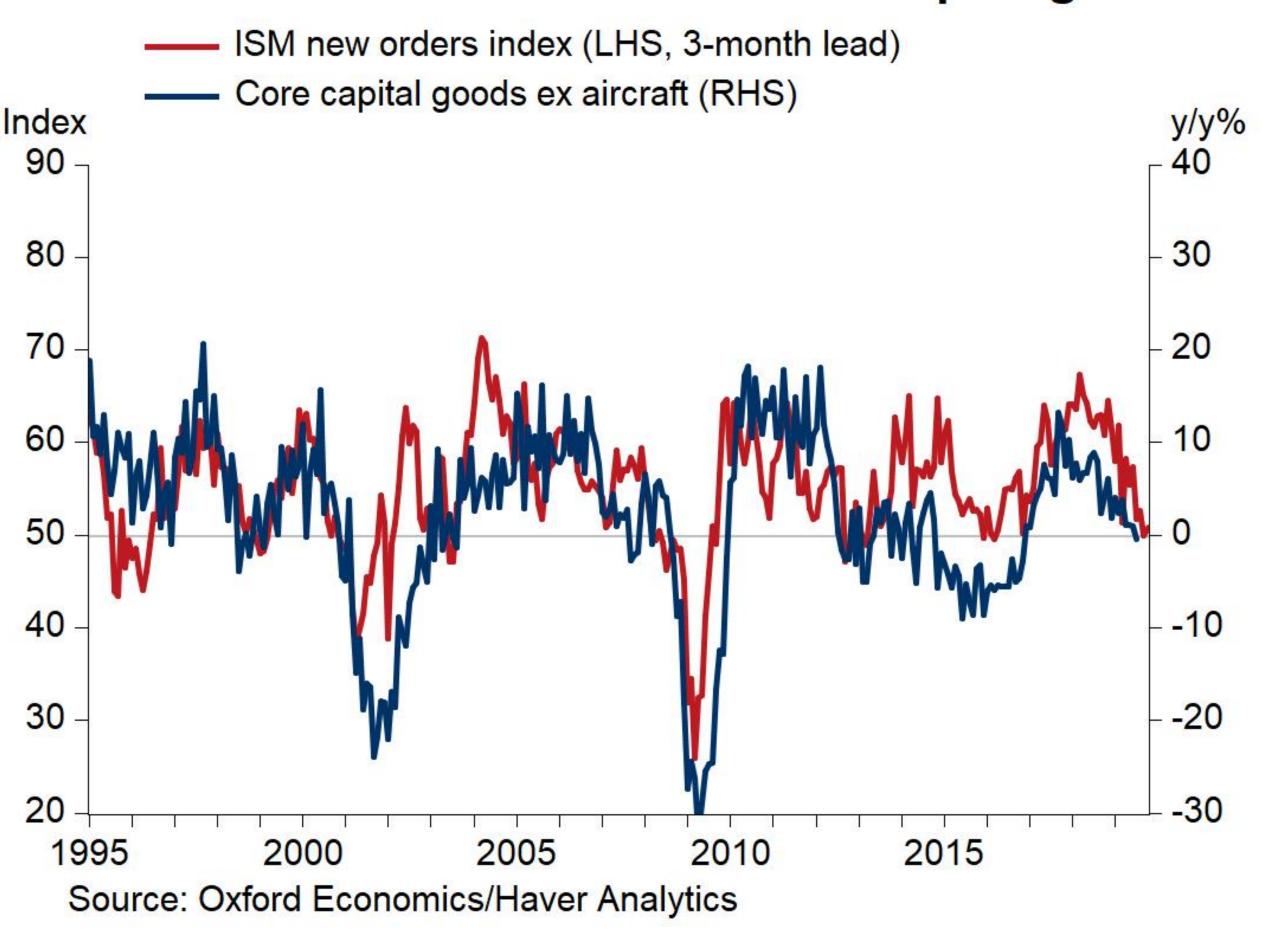


#### **US: NFIB Small Business Optimism Index**



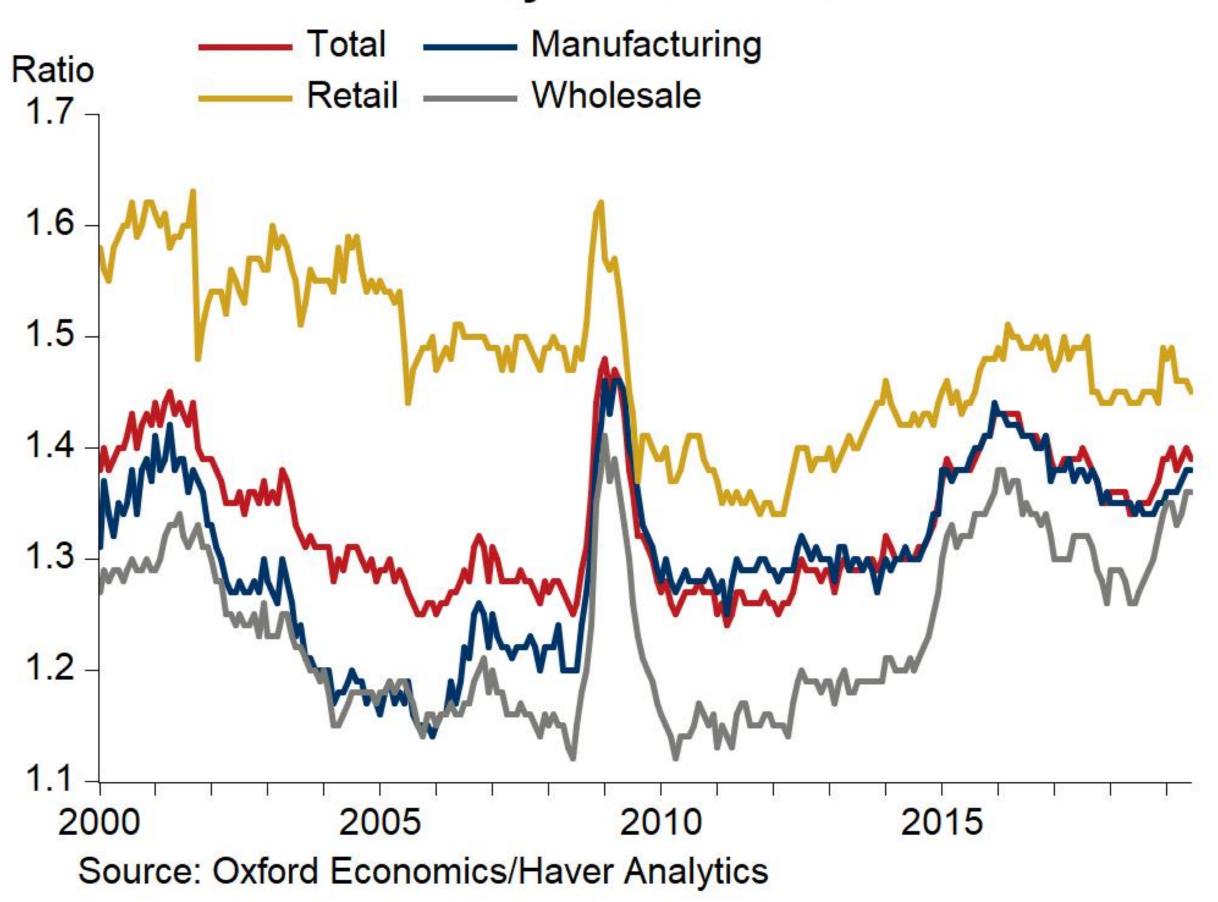
## Manufacturing activity stalled

### US: ISM new orders lead core orders capital gds orders



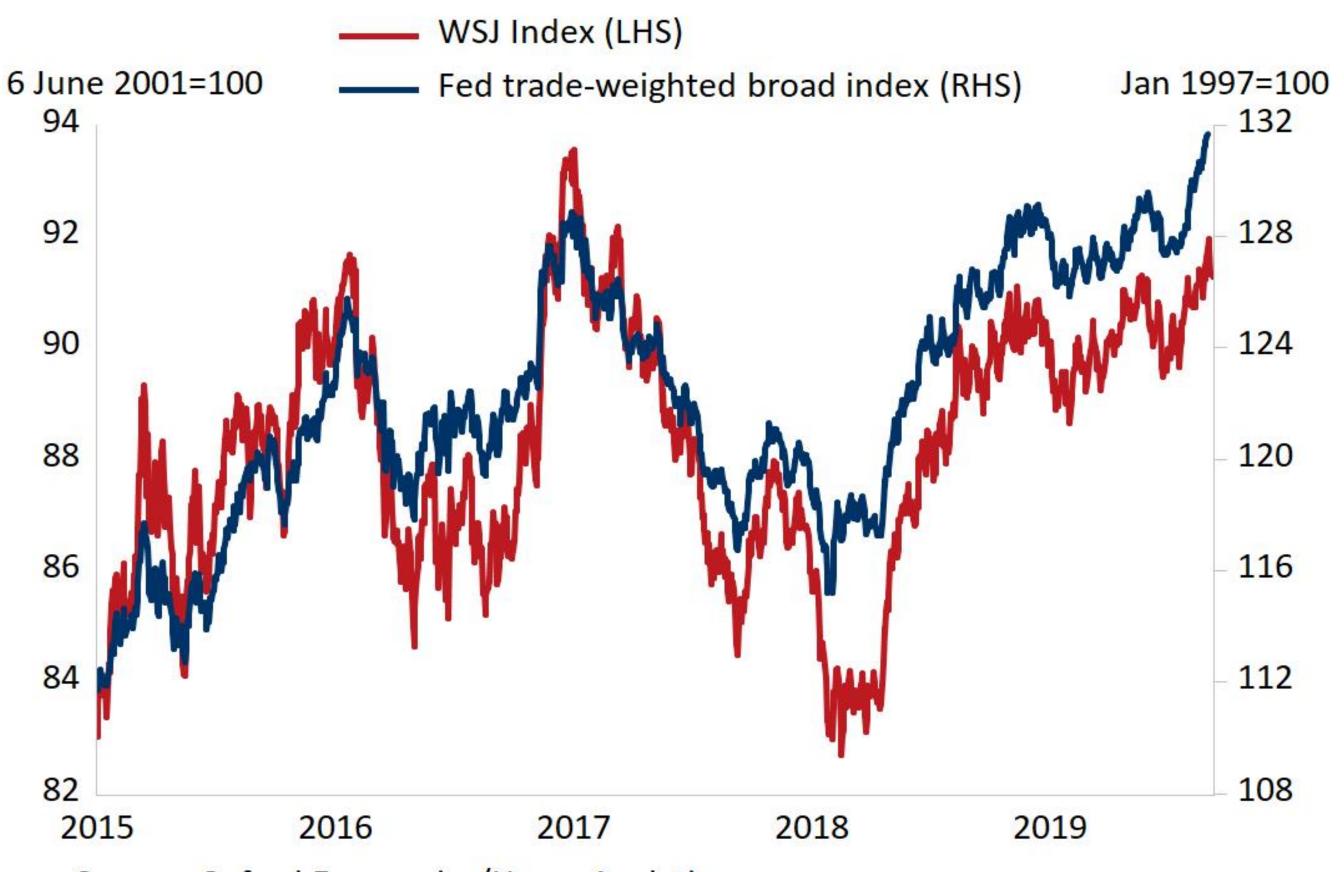
## Inventory overhang

### **US:** Business inventory to sales ratio



## Strong dollar remains a headwind

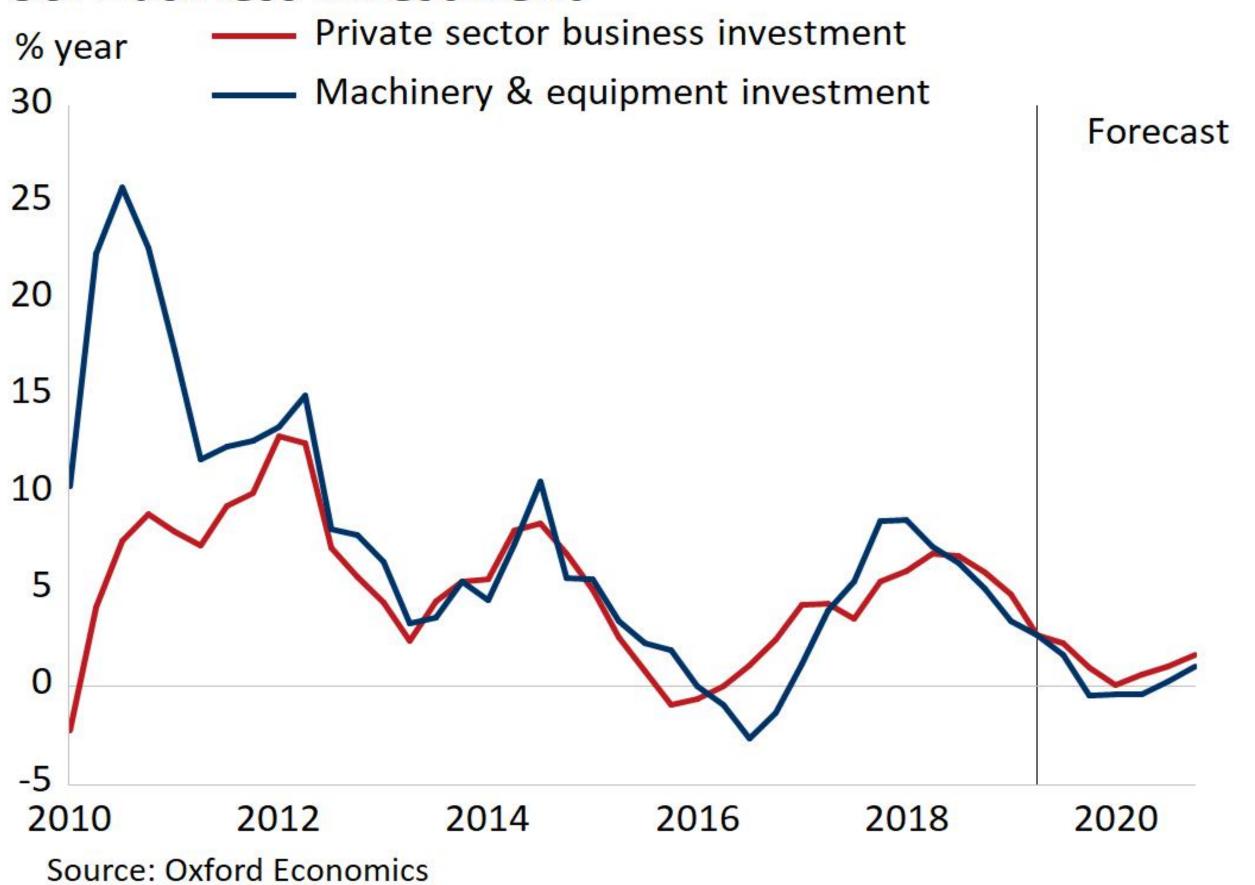
### **US: A stronger US dollar**



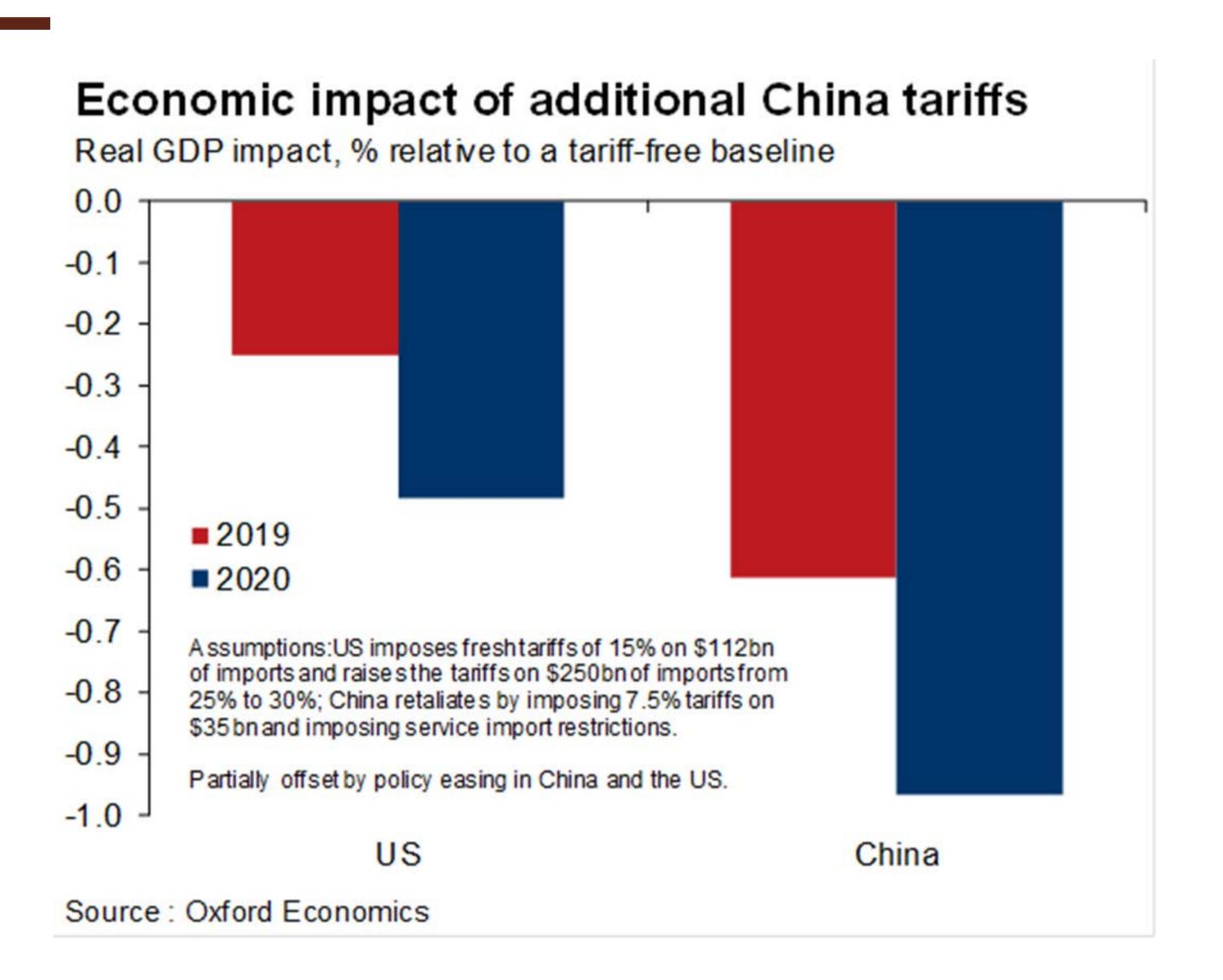
Source: Oxford Economics/Haver Analytics

### Business investment to slow

#### **US:** Business investment



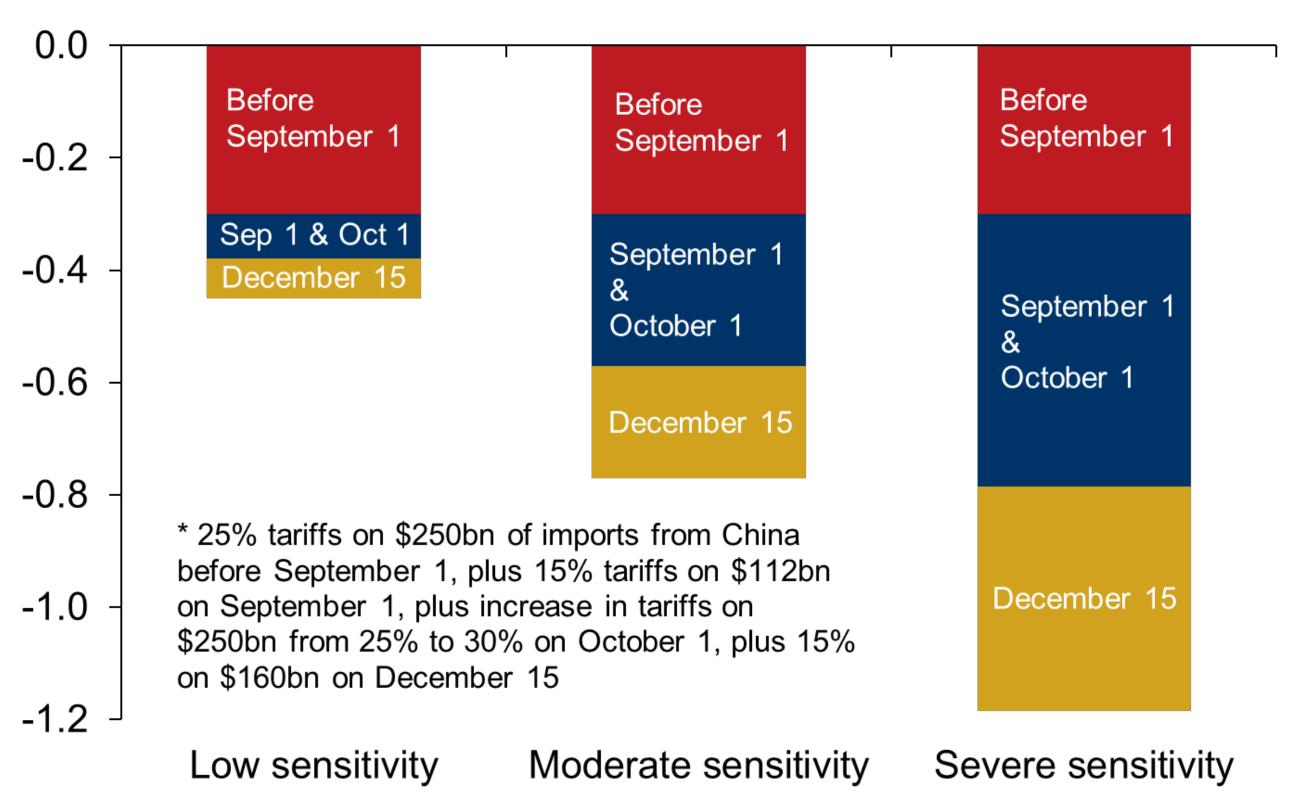
### Tariff Impacts



### **Tariff Scenarios**

### **US: Real GDP drag from China tariffs\***

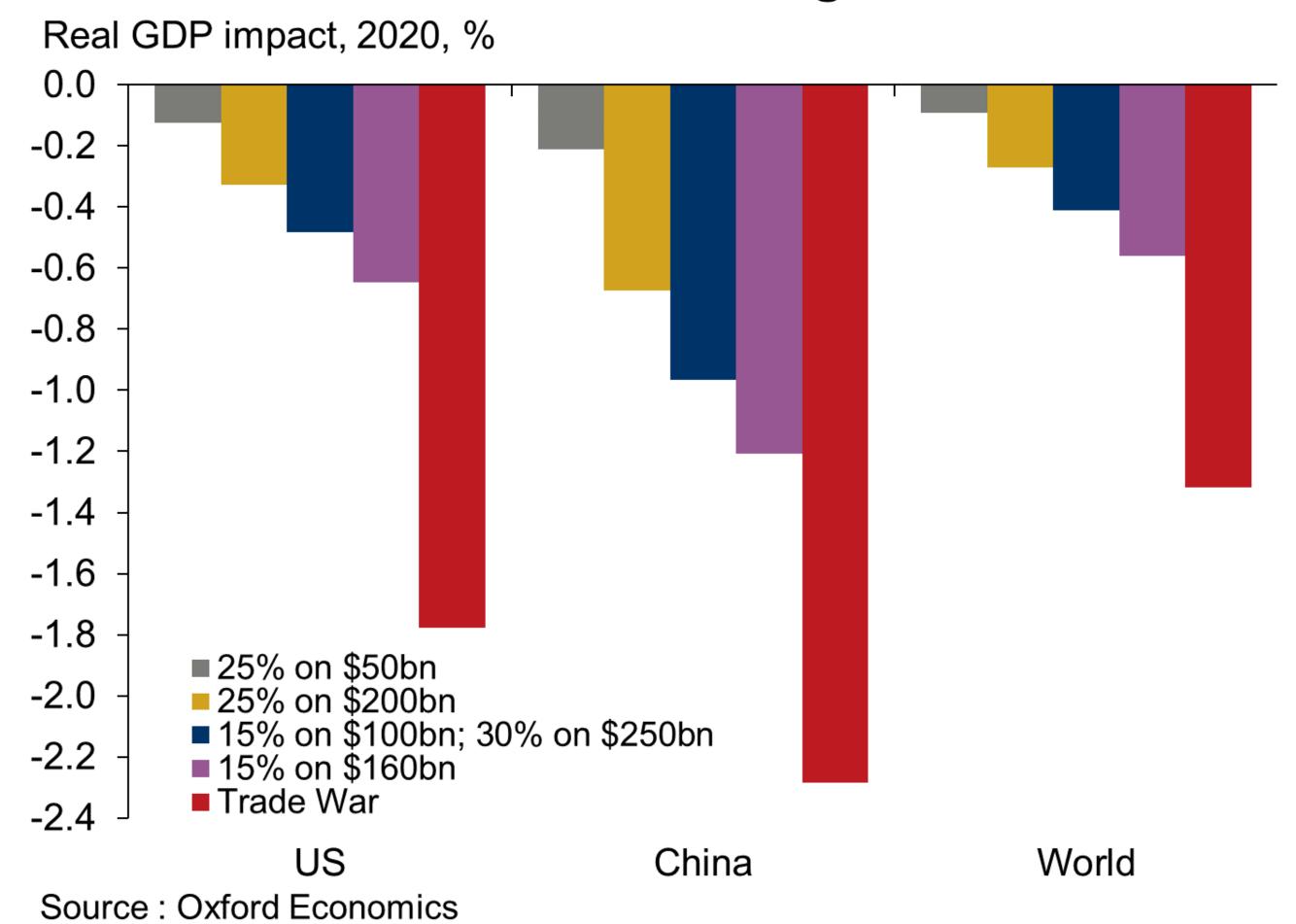
% GDP in 2020 relative to no tariffs baseline



Source : Oxford Economics

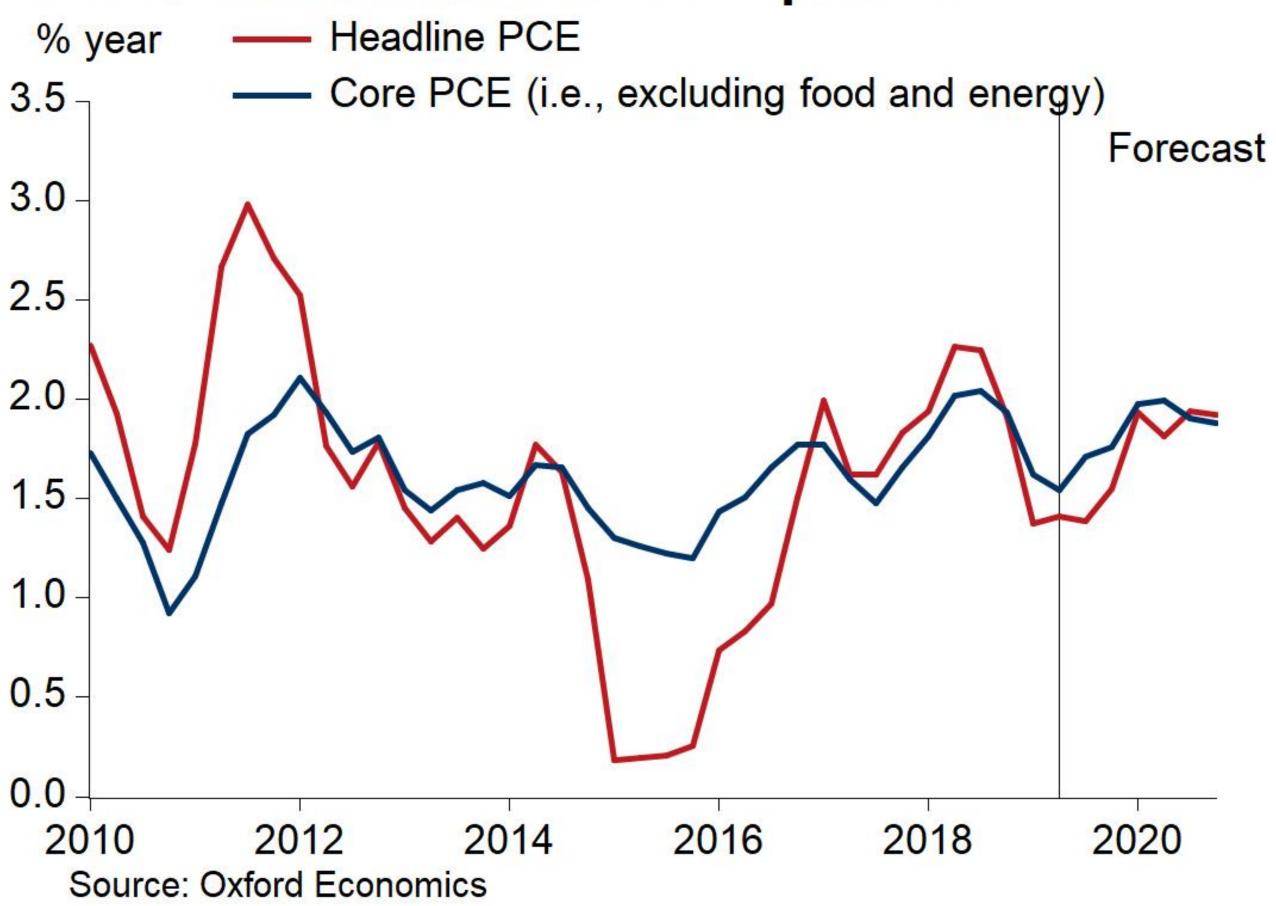
### Trade War

### From bilateral tariffs to all-out global trade war



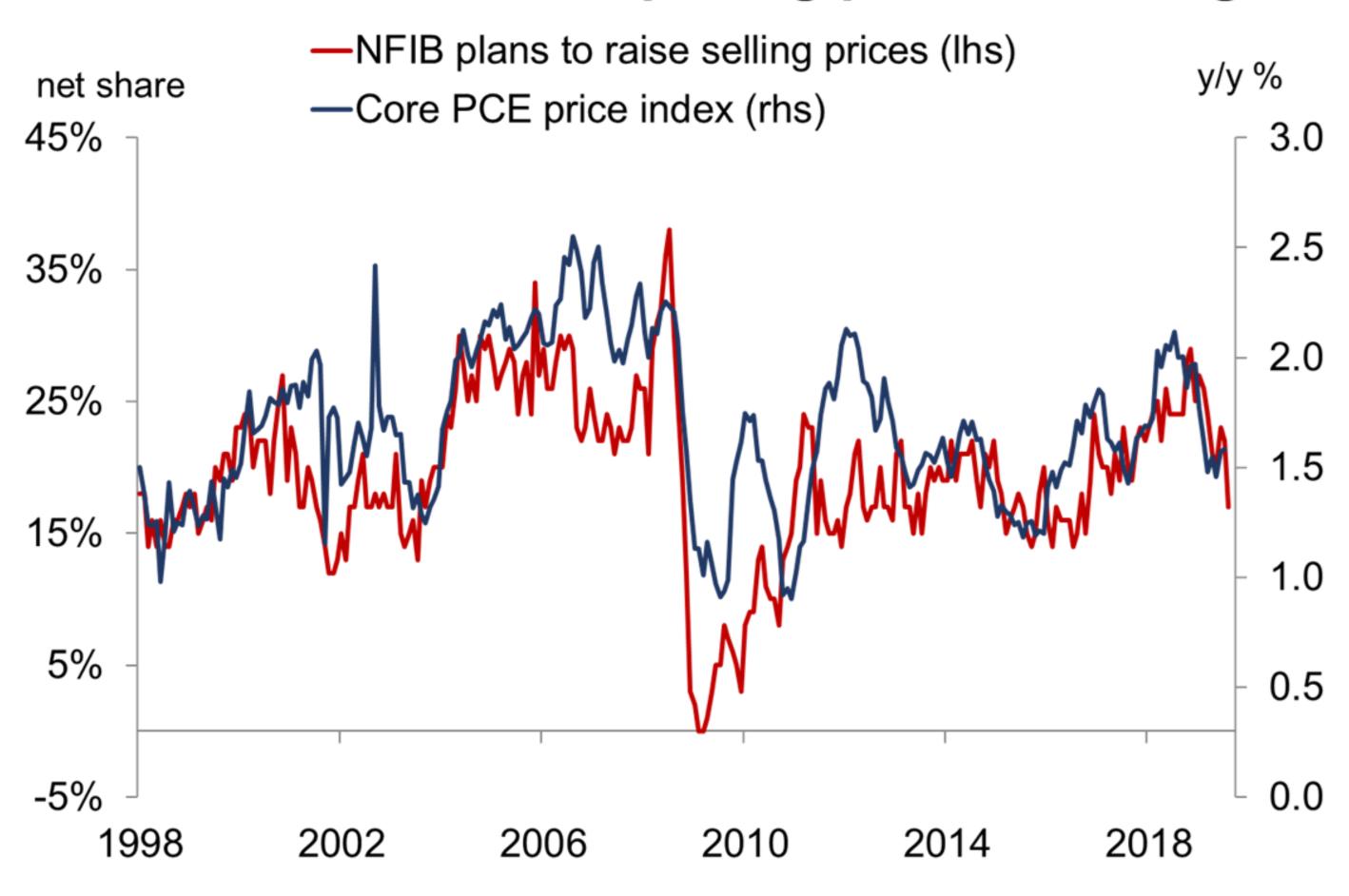
### Persistent low inflation

### **US:** Headline and core PCE prices



## Limited corporate pricing power

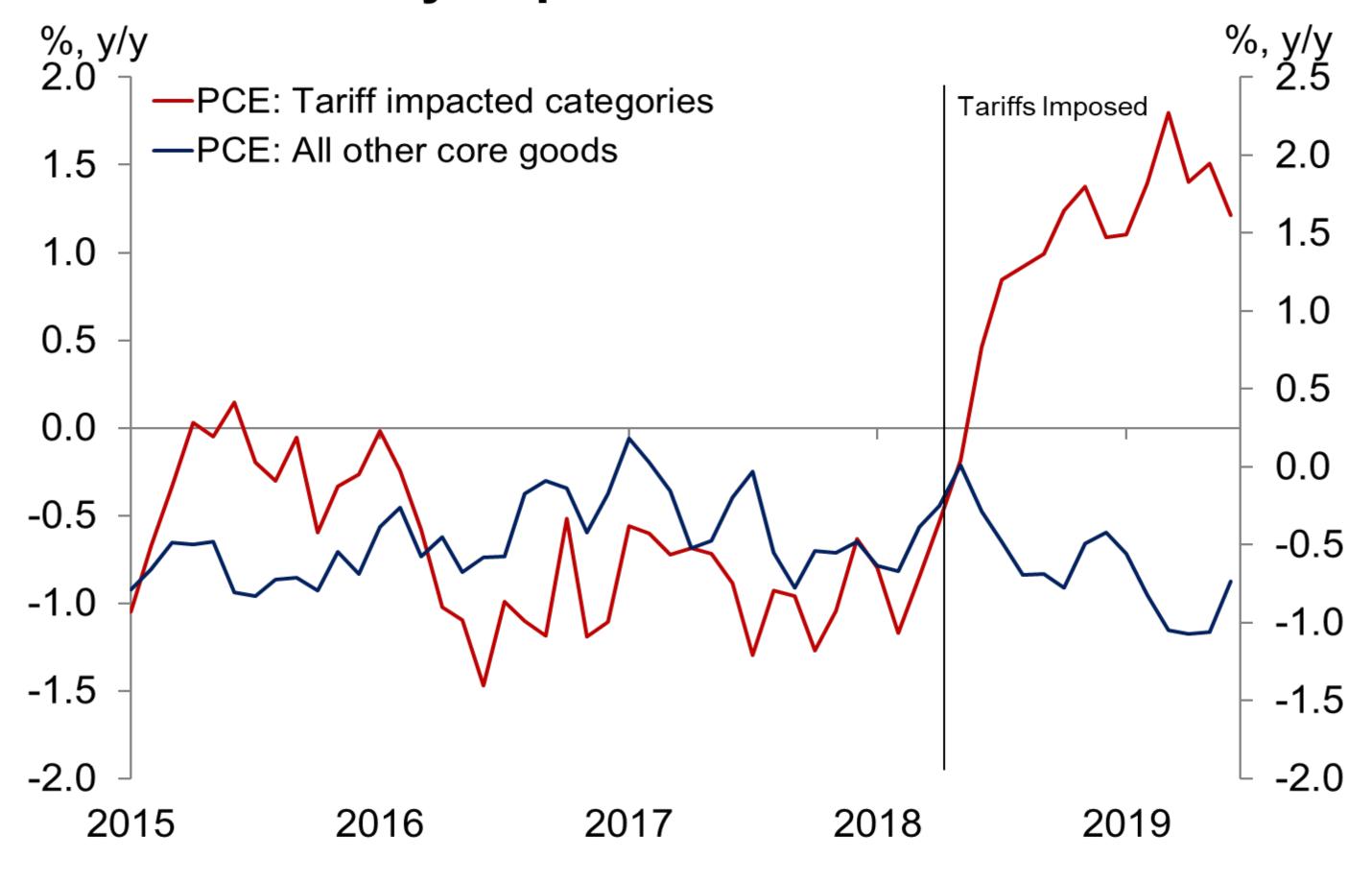
### US: Small businesses' pricing power is fading



Source: Oxford Economics/Haver Analytics

### Tariffs will drive inflation

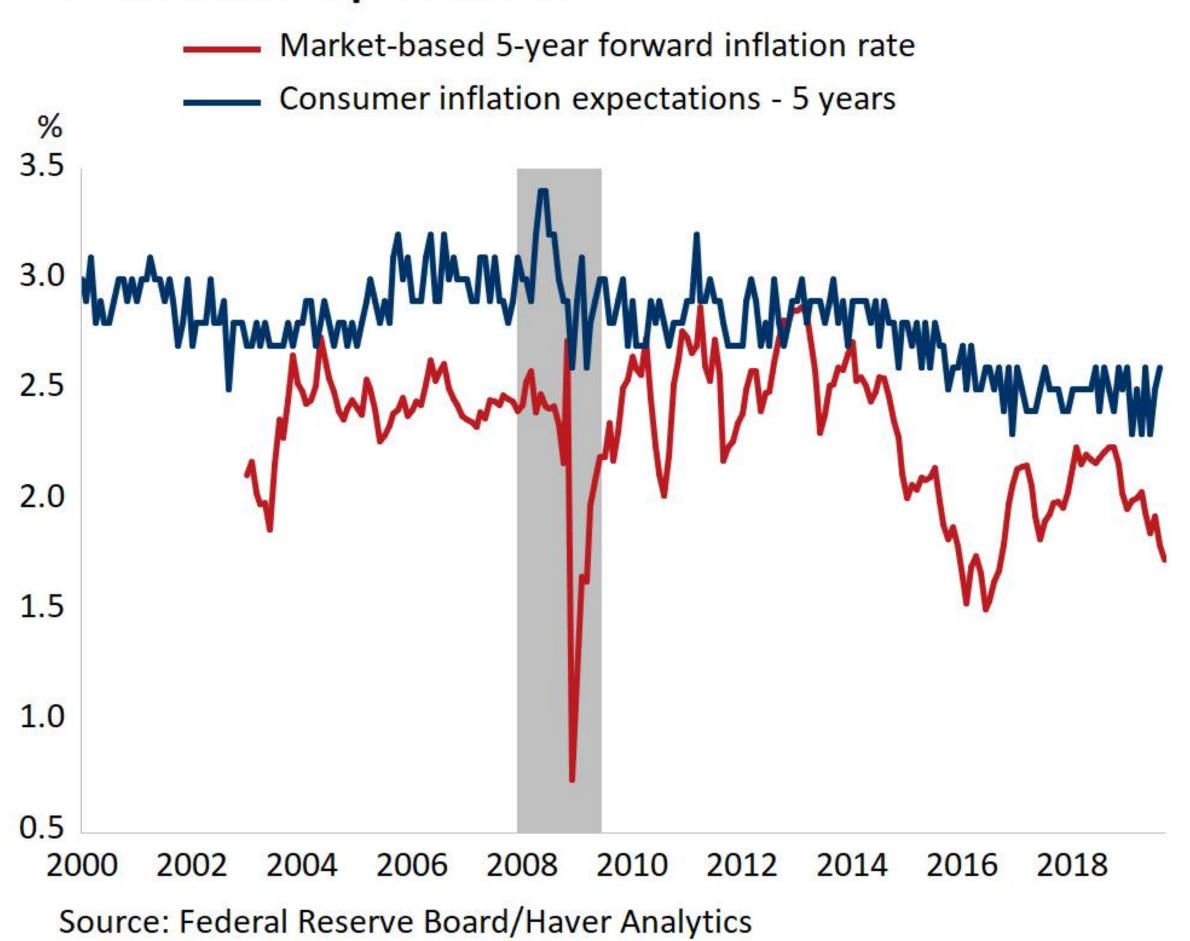
### **US: Inflationary Impact of Tariffs**



Source: Oxford Economics/Haver Analytics

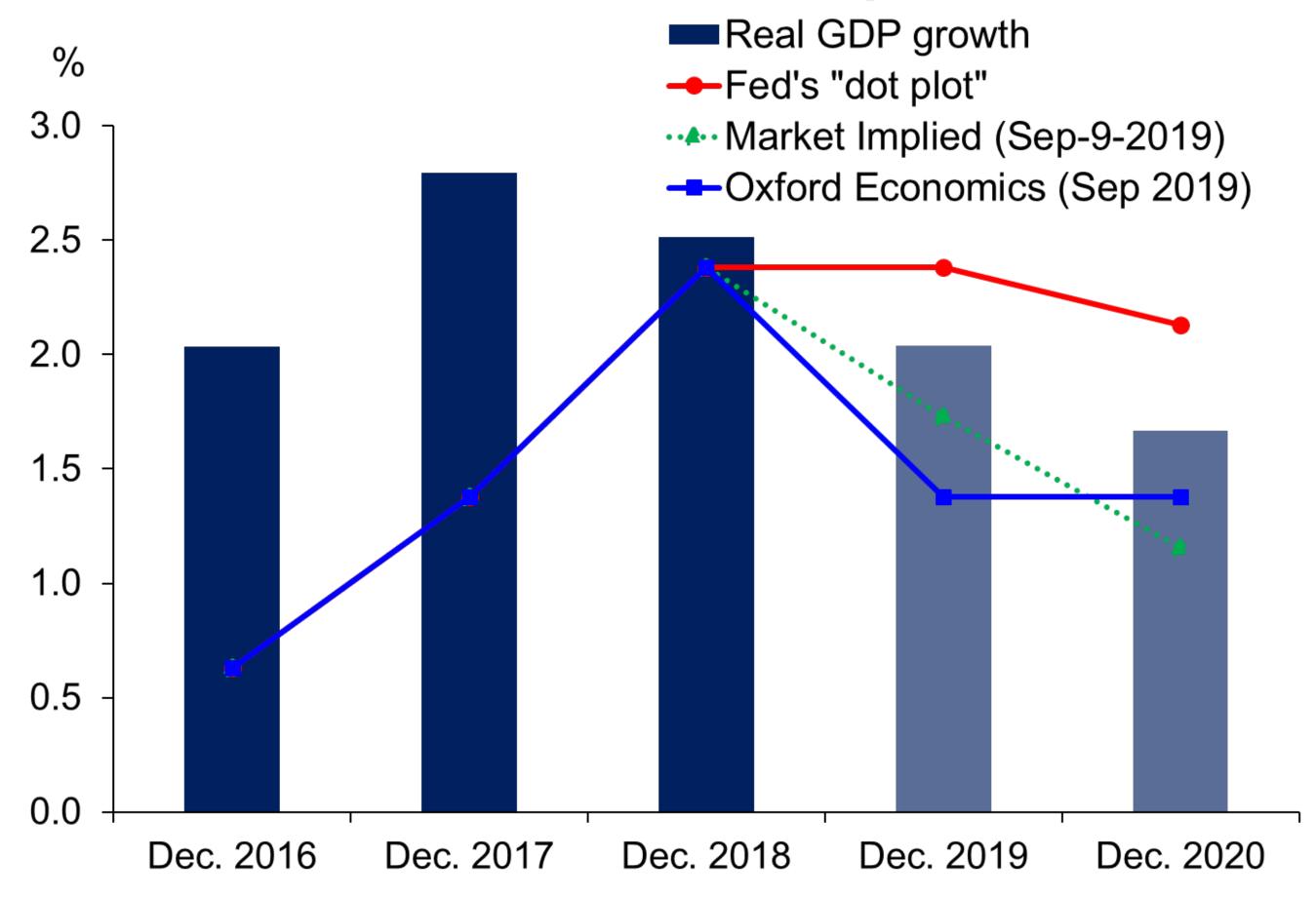
### Inflation expectations continue to fall

#### **US: Inflation expectations**



#### Opens the door for four cuts in 2019

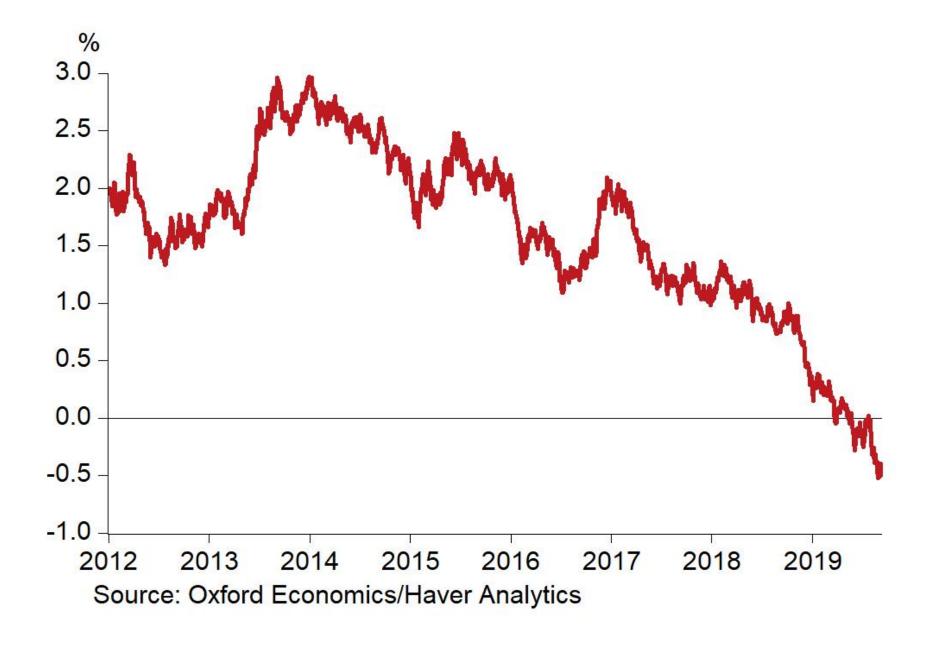
#### **US: Federal funds rate & GDP expectations**



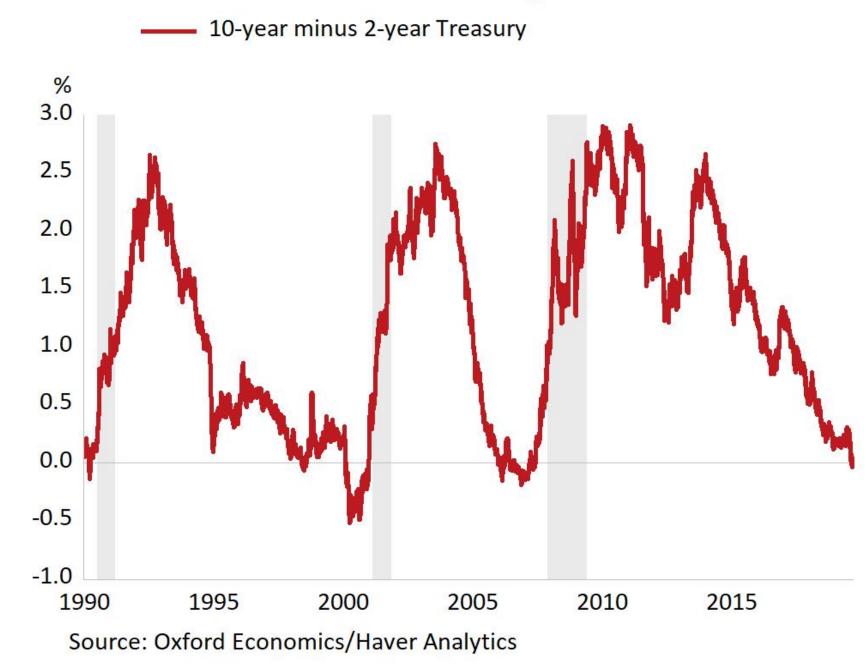
Source: Oxford Economics/Federal Reserve

## Treasury yield curve inverts further

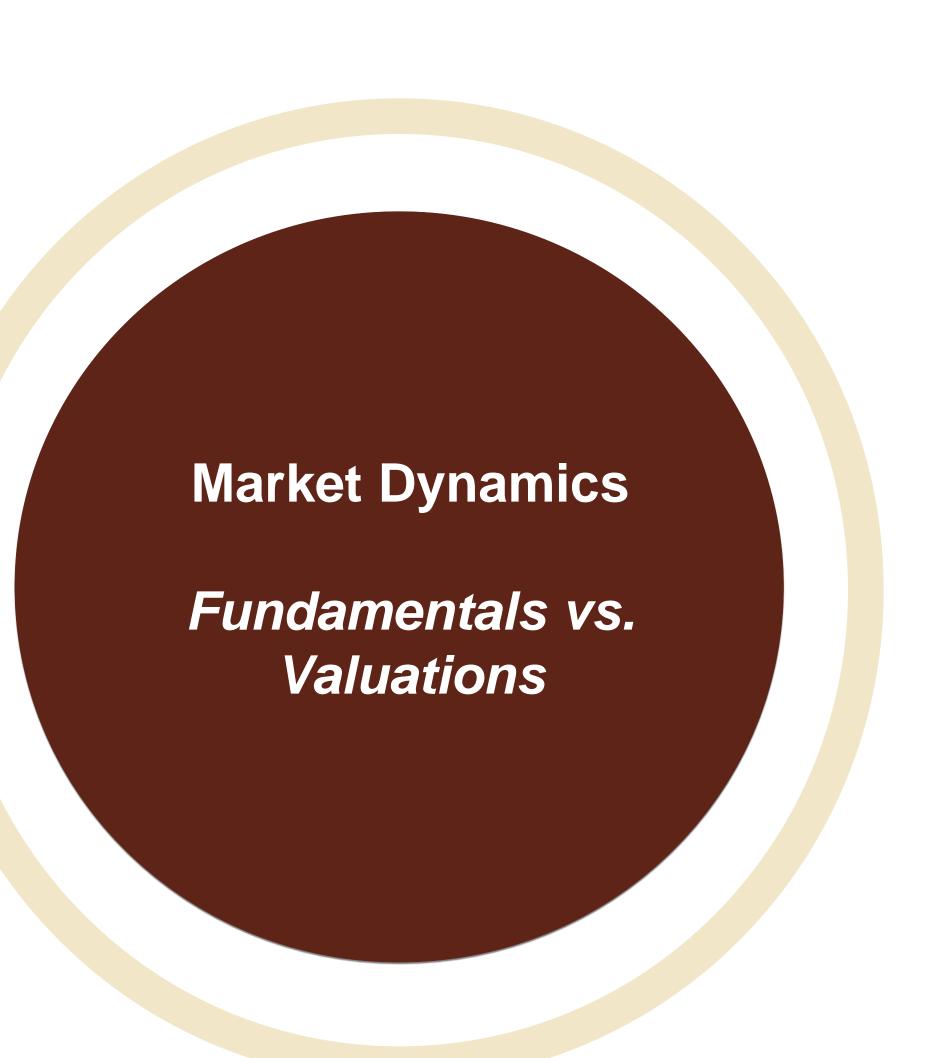
#### **US: Treasury 10year - 3month spread**



#### US: Yield curve has been flattening

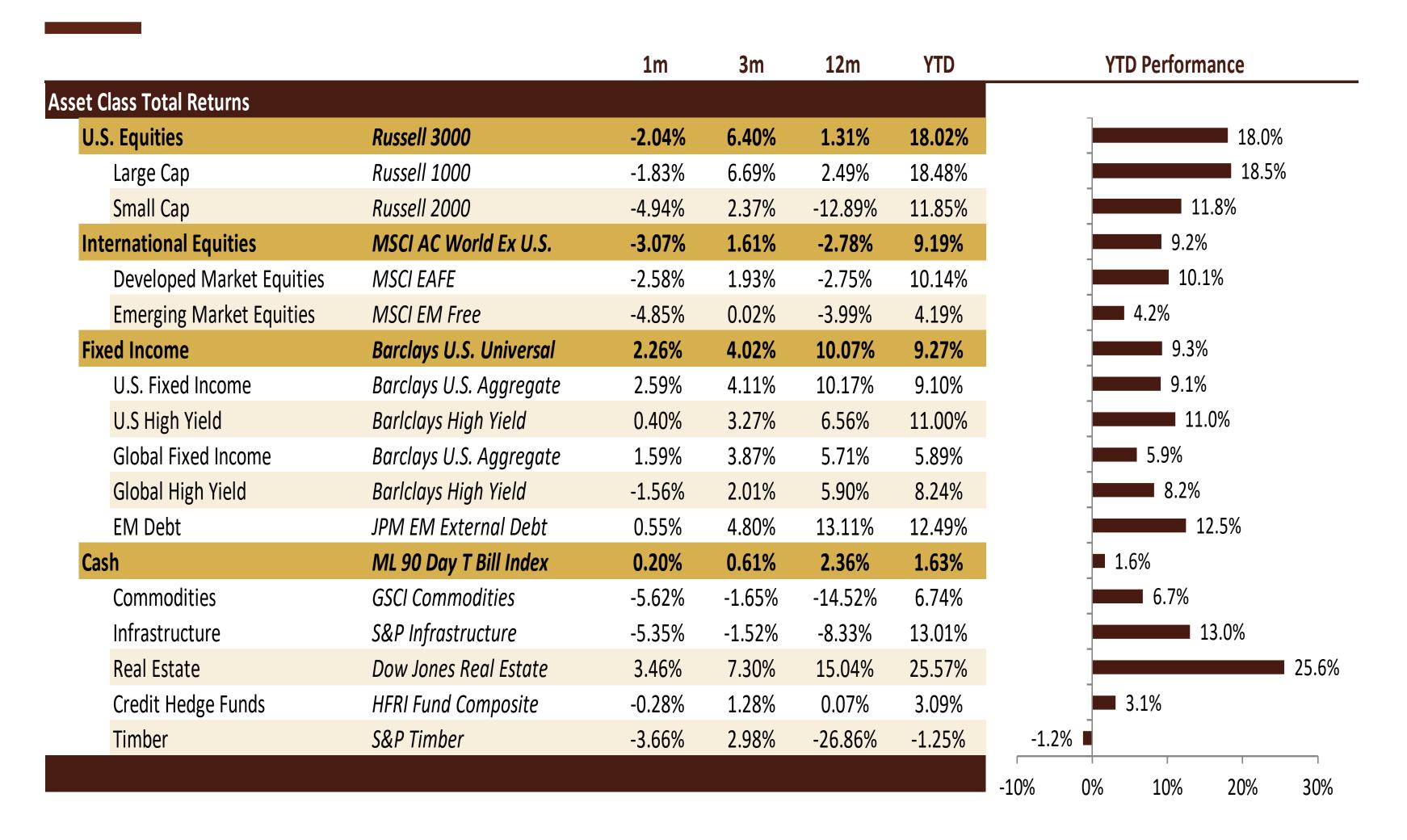




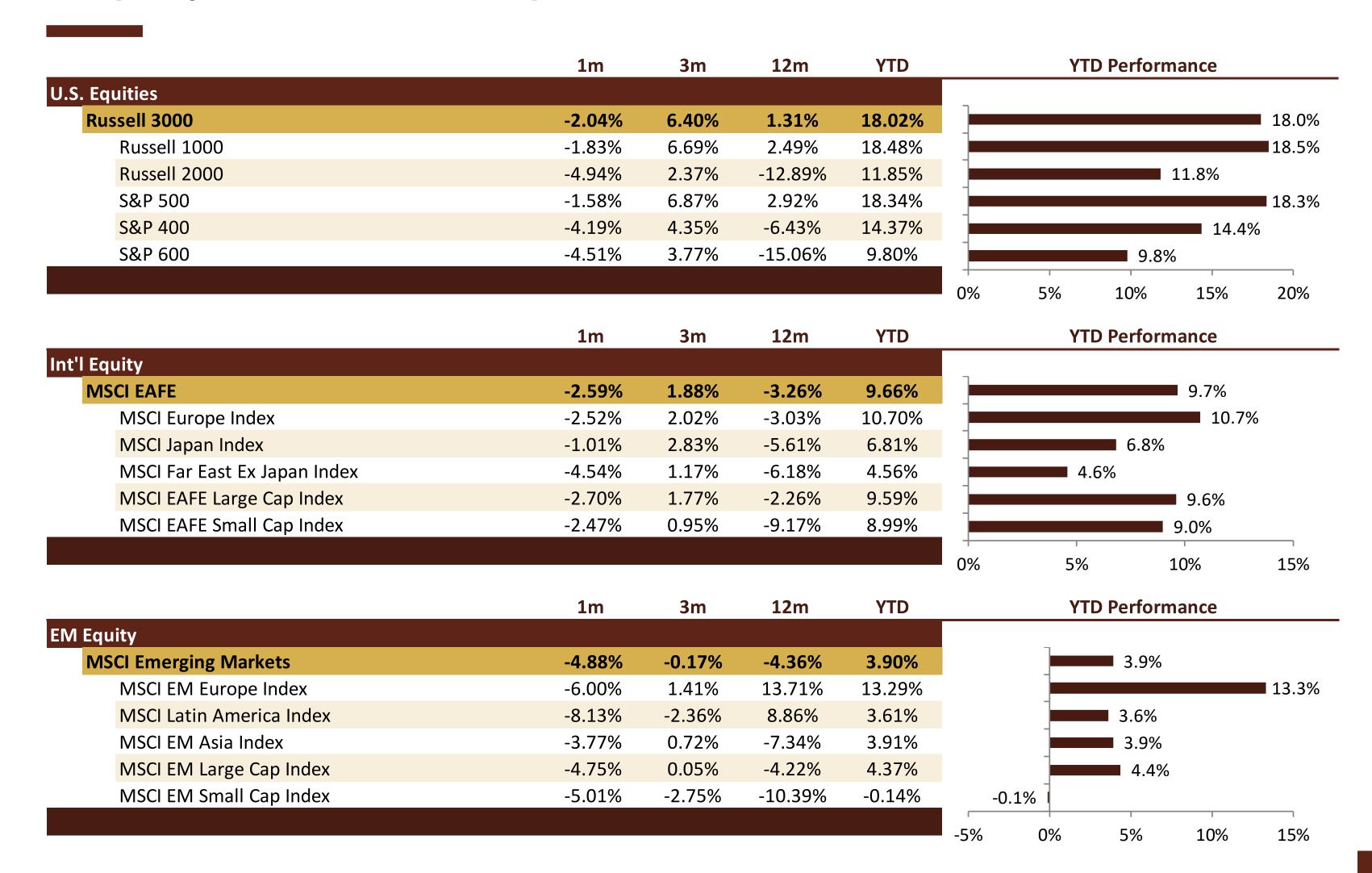


**Exhibit A: Page 41** 

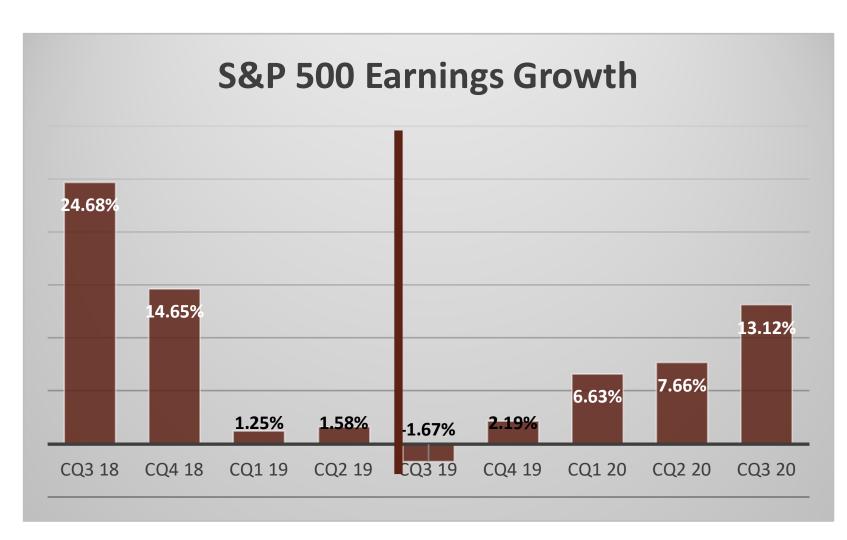
#### Market Snapshot

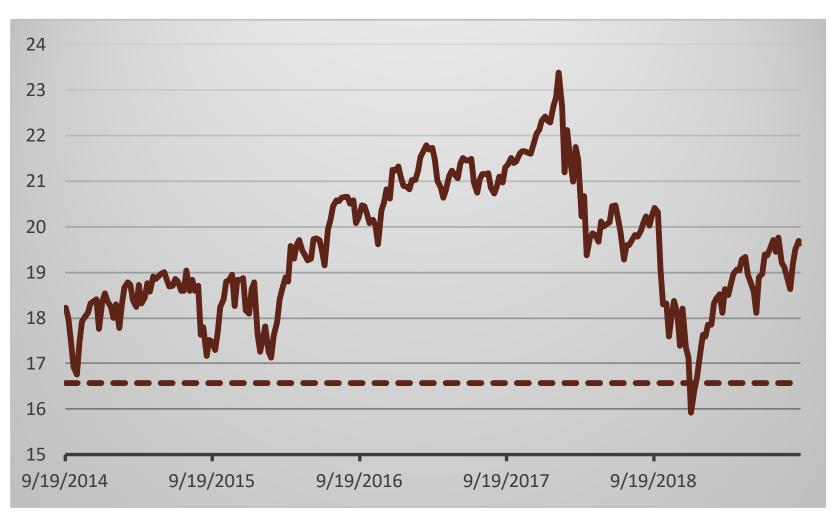


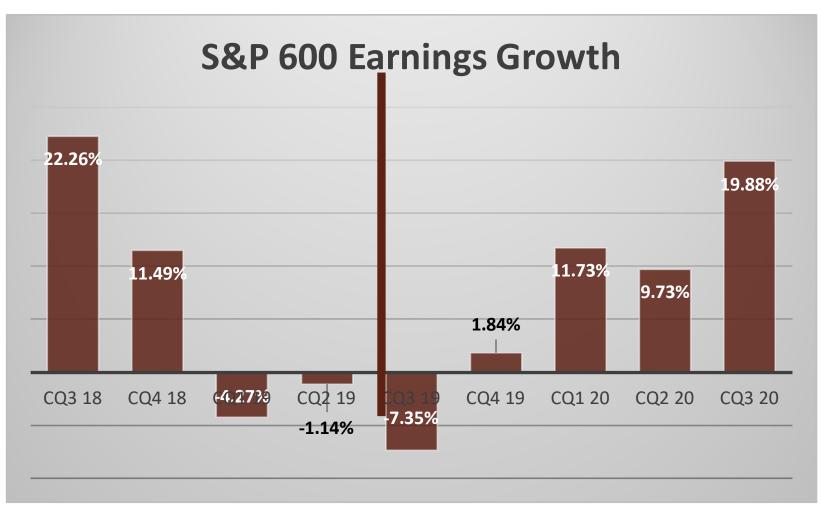
### **Equity Market Snapshot**

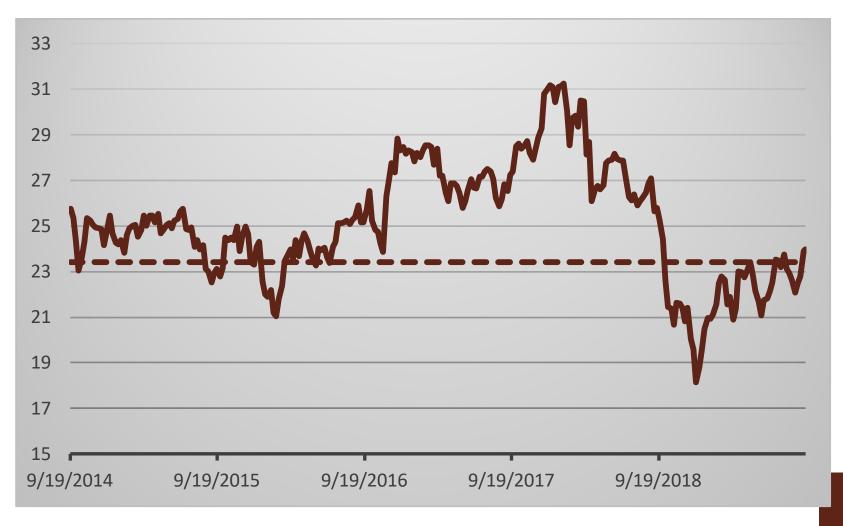


# U.S. Equity

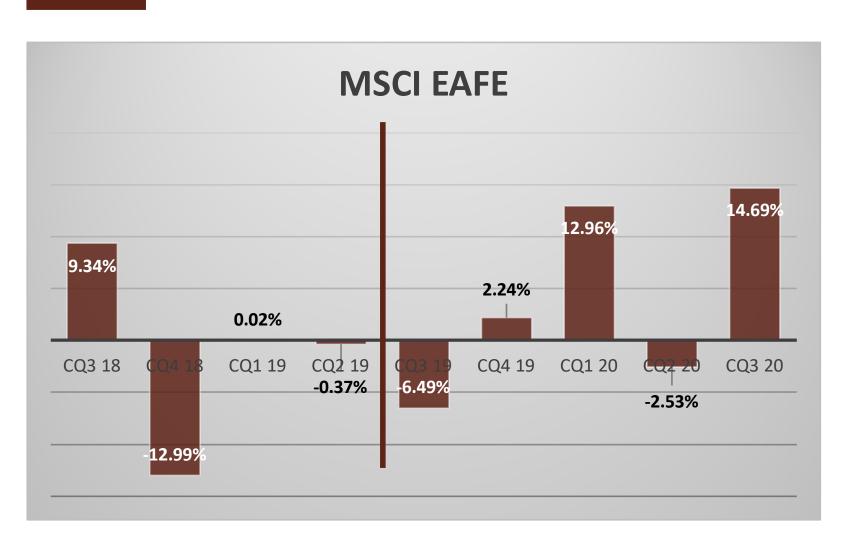




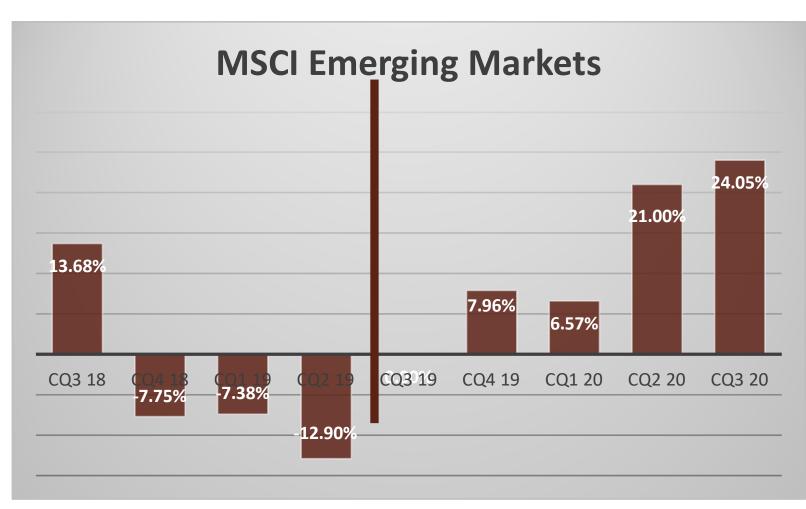


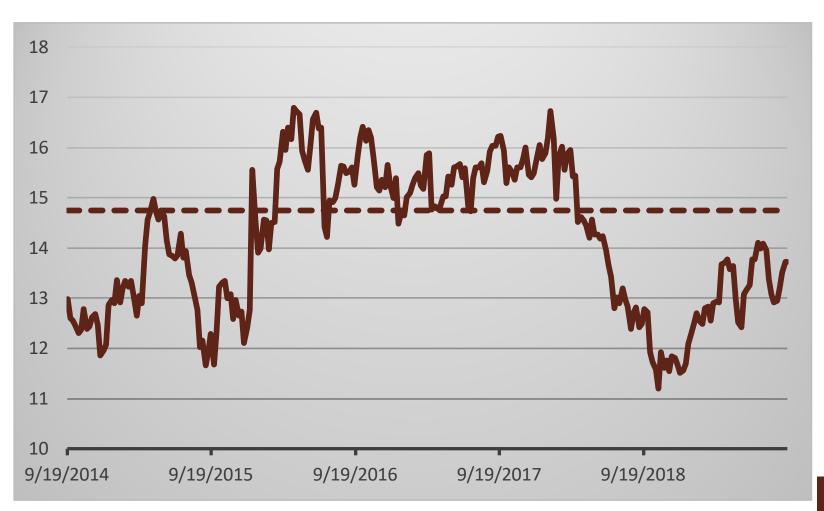


# International Equity

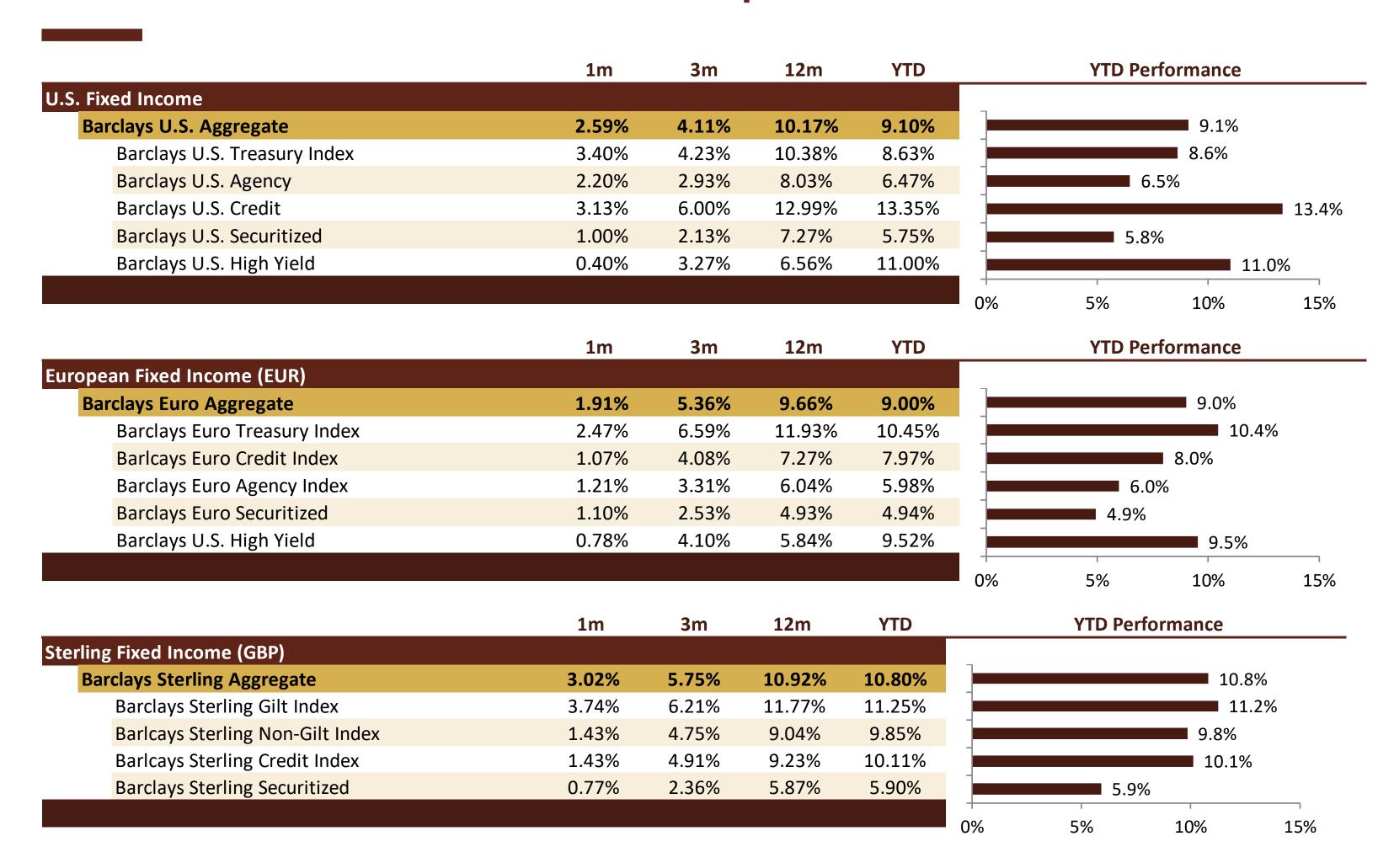




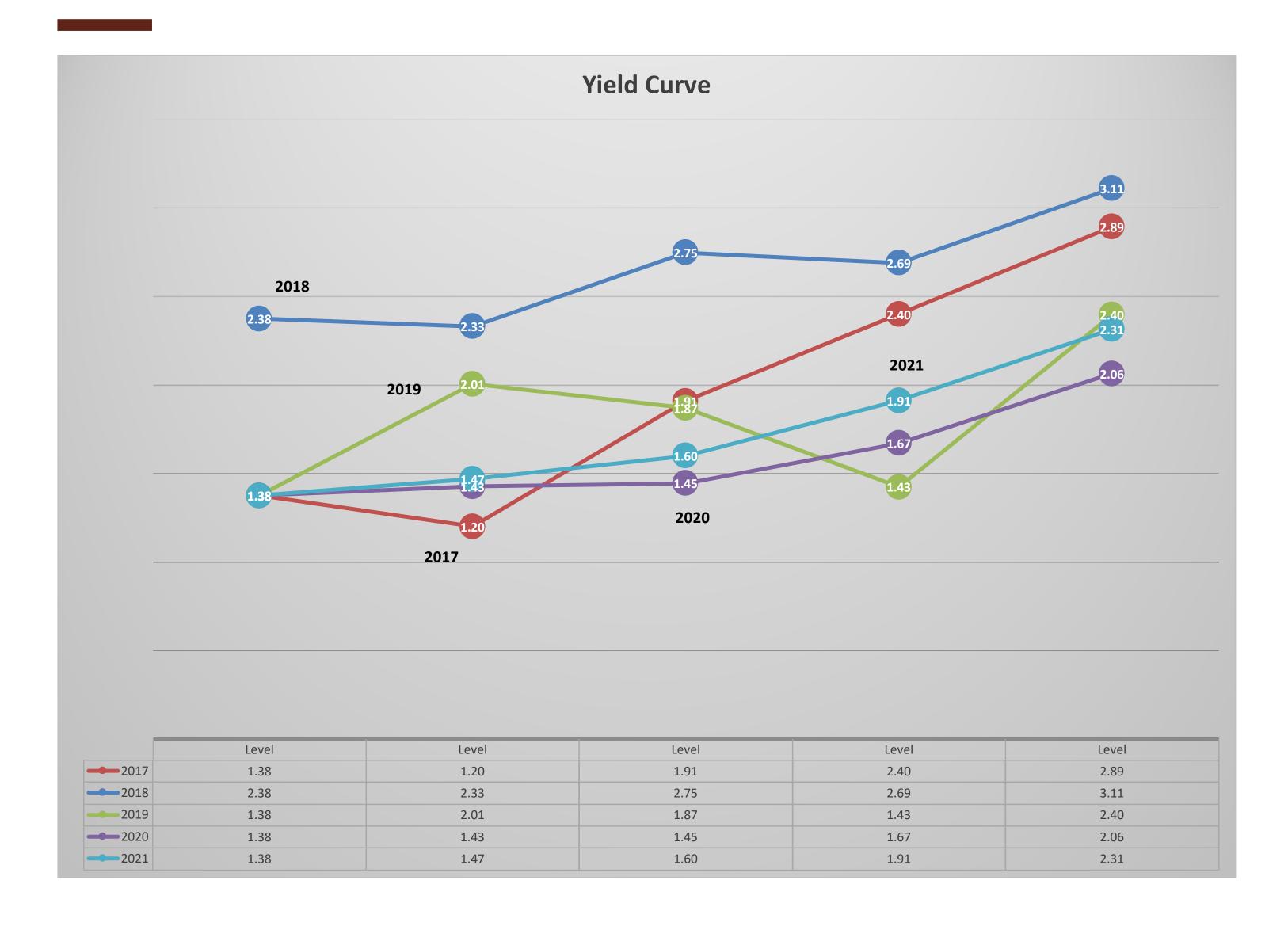




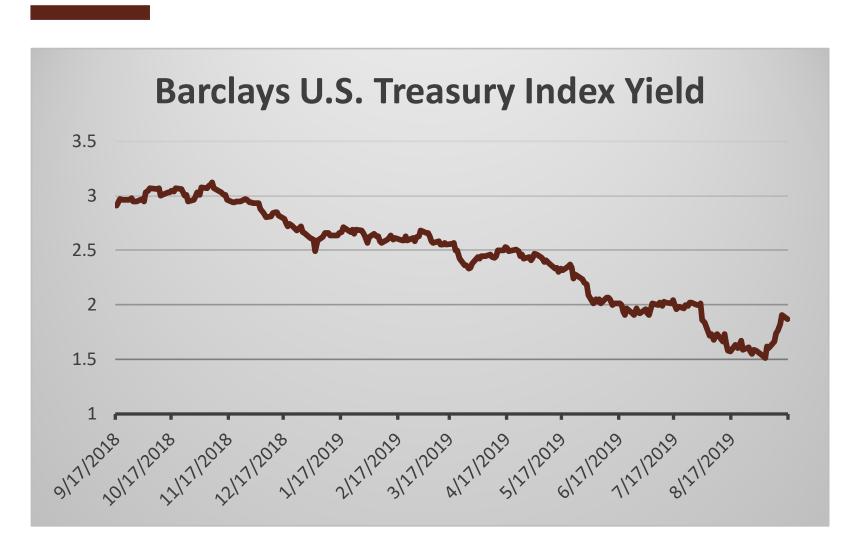
#### Fixed Income Market Snapshot

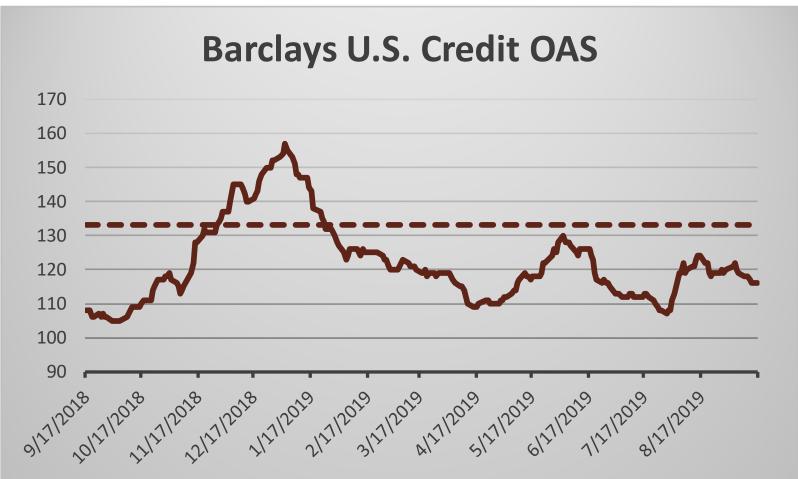


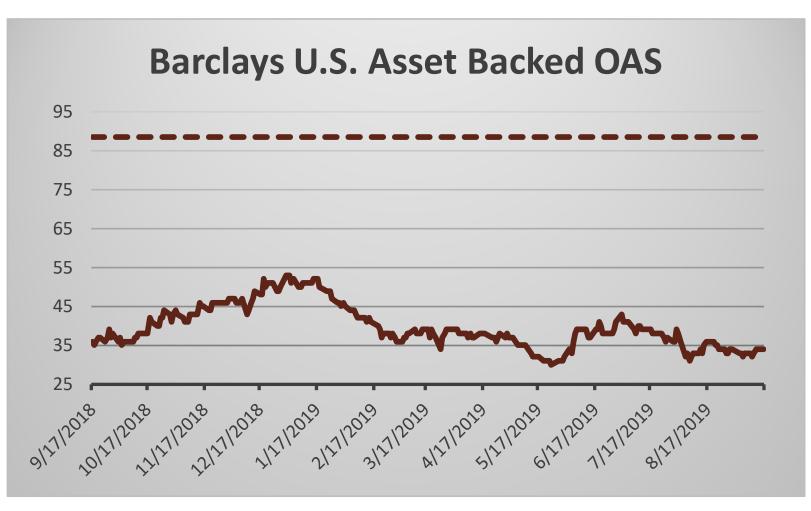
# U.S. Treasury Yield Curve

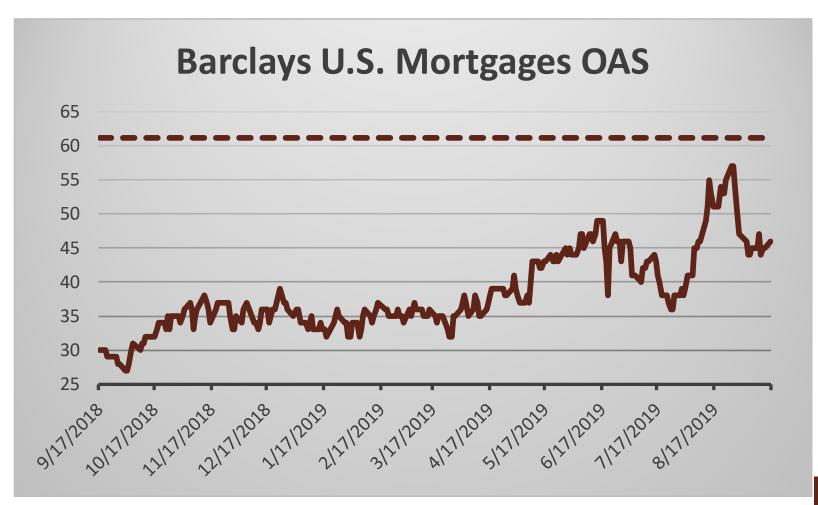


#### U.S. Fixed Income

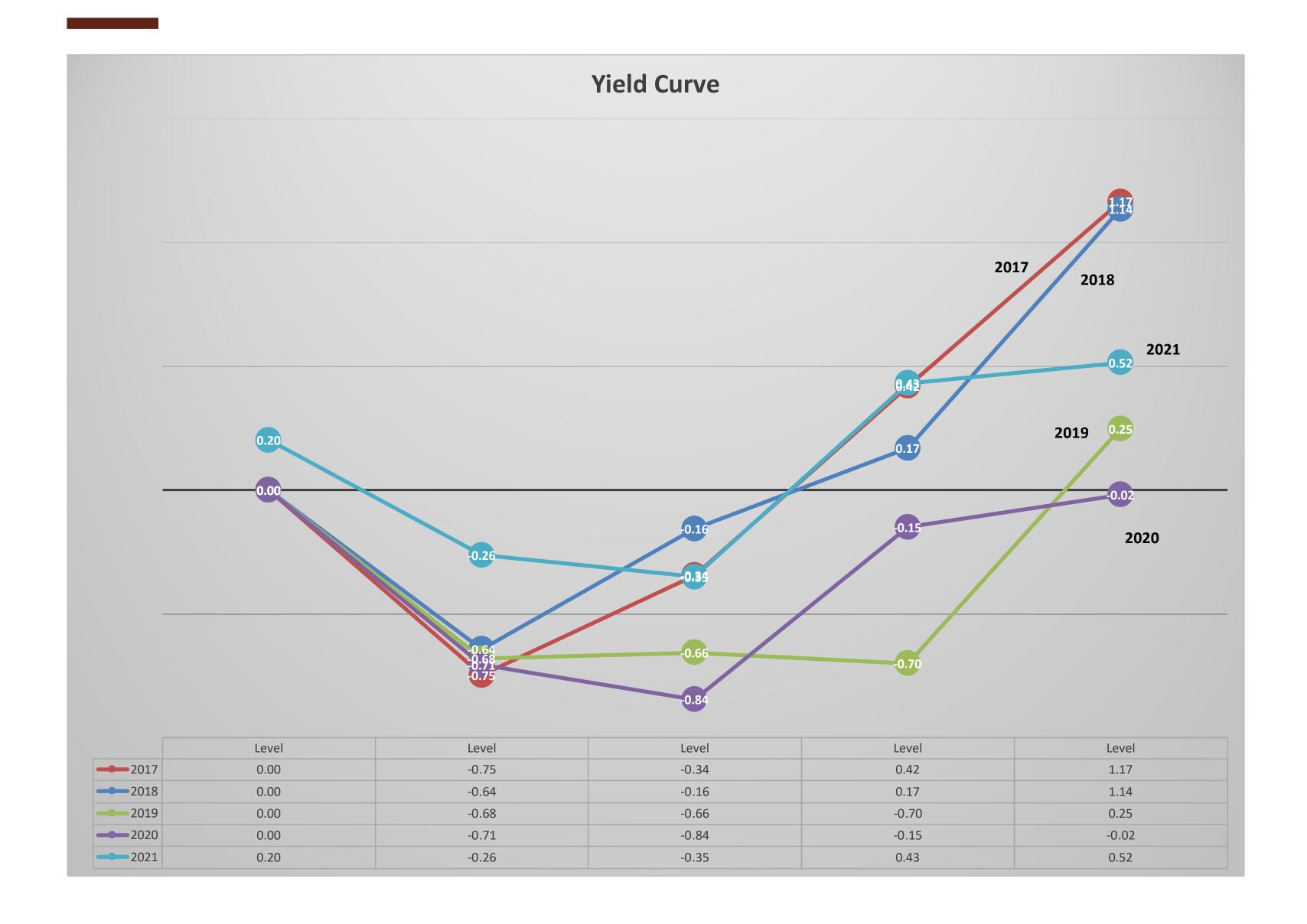




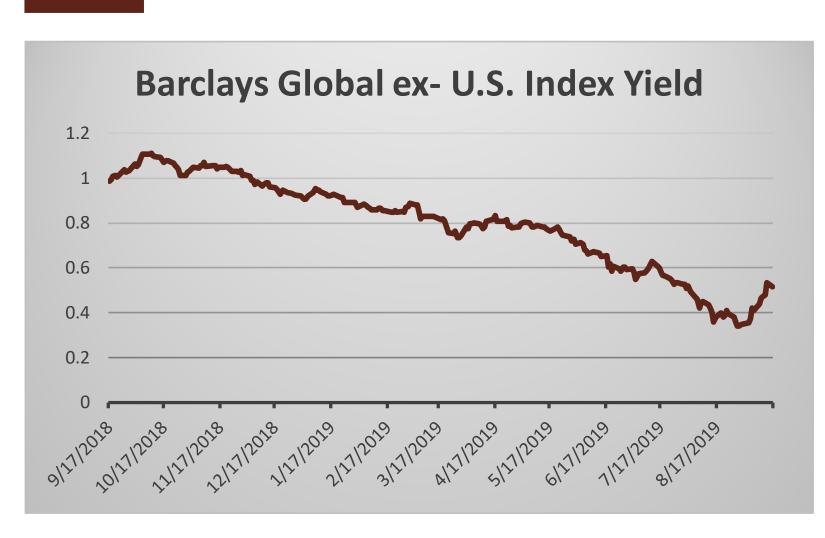


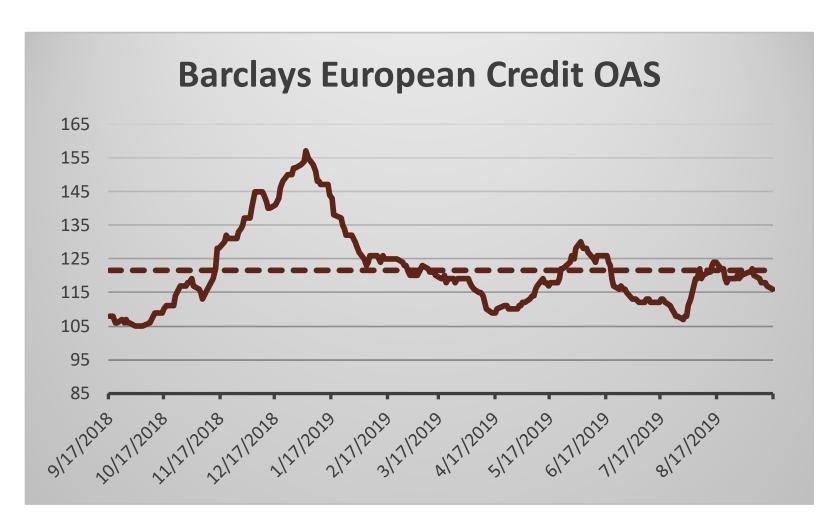


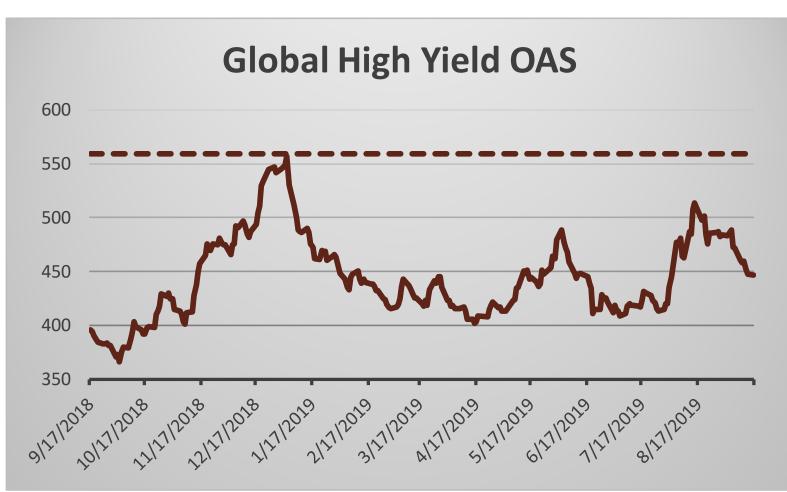
#### German Bund Yield Curve

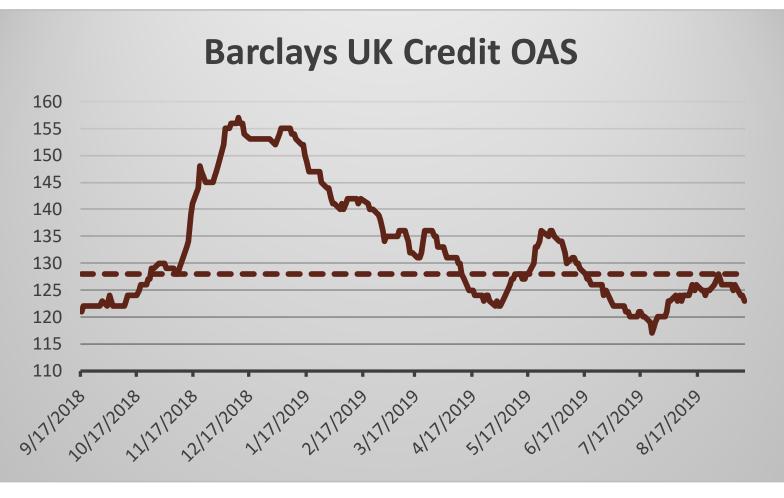


#### Global Fixed Income

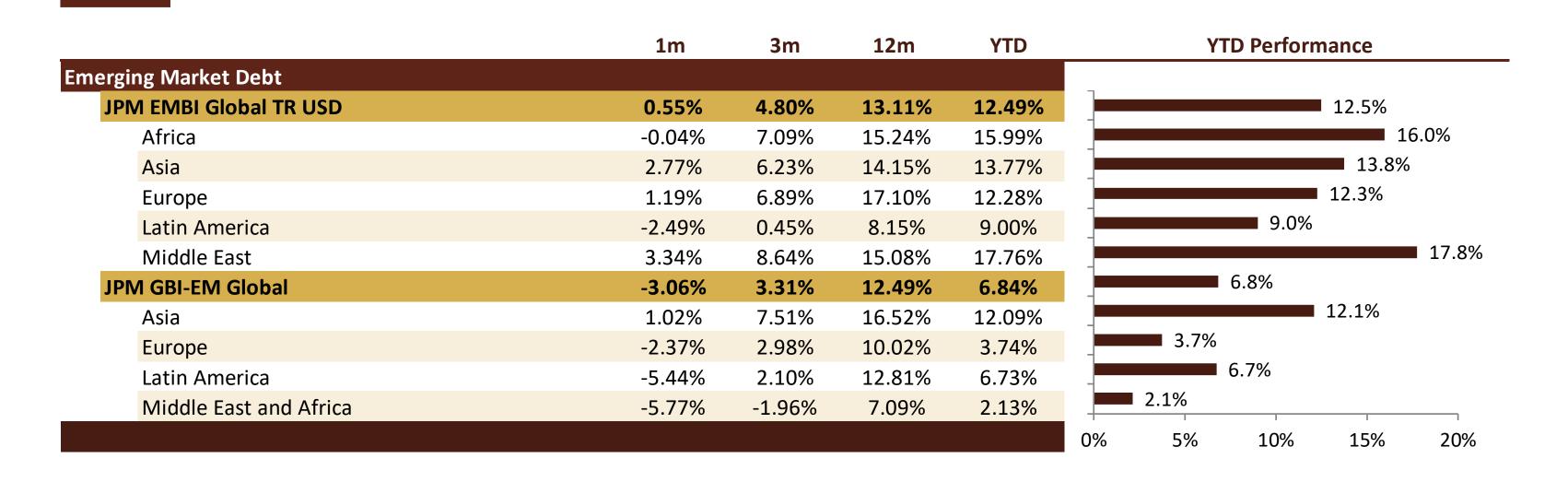




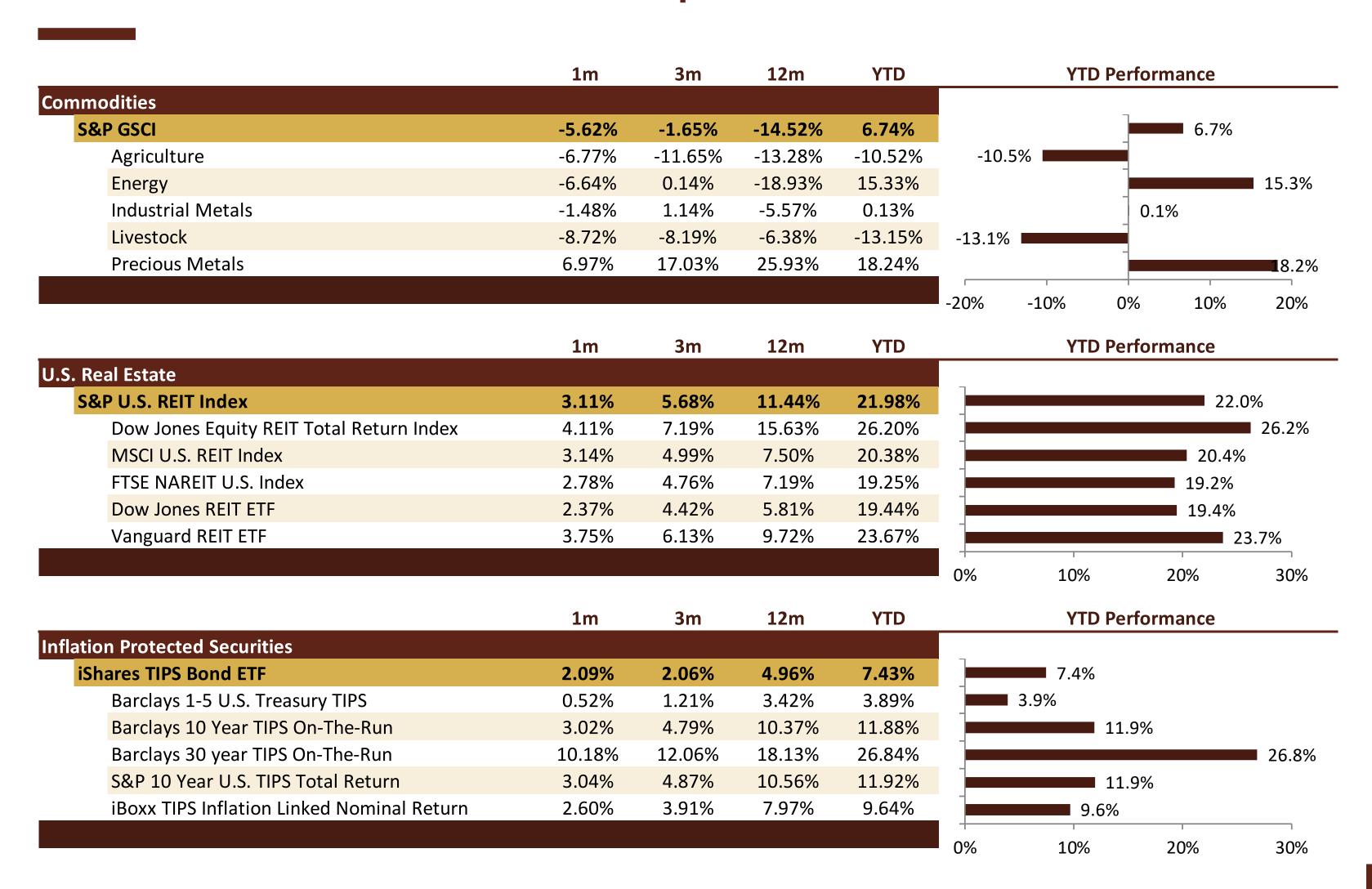




### Fixed Income Market Snapshot



#### Real Assets Market Snapshot

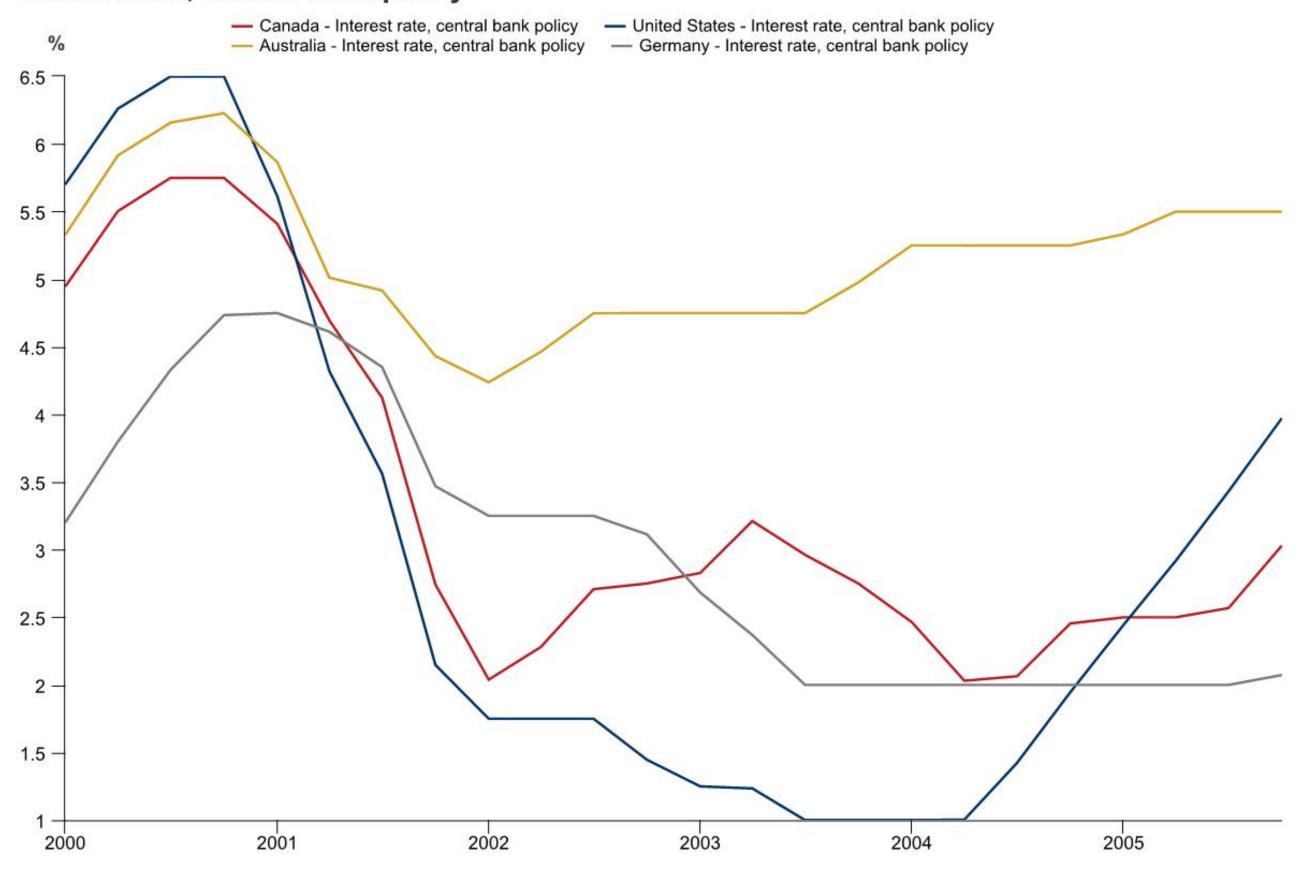






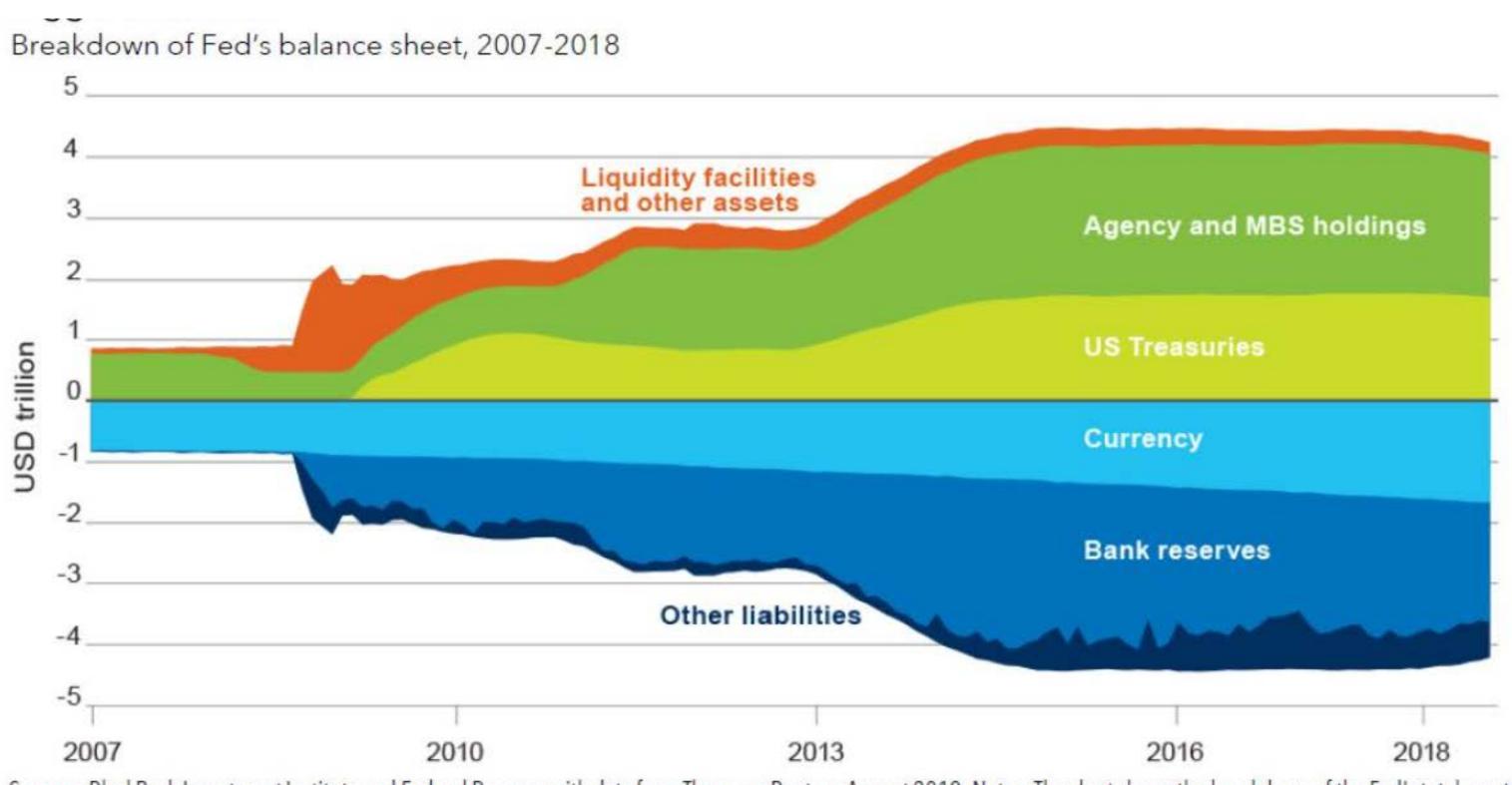
# Step 1: Add Generous Liquidity

#### Interest rate, central bank policy



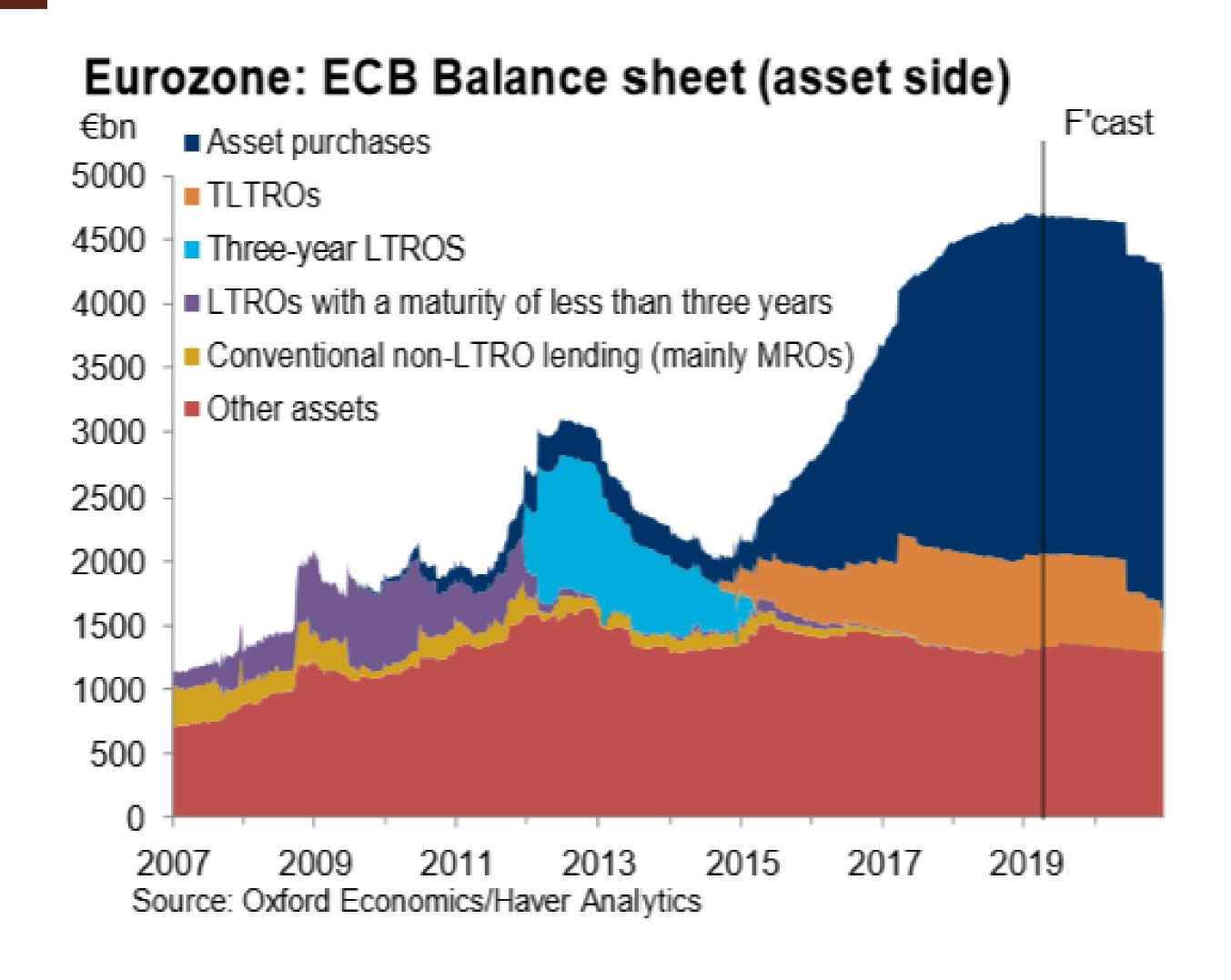
Source: Oxford Economics

### Step 2: Plus some good intentions



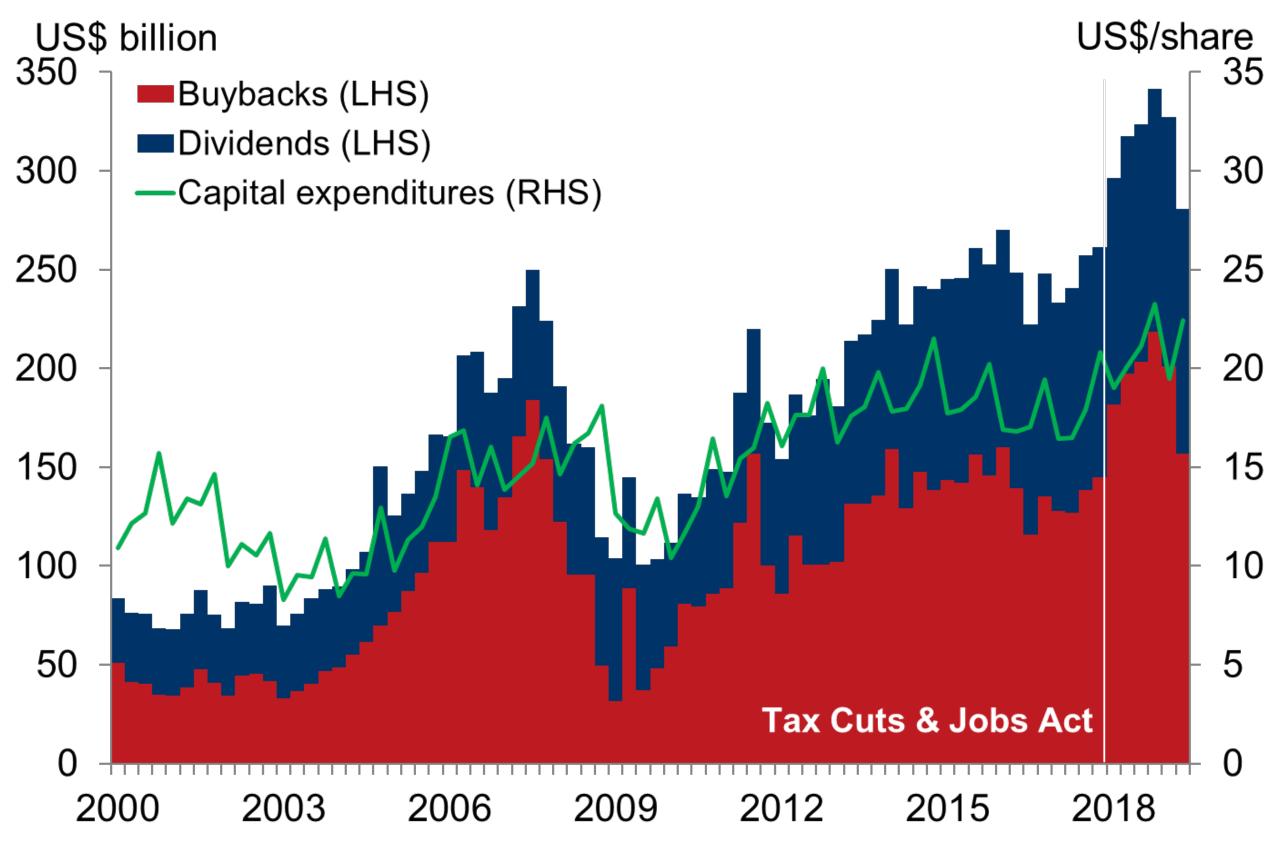
Sources: BlackRock Investment Institute and Federal Reserve, with data from Thomson Reuters, August 2018. Notes: The chart shows the breakdown of the Fed's total assets and liabilities.

### Step 2: Add more good intentions



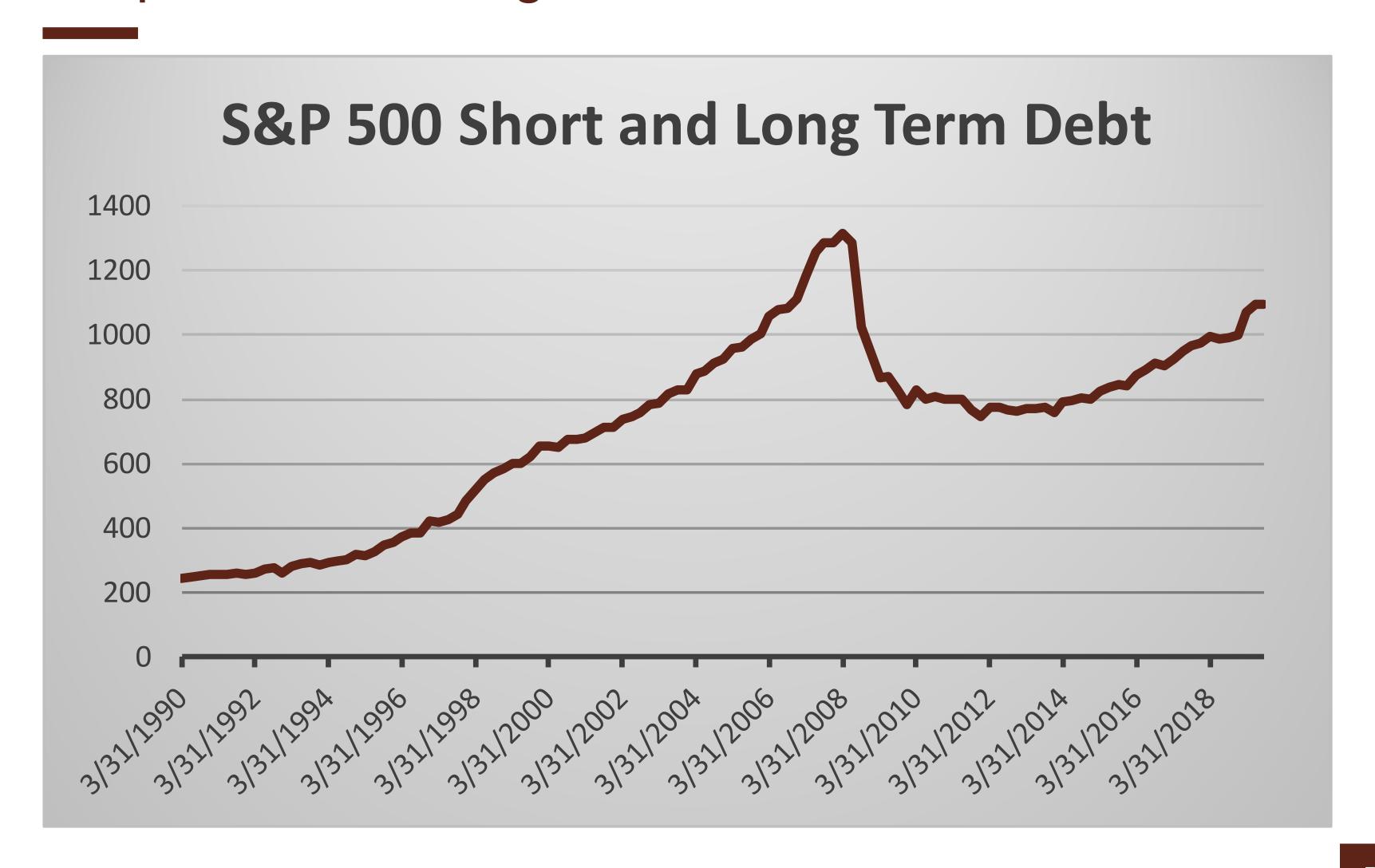
### Step 3: Sprinkle in some greed





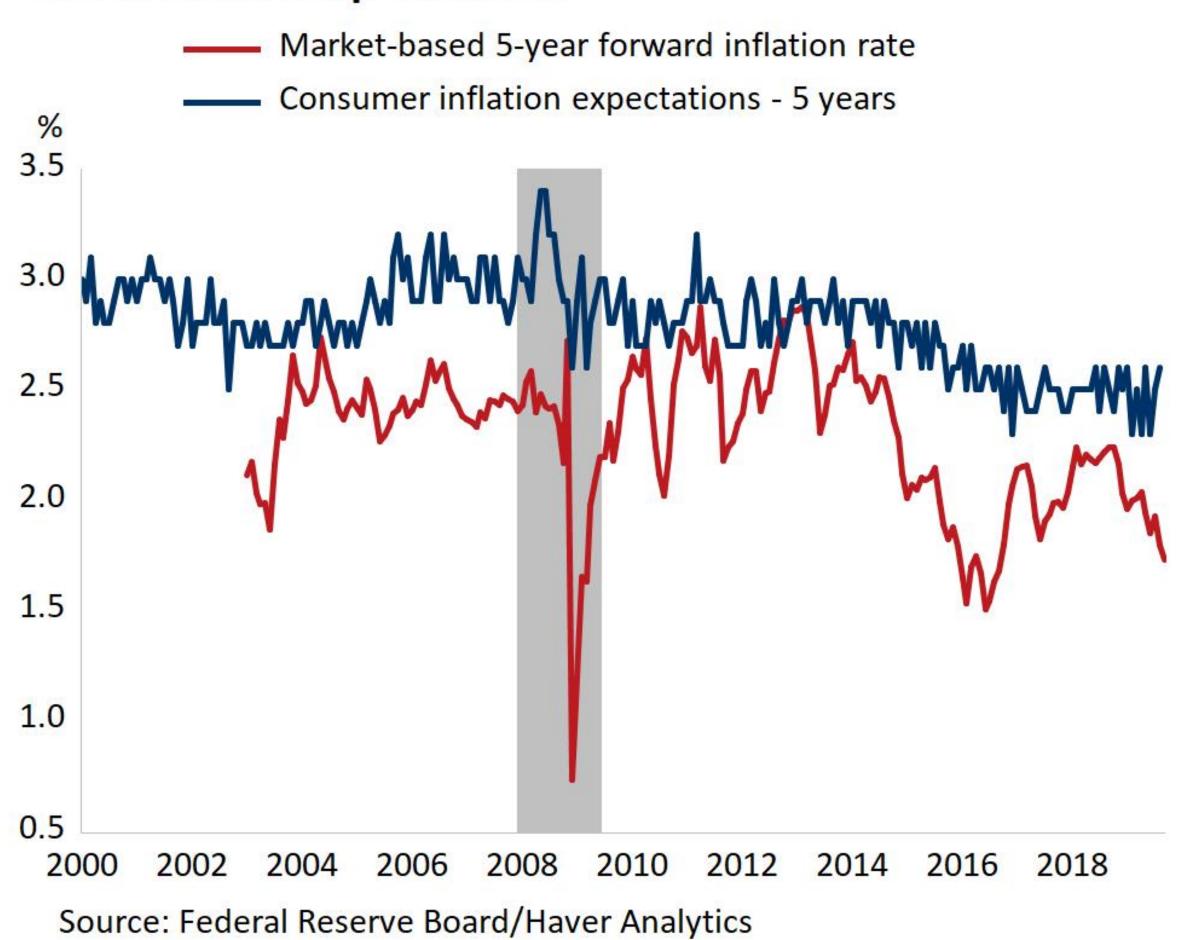
Source : Oxford Economics/Bloomberg

#### Step 3: Add more greed

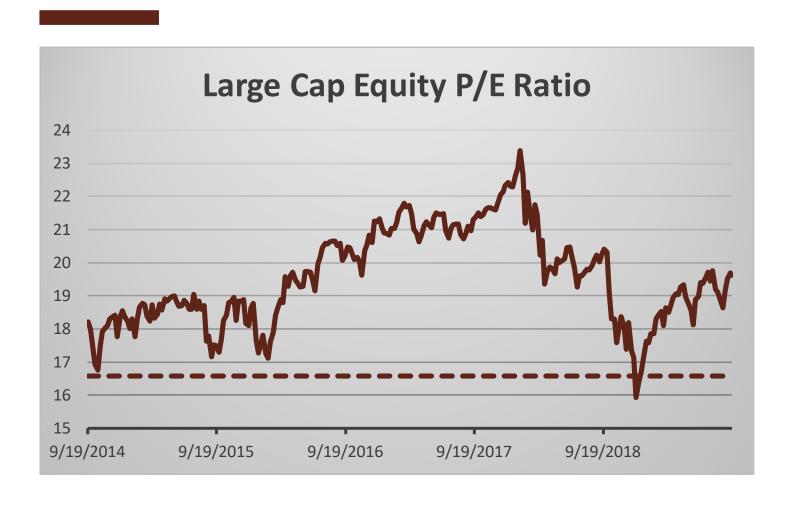


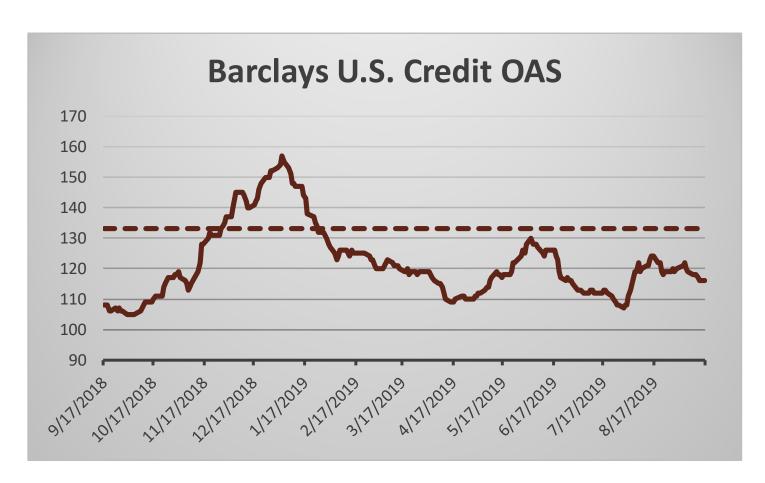
### Step 4: Stir in some delusion

#### **US: Inflation expectations**

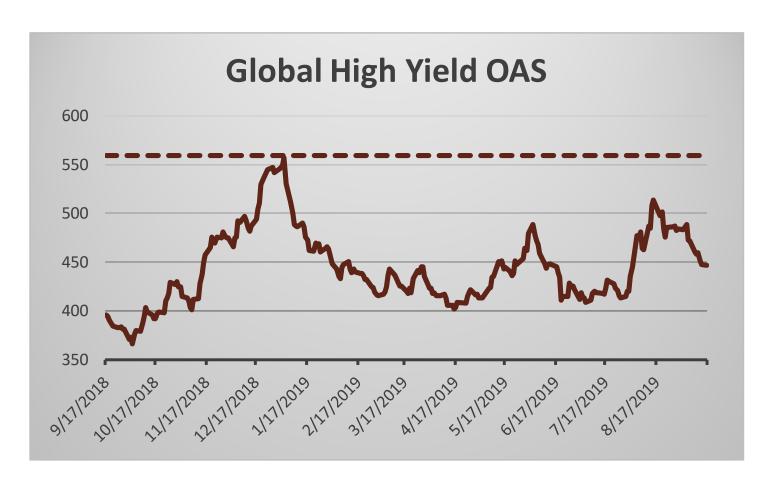


# Step 5: Ignore the real inflation





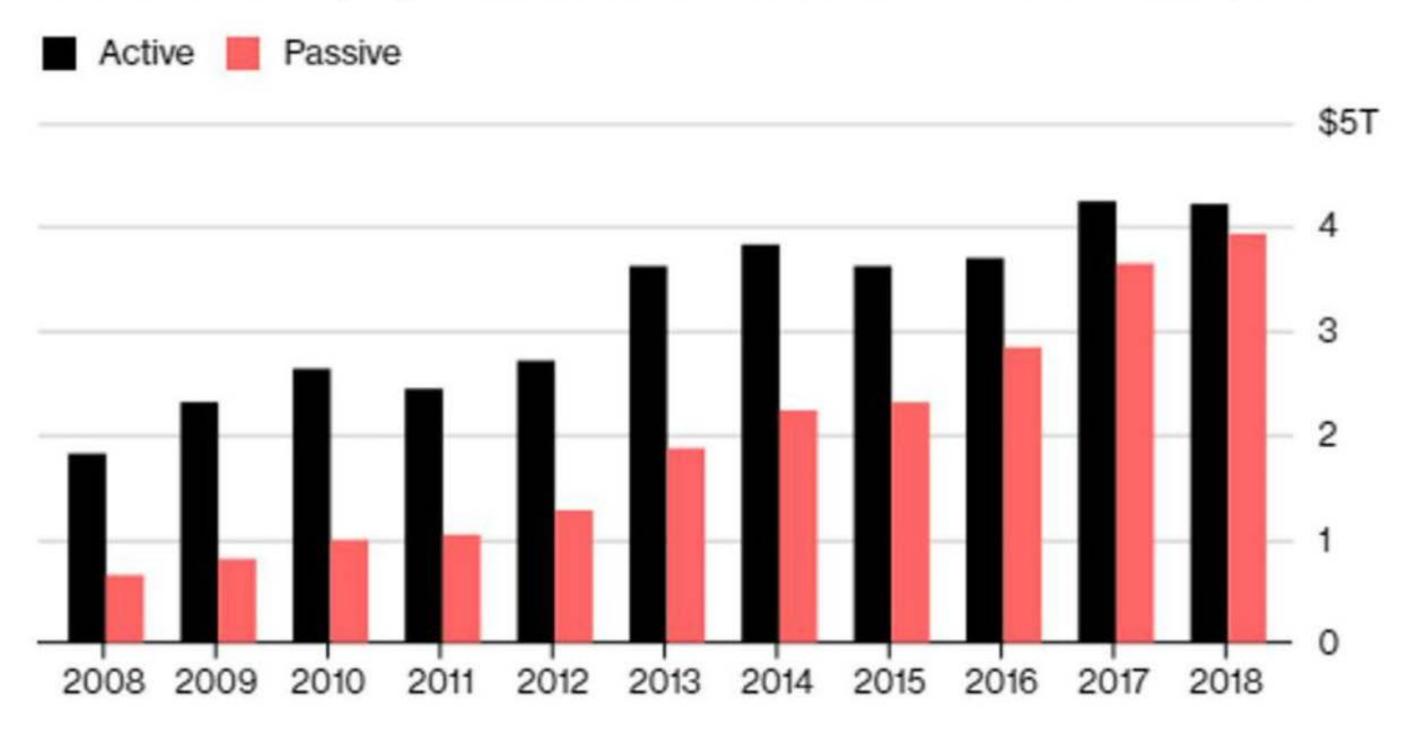




### Step 6: Add a pinch of stupidity

#### Indexing on the Rise

Passive U.S. equity funds could soon overtake their active peers



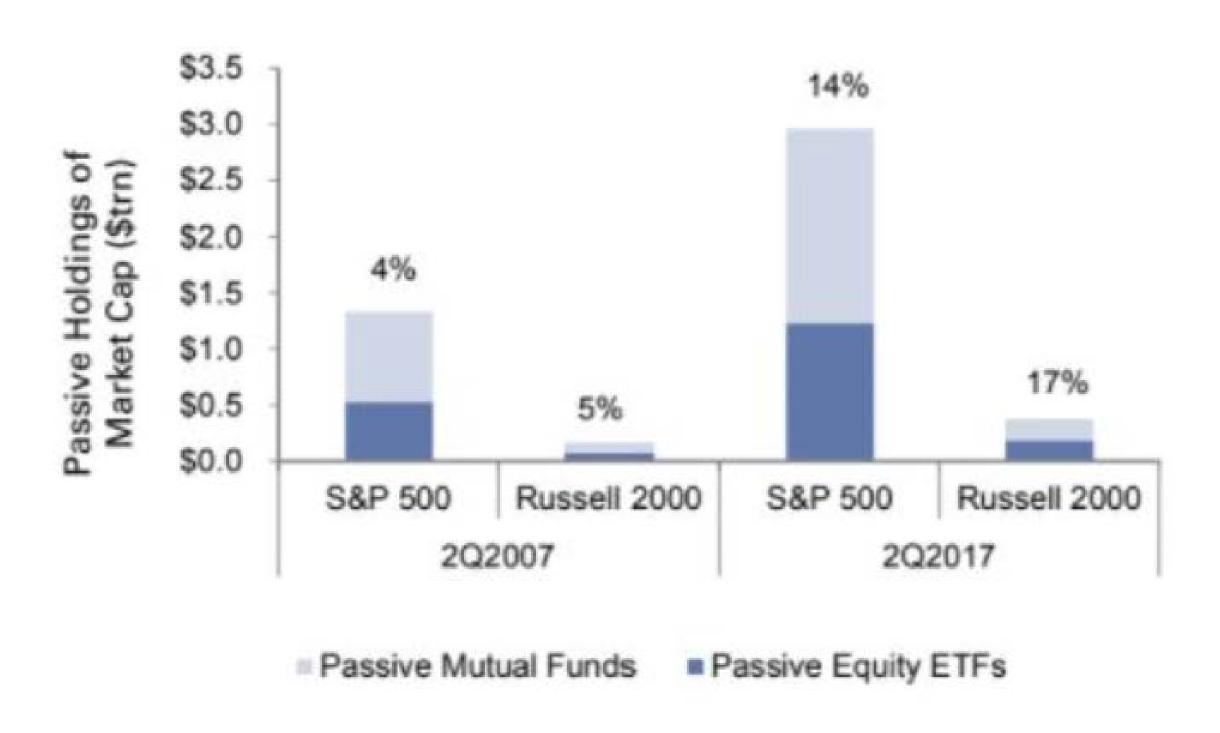
Source: Morningstar Inc.

Note: 2018 data as of Nov. 30

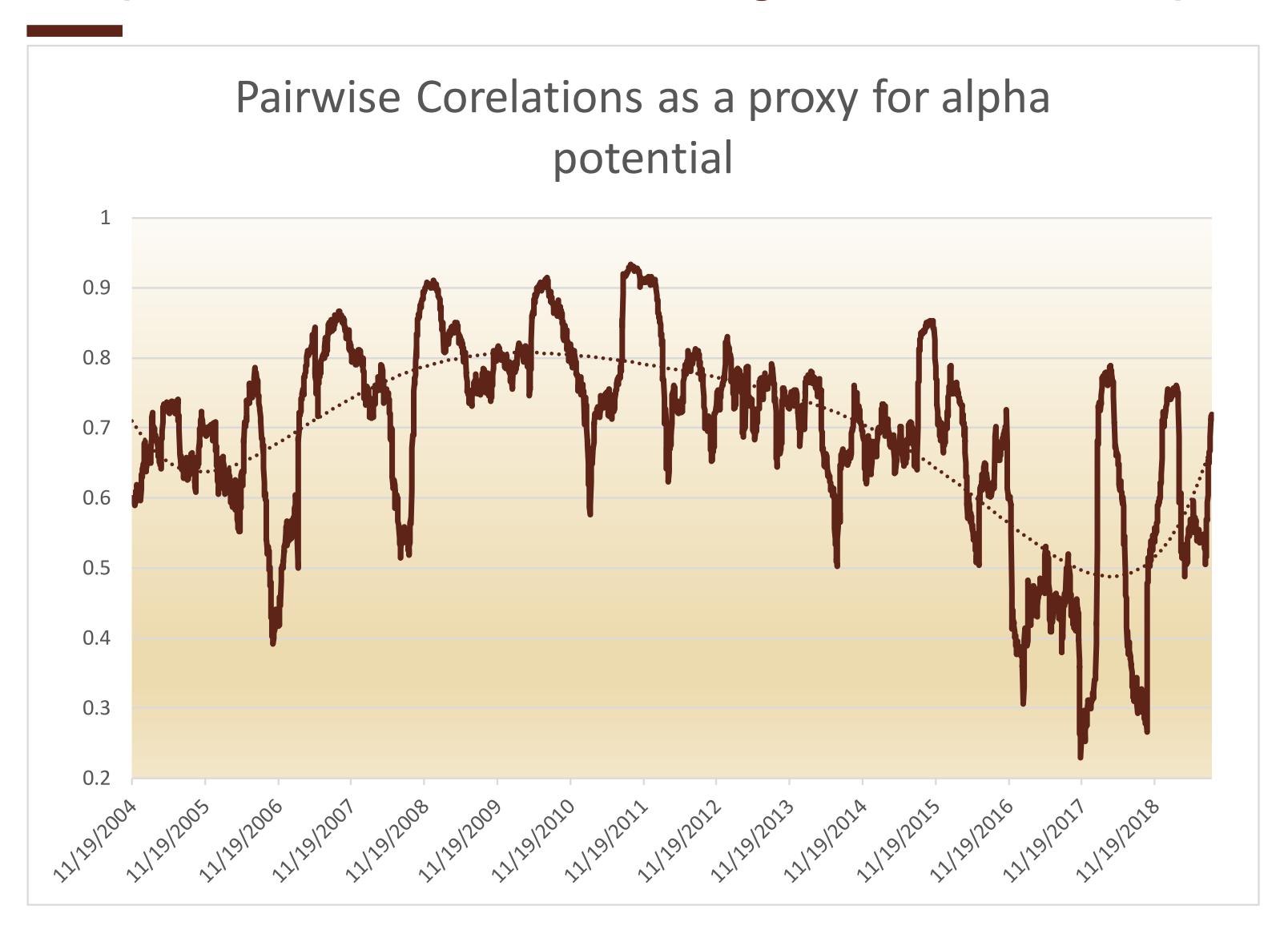
## Step 6: Add a pinch of stupidity

Exhibit 6: Equity ETFs and Passive Mutual Funds now hold 14% of the S&P500 in aggregate, up from 4% a decade ago

Estimated dollar holdings of stocks in the S&P500 of passive funds in aggregate

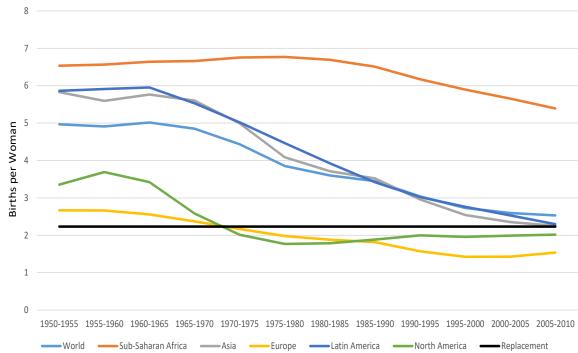


### Step 7: Plus a self-sustaining information loop

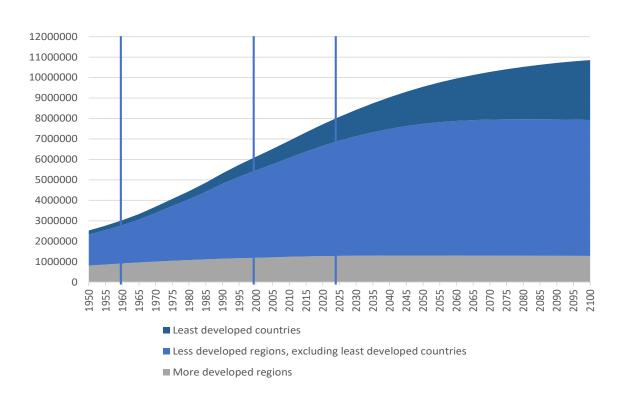


## Debt + Passive Investing + Demographics

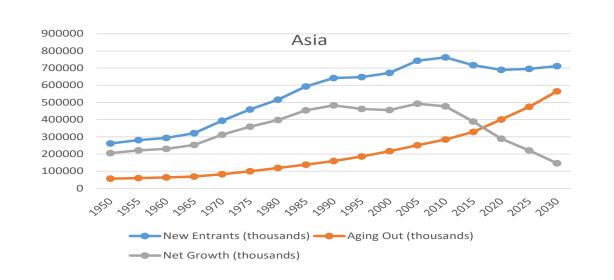
> World Fertility Rates Fallin



> Slowing Population



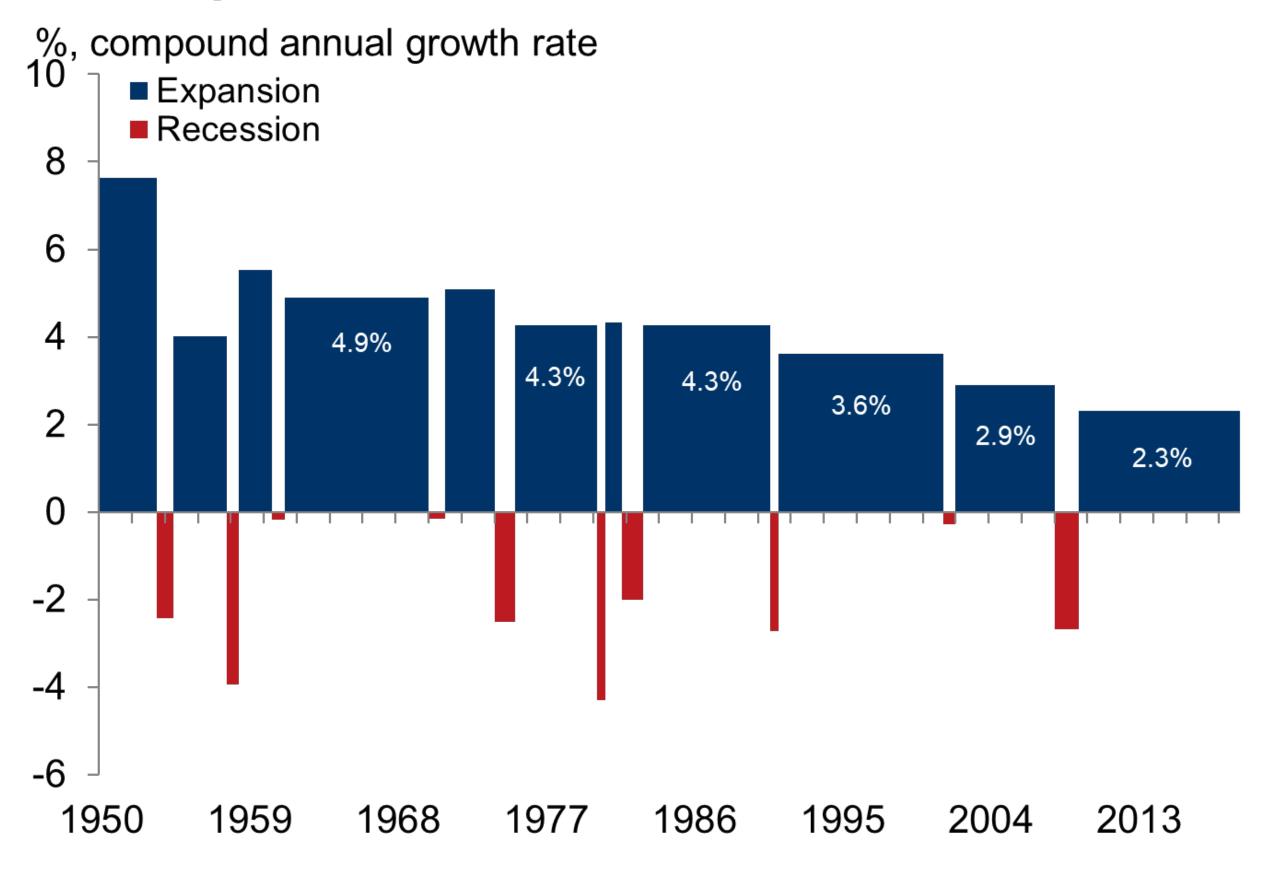
> Peaking Labor Markets



- + Deregulation + Inequality
- Deregulation collapse tax receipts and explodes long term liabilities (debt, environmental, social, etc.)
- Feeds systematic underinvestment in socioeconomic and productivity boosting capital (education, infrastructure, etc.)
- Poorly implemented globalization fuels inequality
- > Populist backlash fuel bigger booms and

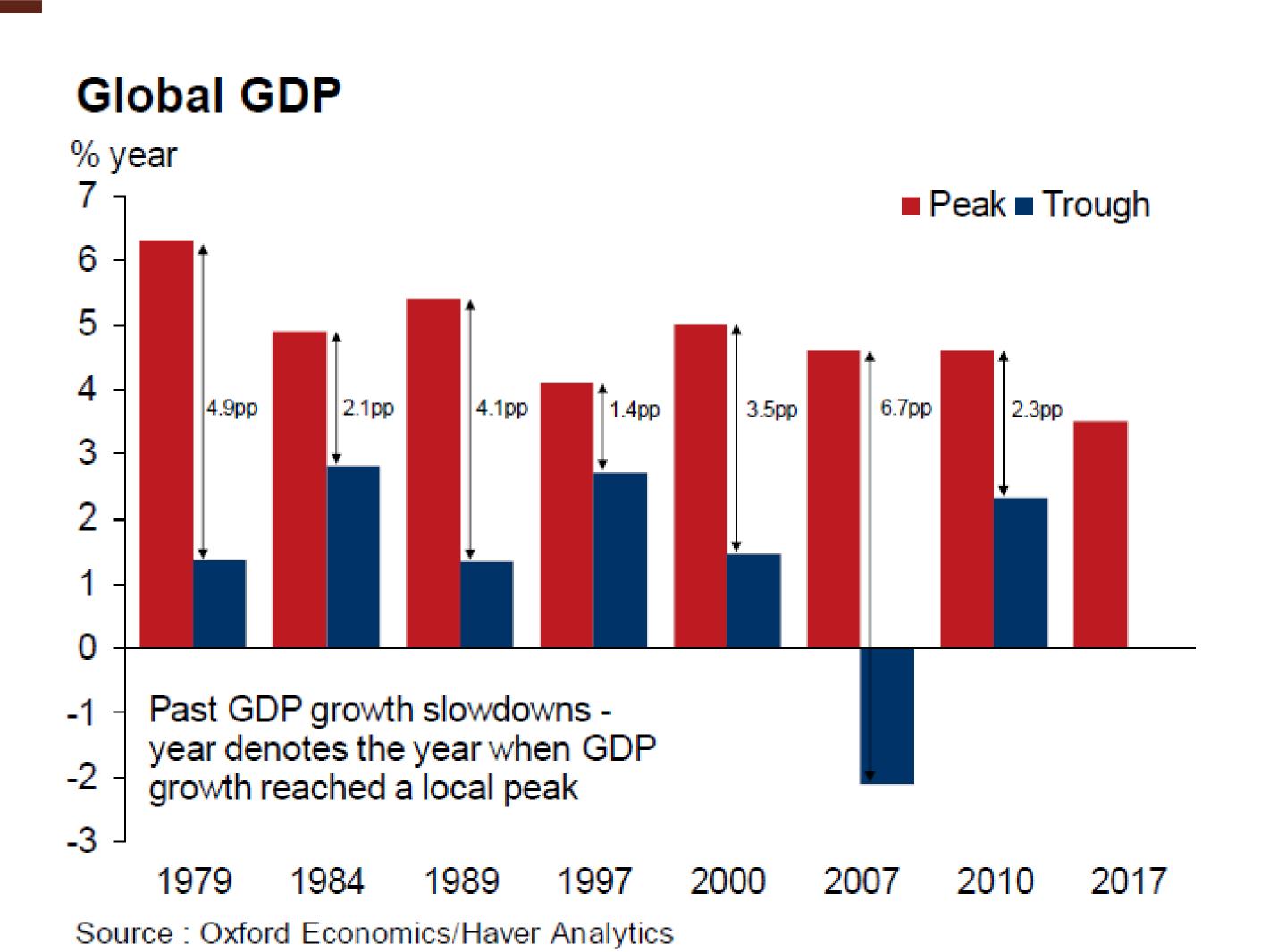
## Equals a troubling trend

#### **US: Expansions and Recessions**

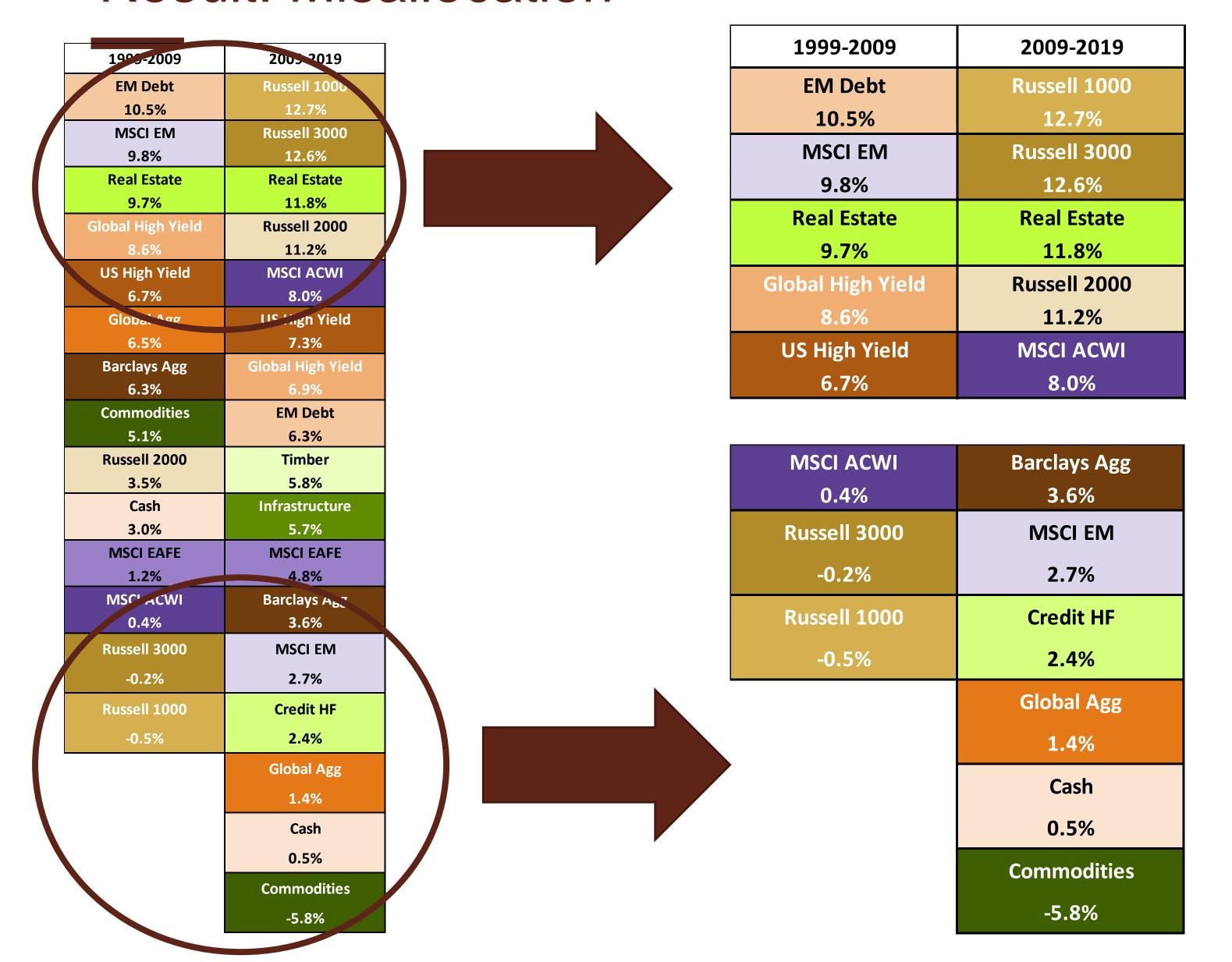


Source: Oxford Economics/Haver Analytics

## EM Not Bailing US out



#### Result: Misallocation



#### Ten Year Periodic Table

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Infrastructure	Infrastructure	Infrastructure	Timber	Russell 2000	Real Estate	Real Estate	Infrastructure	MSCI EM	Cash	Real Estate
78.8%	35.2%	14.5%	22.0%	38.8%	27.2%	2.1%	21.9%	37.3%	1.9%	27.1%
MSCI EM	Real Estate	EM Debt	Global High Yield	Russell 3000	Russell 1000	EM Debt	Russell 2000	Timber	Barclays Agg	Russell 1000
78.5%	26.9%	8.5%	19.6%	33.6%	13.2%	1.2%	21.3%	34.4%	0.0%	21.8%
Global High Yield	Russell 2000	Barclays Agg	Real Estate	Russell 1000	Russell 3000	Russell 1000	US High Yield	MSCI EAFE	US High Yield	Russell 3000
59.4%	26.9%	7.8%	18.9%	33.1%	12.6%	0.9%	17.1%	25.0%	-2.1%	21.5%
US High Yield	MSCI EM	Real Estate	EM Debt	Infrastructure	Infrastructure	Barclays Agg	Global High Yield	MSCI ACWI	Global Agg	Russell 2000
58.2%	18.9%	6.0%	18.5%	29.8%	7.7%	0.5%	14.3%	24.0%	-2.1%	18.2%
Credit HF	Russell 3000	US High Yield	MSCI EM	MSCI ACWI	Barclays Agg	Russell 3000	Timber	Russell 1000	Credit HF	MSCI ACWI
38.9%	16.9%	5.0%	18.2%	22.8%	6.0%	0.5%	13.0%	21.7%	-2.5%	17.3%
Timber	Timber	Global Agg	MSCI EAFE	MSCI EAFE	EM Debt	Cash	Russell 3000	Russell 3000	Real Estate	Infrastructure
38.0%	16.4%	4.4%	17.3%	22.8%	5.5%	0.1%	12.7%	21.1%	-4.0%	16.6%
MSCI ACWI	Russell 1000	Global High Yield	Russell 1000	Timber	Russell 2000	MSCI EAFE	Russell 1000	Russell 2000	Global High Yield	MSCI EAFE
34.6%	16.1%	3.1%	16.4%	19.8%	4.9%	-0.8%	12.1%	14.6%	-4.1%	13.6%
MSCI EAFE 31.8%	US High Yield 15.1%	Russell 1000 1.5%	Russell 3000 16.4%	US High Yield 7.4%	MSCI ACWI 4.2%	MSCI ACWI -2.4%	Commodities 11.4%	Global Agg 10.5%	EM Debt -4.6%	Commodities 13.1%
Real Estate	Global High Yield	Russell 3000	Russell 2000	Global High Yield	US High Yield	Global High Yield	MSCI EM	Global High Yield	Russell 1000	US High Yield
30.8%	14.8%	1.0%	16.3%	7.3%	2.5%	-2.7%	11.2%	10.4%	-4.8%	11.8%
Russell 1000	MSCI ACWI	Cash	MSCI ACWI	Credit HF	Timber	Credit HF	EM Debt	Real Estate	Russell 3000	EM Debt
28.4%	12.7%	0.1%	16.1%	6.9%	2.1%	-4.4%	10.2%	9.8%	-5.2%	11.7%
Russell 3000	EM Debt	Commodities	US High Yield	Real Estate	Cash	Russell 2000	MSCI ACWI	EM Debt	MSCI ACWI	Global High Yield
28.3%	12.0%	-1.2%	15.8%	1.8%	0.0%	-4.4%	7.9%	9.3%	-9.4%	9.2%
EM Debt	Credit HF	Credit HF	Credit HF	Cash	Global High Yield	US High Yield	Real Estate	US High Yield	Russell 2000	MSCI EM
28.2%	10.2%	-3.6%	7.7%	0.1%	0.0%	-4.5%	7.6%	7.5%	-11.0%	7.7%
Russell 2000	Commodities	Russell 2000	Infrastructure	Commodities	Credit HF	Global Agg	Credit HF	Commodities	Infrastructure	Barclays Agg
27.2%	9.0%	-4.2%	5.0%	-1.2%	-1.8%	-6.0%	5.0%	5.8%	-11.7%	7.6%
Commodities	MSCI EAFE	MSCI ACWI	Barclays Agg	Barclays Agg	MSCI EM	Timber	Barclays Agg	Credit HF	MSCI EAFE	Timber
13.5%	7.8%	-7.3%	4.2%	-2.0%	-2.2%	-7.5%	2.6%	3.9%	-13.8%	5.3%
Global Agg	Barclays Agg	MSCI EAFE	Global Agg	MSCI EM	Global Agg	MSCI EM	Global Agg	Barclays Agg	Commodities	Global Agg
7.5%	6.5%	-12.1%	4.1%	-2.6%	-3.1%	-14.9%	1.5%	3.5%	-13.8%	4.5%
Barclays Agg	Global Agg	Timber	Cash	Global Agg	MSCI EAFE	Commodities	MSCI EAFE	Cash	MSCI EM	Credit HF
5.9%	4.9%	-16.9%	0.1%	-3.1%	-4.9%	-32.9%	1.0%	0.9%	-14.6%	3.6%
Cash	Cash	MSCI EM	Commodities	EM Debt	Commodities	Infrastructure	Cash	Infrastructure	Timber	Cash
0.2%	0.1%	-18.4%	0.1%	-6.6%	-33.1%	-35.1%	0.3%	-5.6%	-17.7%	1.7%

# SBCERA Assumptions

		SBCERA Portfolio (Physicals + Futures)	Benchmark	20 Year Historical	15 Year Historical	10 Year Historical	5 Year Historical	10 Year Estimated
Equity	US Equity	10.00%	60.00%	6.49%	9.09%	13.35%	9.60%	6.35%
	US Large Cap	8.60%		6.39%	9.14%	13.49%	9.85%	6.16%
	US Small Cap	1.40%		7.88%	8.37%	11.59%	6.41%	7.98%
	International Equity	17.70%		4.74%	7.07%	8.61%	5.51%	
	Developed Ex-US	10.50%		3.63%	5.27%	5.00%	1.89%	6.89%
	Emerging Markets	7.20%		7.01%	8.09%	4.07%	0.38%	9.98%
	Private Equity	15.70%		6.49%	9.09%	13.35%	9.60%	8.02%
	Total Equities	43.40%						
Fixed Income	US Fixed Income	0.80%	40.00%	5.10%	4.26%	3.91%	3.35%	2.48%
	Global Ex-US Fixed Income	5.70%			3.28%	1.70%	0.29%	2.61%
	Global High Yield Bonds	13.50%		8.02%	7.51%	8.02%	3.91%	5.58%
	Emerging Market Debt	9.80%		9.18%	7.42%	7.06%	4.66%	6.05%
	Cash*	-0.30%		1.83%	1.39%	0.52%	0.95%	0.74%
	Total Fixed Income	29.50%						
Alternatives	Commodities	2.00%		-0.42%	-5.22%	-5.58%	-13.14%	4.62%
	Infrastructure	1.80%			7.58%	7.55%	-8.32%	6.65%
	Real Estate	4.30%		10.51%	8.31%	13.31%	8.99%	7.03%
	Timberland	0.80%			3.40%	6.76%	3.25%	3.29%
	(Credit) Hedge Funds	18.20%				3.19%	0.00%	3.58%
	Total Alternatives	27.10%						
	SBCERA Portfolio	100.00%						6.68%
	Benchmark		100.00%					4.80%
								1.88%





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