



southtec®

Managing in an Uncertain Economy

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President



ITR ECONOMICS

First In Forecasts Worldwide

2018 Forecast Results

If you heard ITR around two years prior...

	Duration	Accuracy
US GDP	24	99.9%
US Ind. Production	34	99.4%
Europe Ind. Production	24	99.2%
Canada Ind. Production	27	97.1%
China Ind. Production	30	99.9%
Retail Sales	28	99.6%
Housing (Single Family Units)	26	99.2%
Employment (Private Sector)	30	99.4%

ITR Economics provides the best economic intelligence to reduce risk and drive practical and profitable business decisions.

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Summary October 2019

Macroeconomic Softness in 2019

US

Global

Segment Thinking Into 3 Time Periods

2020

2021 - 2029

2030 - 2040

Global Issues Impacting Our Businesses

Tariffs

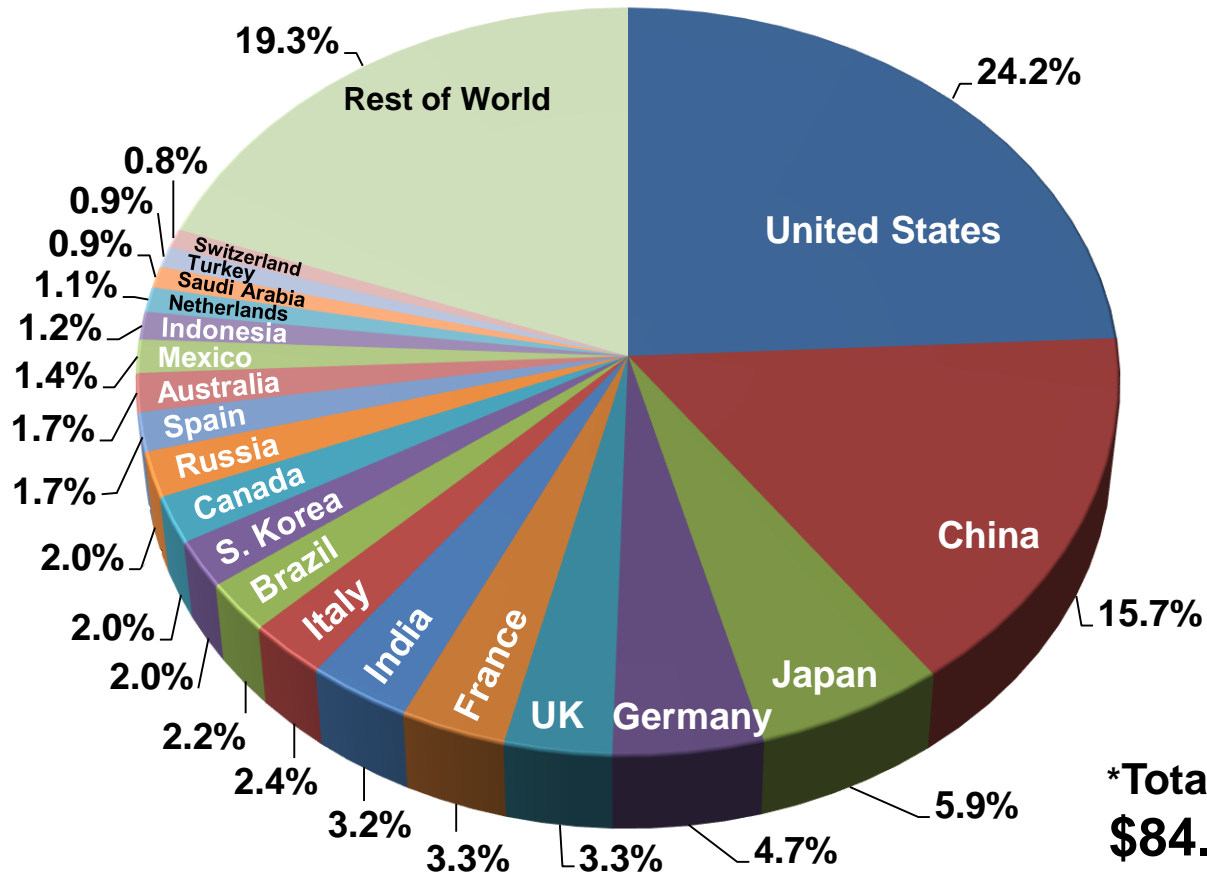
Leading Indicator Signals are Mixed

Know which ones matter to you

How to track the leading indicators



Percent of 2018 World GDP by Country

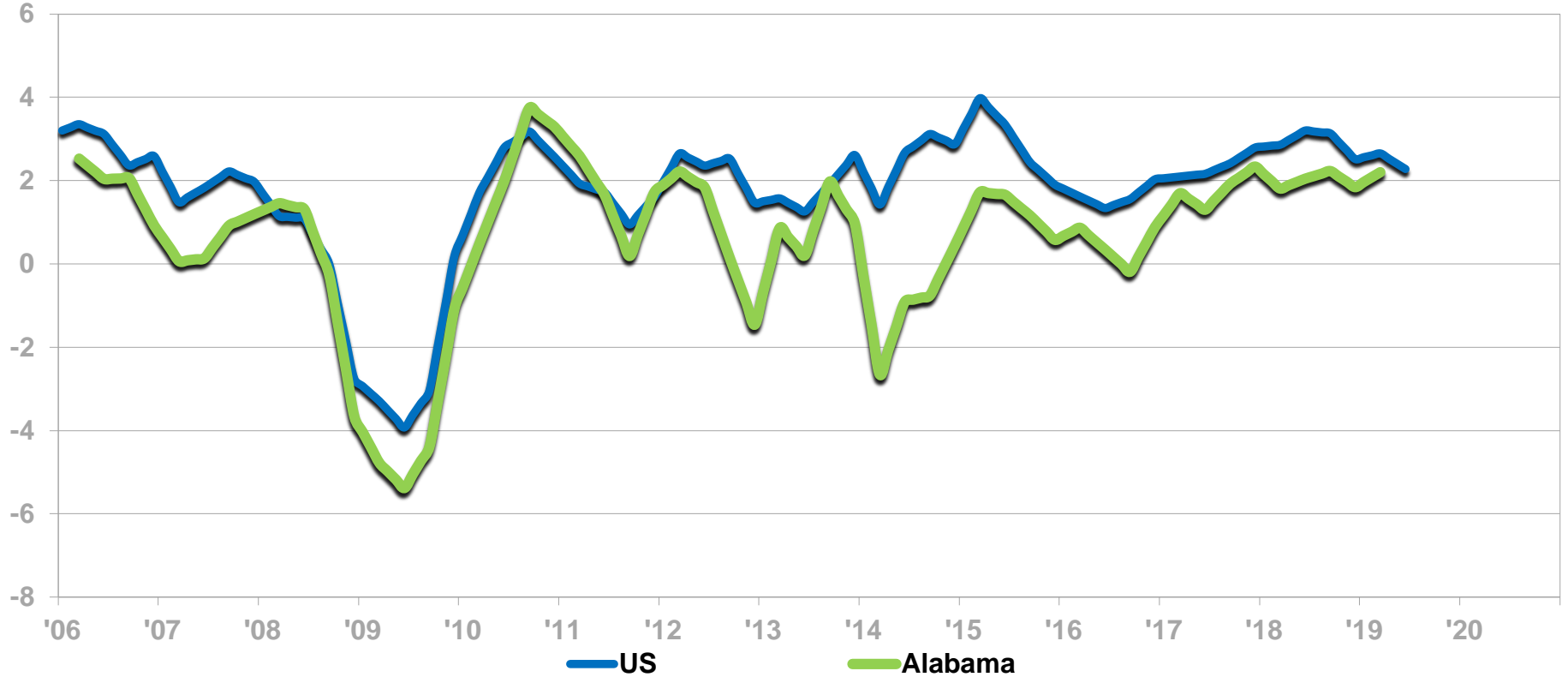


***Total 2018 World GDP:
\$84.93 Trillion US\$**



A Tight Cyclical Relationship

US to Alabama Gross Domestic Product



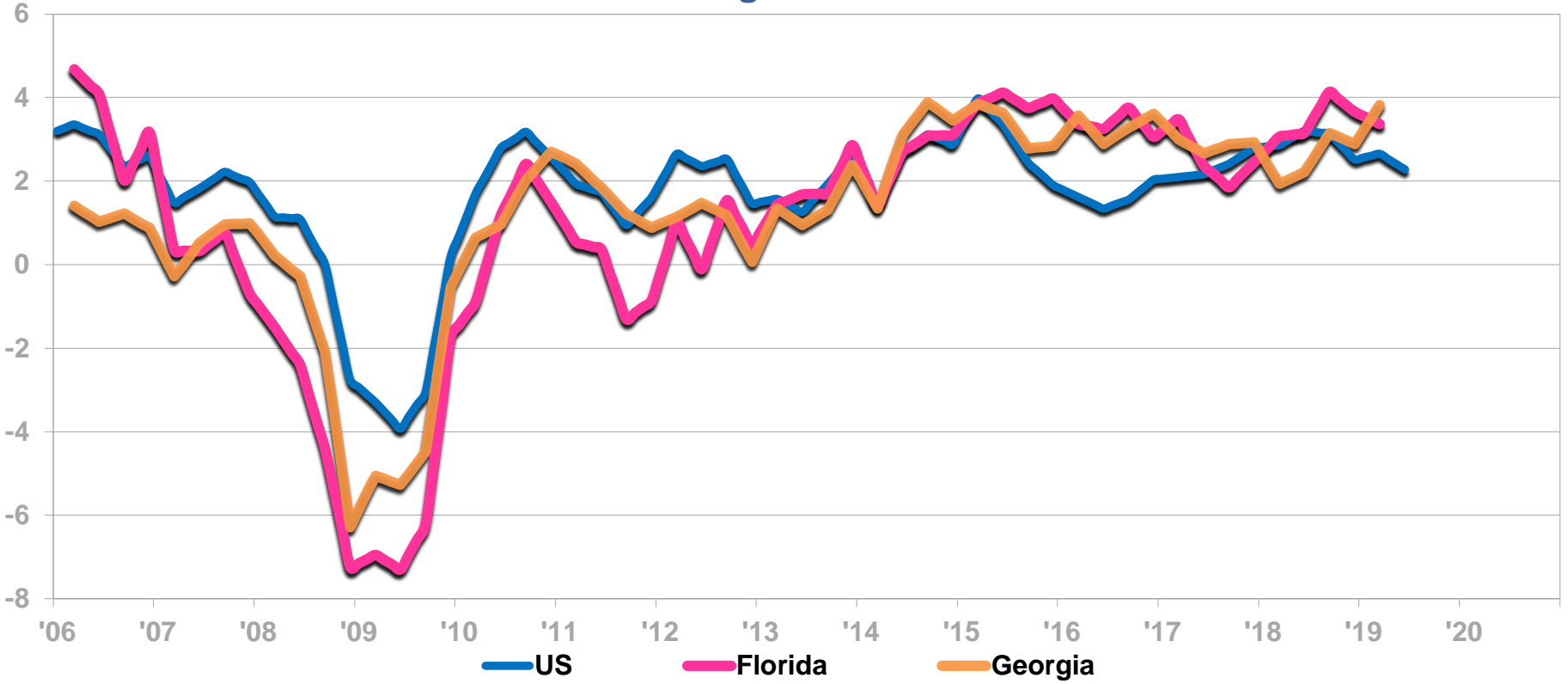
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3/12 Rates of Change

Source: Bureau of Economic Analysis

Tight Cyclical Relationships

US to Florida and Georgia Gross Domestic Product



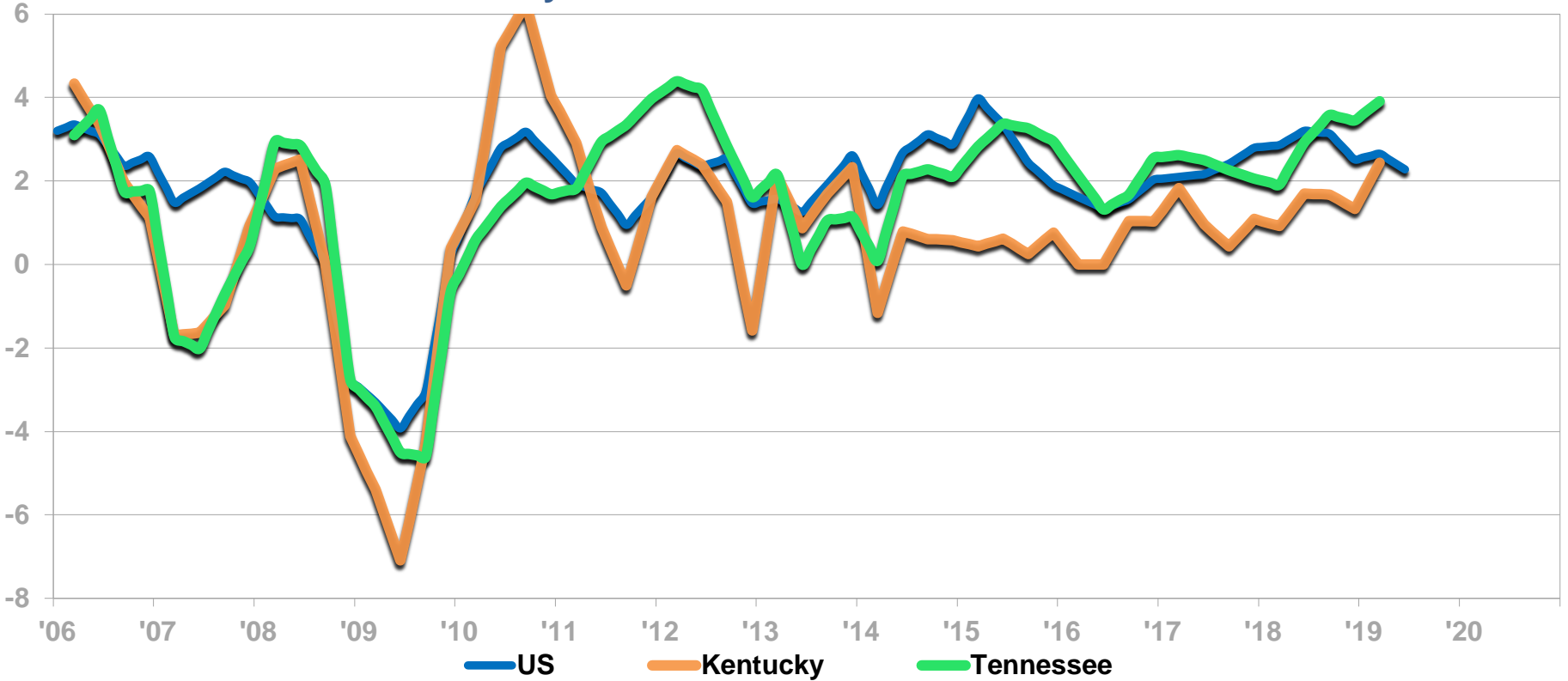
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3/12 Rates of Change

Source: Bureau of Economic Analysis

Mixed Results

US to Kentucky and Tennessee Gross Domestic Product



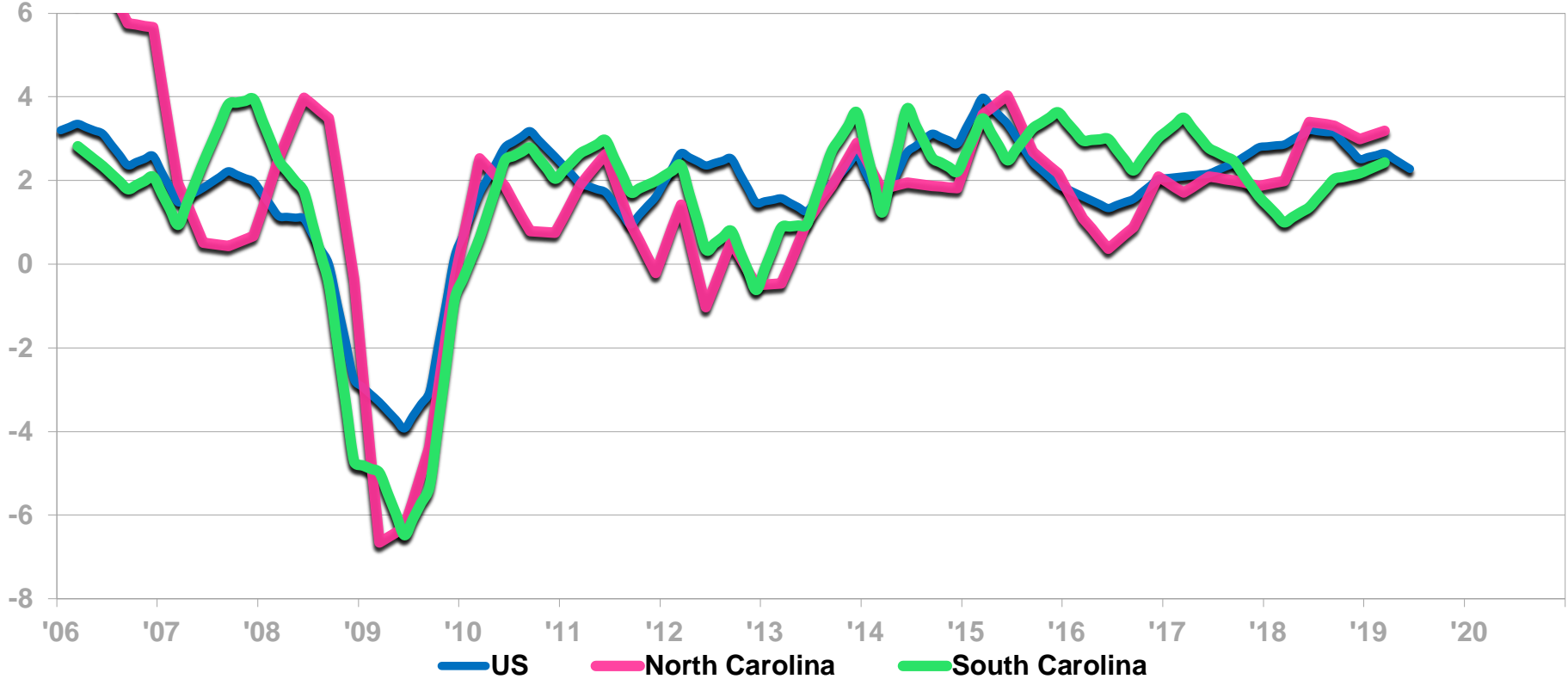
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3/12 Rates of Change

Source: Bureau of Economic Analysis

Macro Trends Apply to the Both States

US to North Carolina and South Carolina Gross Domestic Product



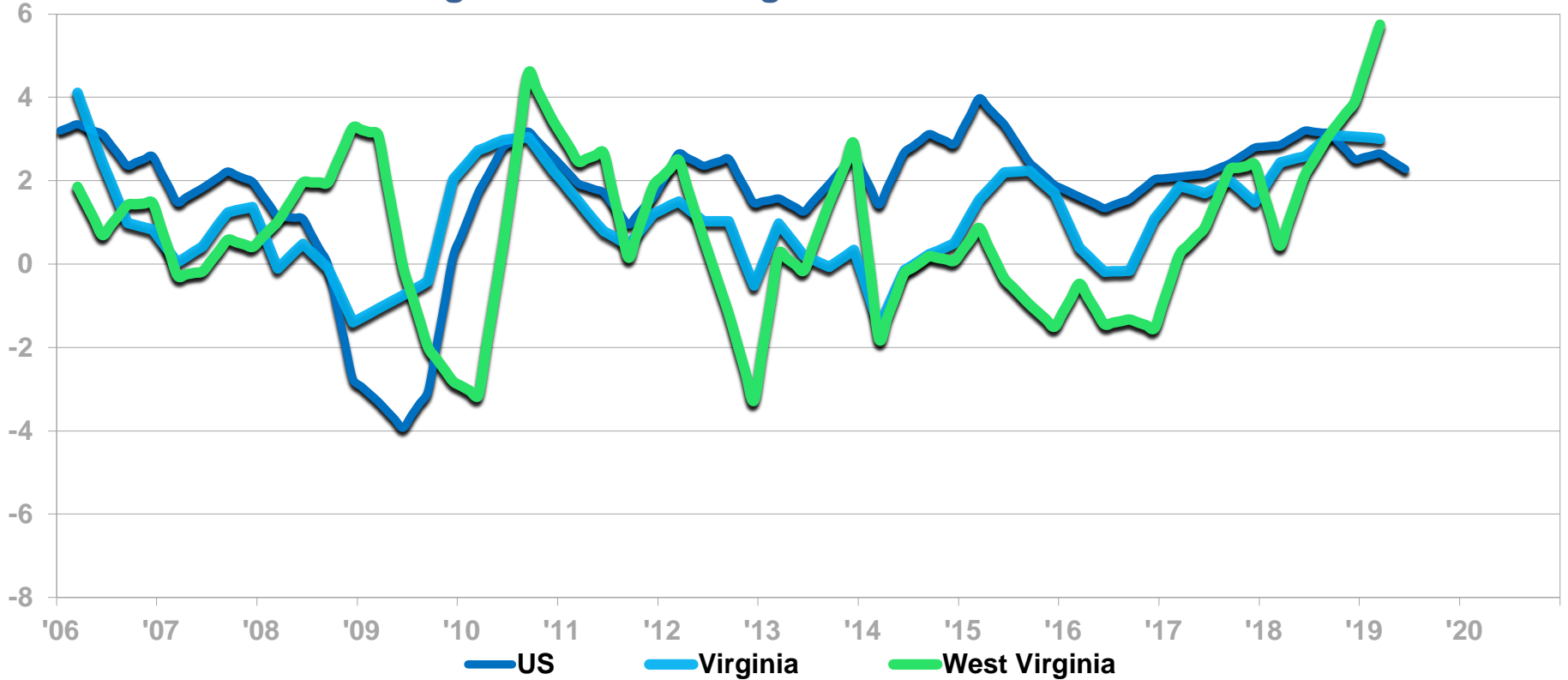
First In Forecasts Worldwide

3/12 Rates of Change

Source: Bureau of Economic Analysis

Macro Trends Apply to Both States – Go West VA!

US to Virginia and West Virginia Gross Domestic Product



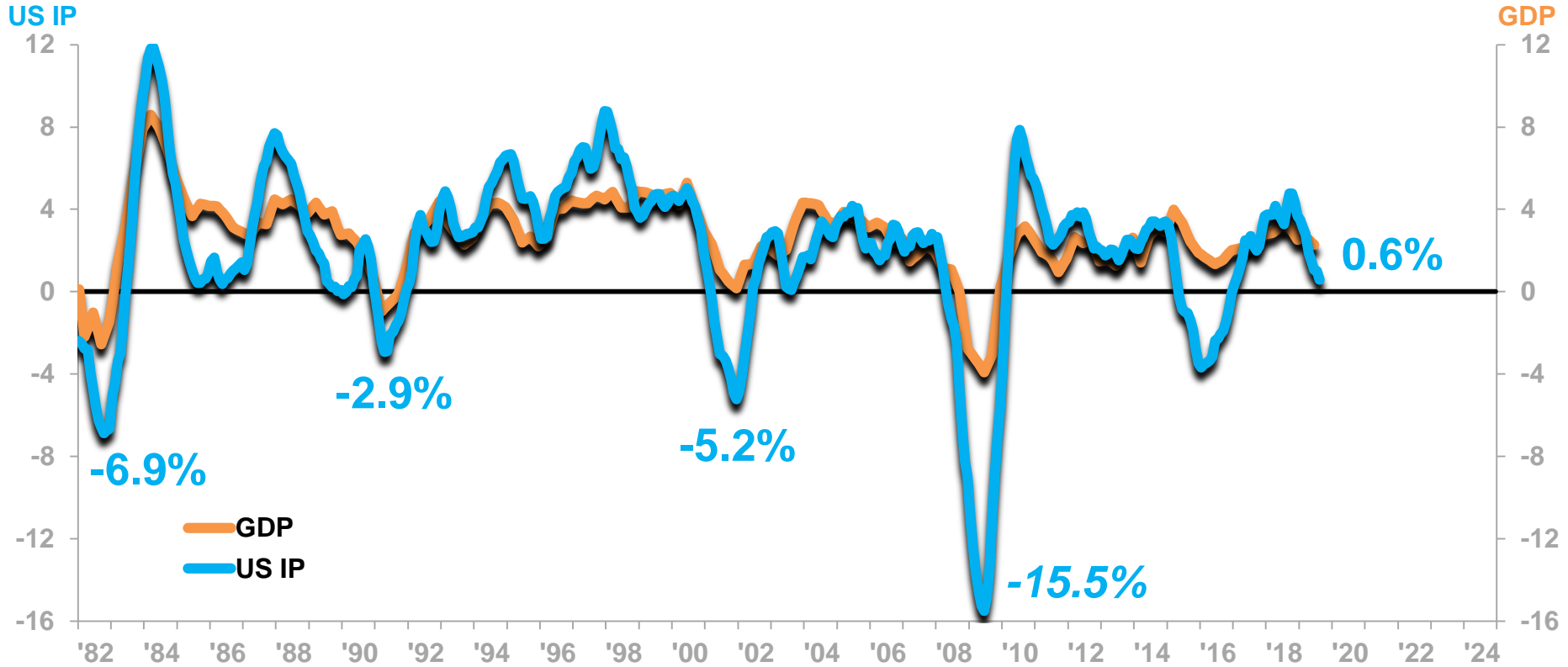
First In Forecasts Worldwide

3/12 Rates of Change

Source: Bureau of Economic Analysis

It Is Important to Think a Half Business Cycle Ahead

US Industrial Production to Gross Domestic Product



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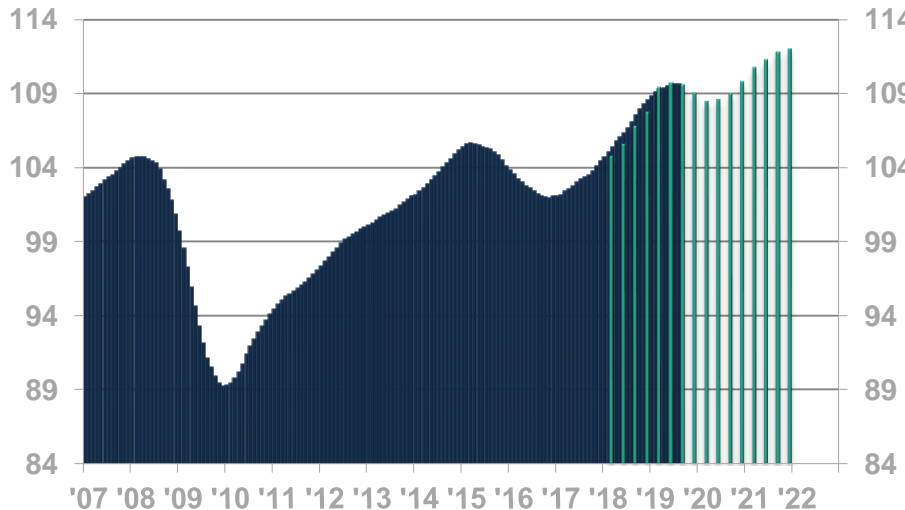
Year-over-Year, Quarter-to-Quarter (3/12)

Sources: FRB, BEA 11

4Q18 Business Cycle Peak, Slowing Growth for 2019

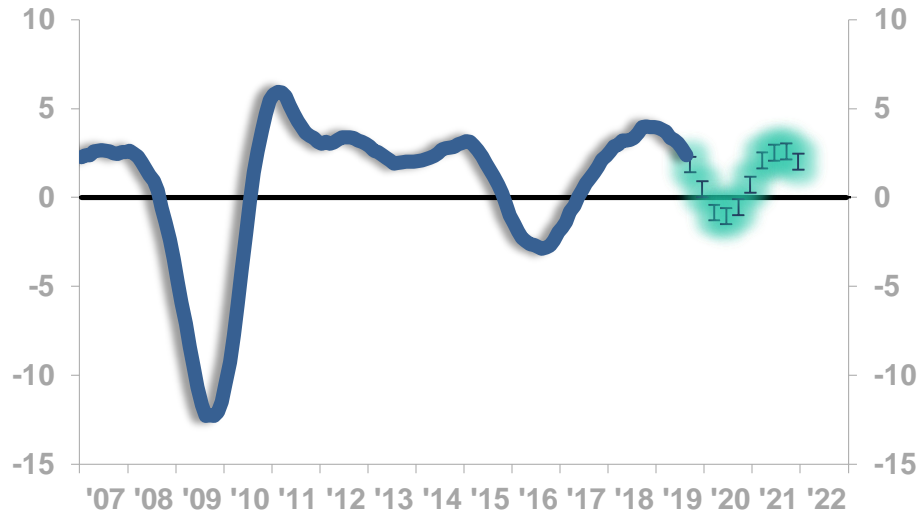
US Industrial Production Index

US Industrial Production Index 12-Month Moving Average



- **Annual Trend: 109.6**
- **Phase: C**
- **Year-over-Year: 2.4%**

Year-over-Year Growth Rate 12/12 Rate-of-Change



ITR 
Outlook

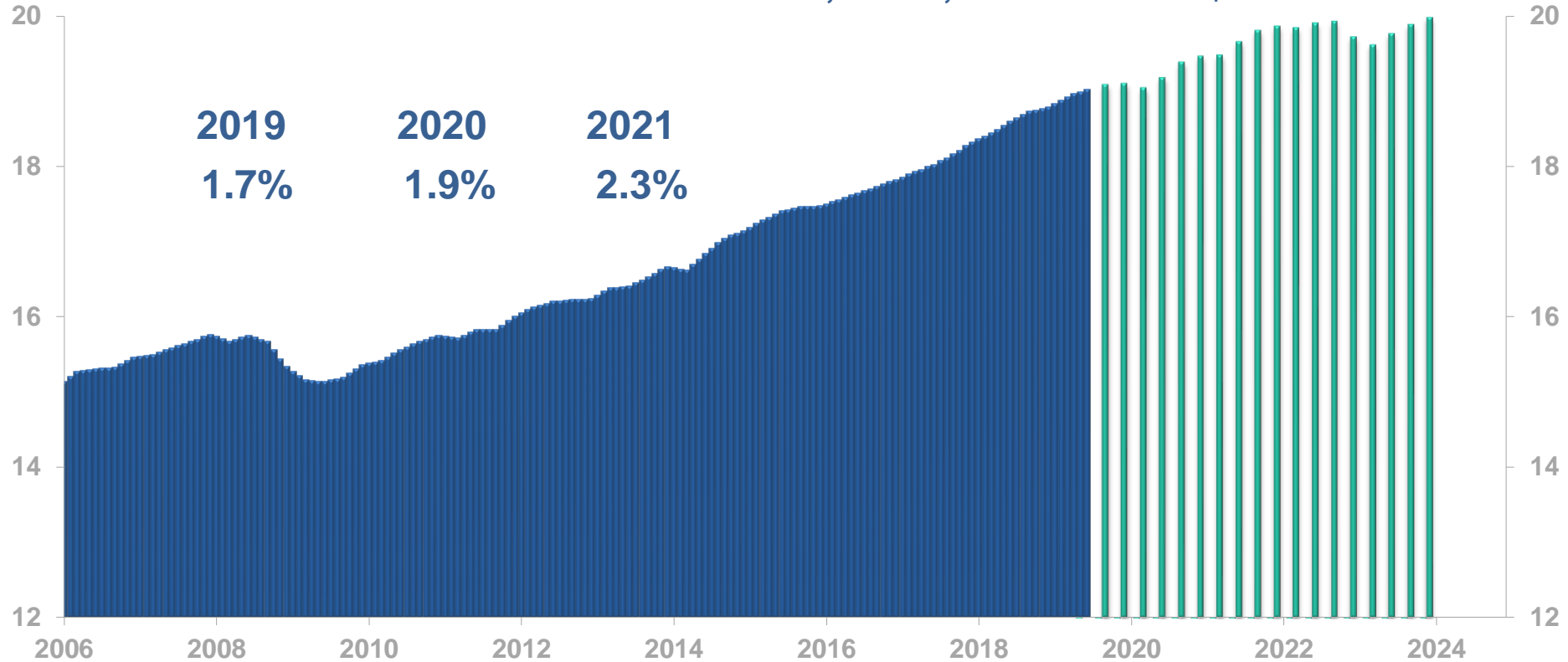
- 2019: 0.5%**
- 2020: 0.7%**
- 2021: 2.0%**



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US Economy Stalls in 2019 and Into 2020

US Gross Domestic Product, SAAR, Chained 2012 \$



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3-Month Moving Average

Source: BEA

A Powerful Management Tool

Rate-of-Change

	Raw	3MMT	3/12	12MMT	12/12
Oct-17	1.5				
Nov-17	1.5				
Dec-17	1.4	4.4			
Jan-18	1.5	4.4			
Feb-18	1.3	4.4			
Mar-18	1.3	4.2			
Apr-18	1.6	4.1			
May-18	1.6	4.2			
Jun-18	1.5	4.5			
Jul-18	1.5	4.7			
Aug-18	1.6	4.8			
Sep-18	1.7	4.8		18.0	
Oct-18	1.7	5.0		18.2	
Nov-18	1.7	5.0		18.4	
Dec-18	1.6	5.1	15.9%	18.6	
Jan-19	1.7	5.0	13.6%	18.8	
Feb-19	1.5	5.0	13.6%	19.0	26.7%
Mar-19	1.5	4.8	14.3%	19.2	25.5%
Apr-19	1.9	4.7	14.6%	19.4	25.2%
May-19	1.7	4.9	16.7%	19.7	22.4%
Jun-19	1.7	5.1	13.3%	19.8	20.0%
Jul-19	1.9	5.3	12.8%	20.0	18.3%
Aug-19	1.7	5.3	10.4%	20.2	15.4%
Sep-19	1.7	5.3	10.4%	20.3	12.7%

3/12 Rate-of-Change

$$= \frac{\text{September 2019 3MMT}}{\text{September 2018 3MMT}} \times 100 - 100$$

$$= \frac{5.3}{4.8} \times 100 - 100 = 10.4\%$$

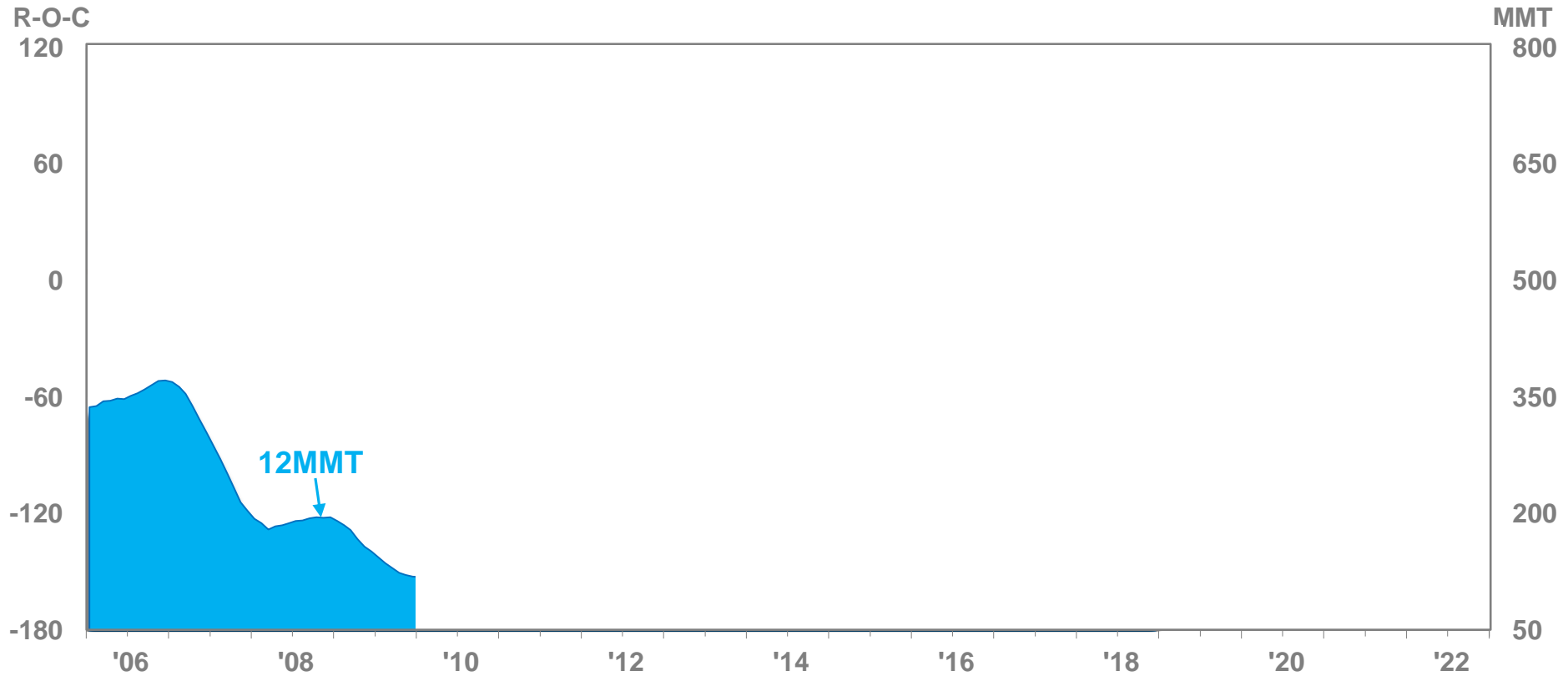
12/12 Rate-of-Change

$$= \frac{\text{September 2019 12MMT}}{\text{September 2018 12MMT}} \times 100 - 100$$

$$= \frac{20.3}{18.0} \times 100 - 100 = 12.7\%$$

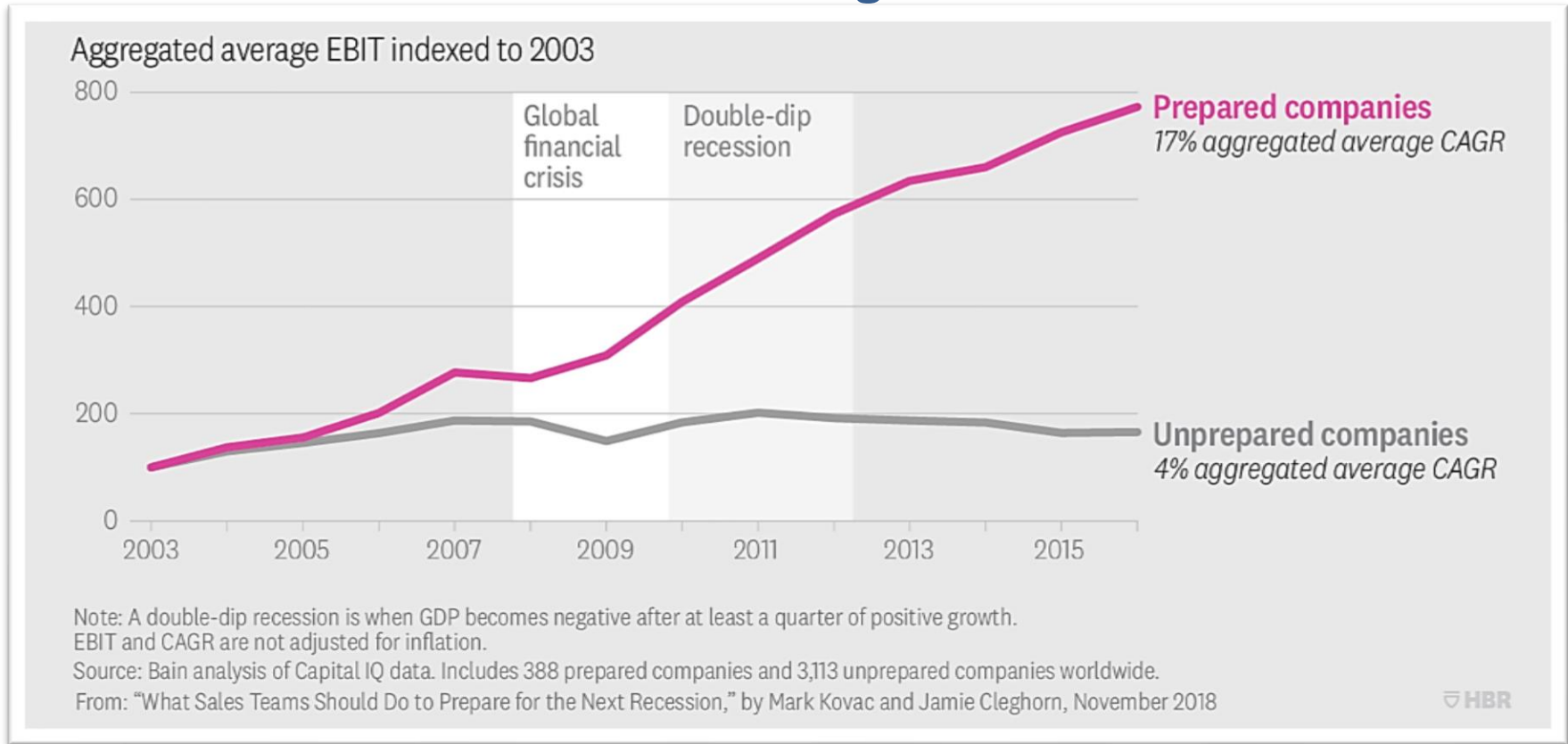


Rate-of-Change – A Management Tool



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Companies That Prepare for a Recession Pull Ahead During and After it





Tariff

A tax or duty that a government charges on goods coming into or going out of their country

Tariffs and Other Fun Things

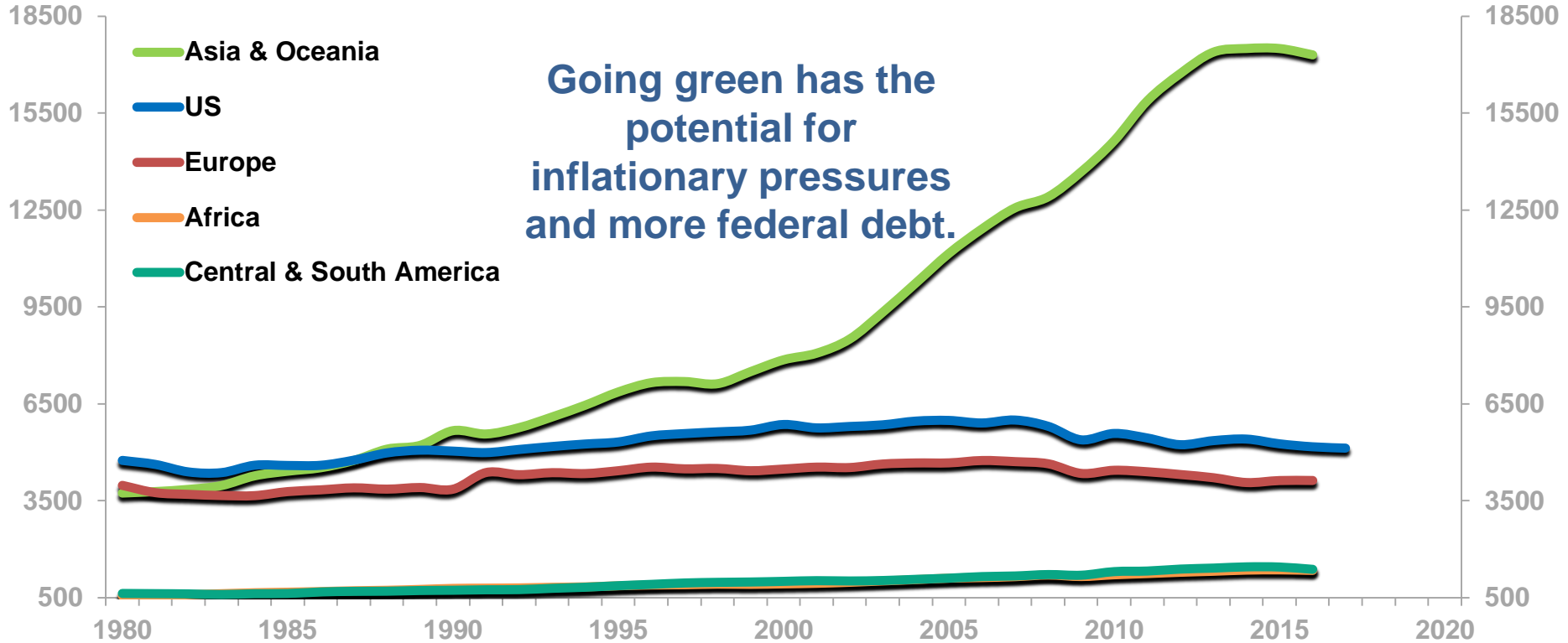


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Things Are Getting Better

World Carbon Dioxide Emissions



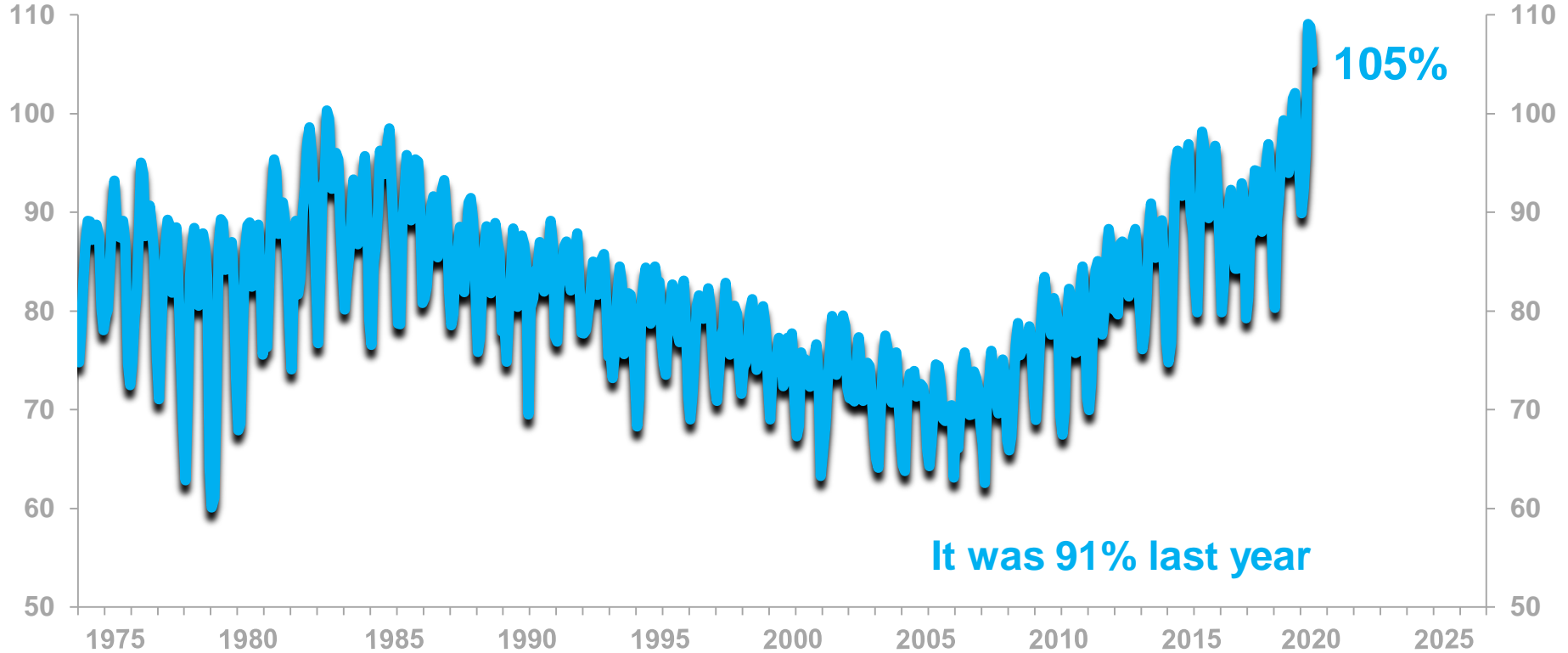
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Millions of Metric Tons

Source: EIA

An Energy Independent Nation

Percent of Energy Consumed from Domestic Sources



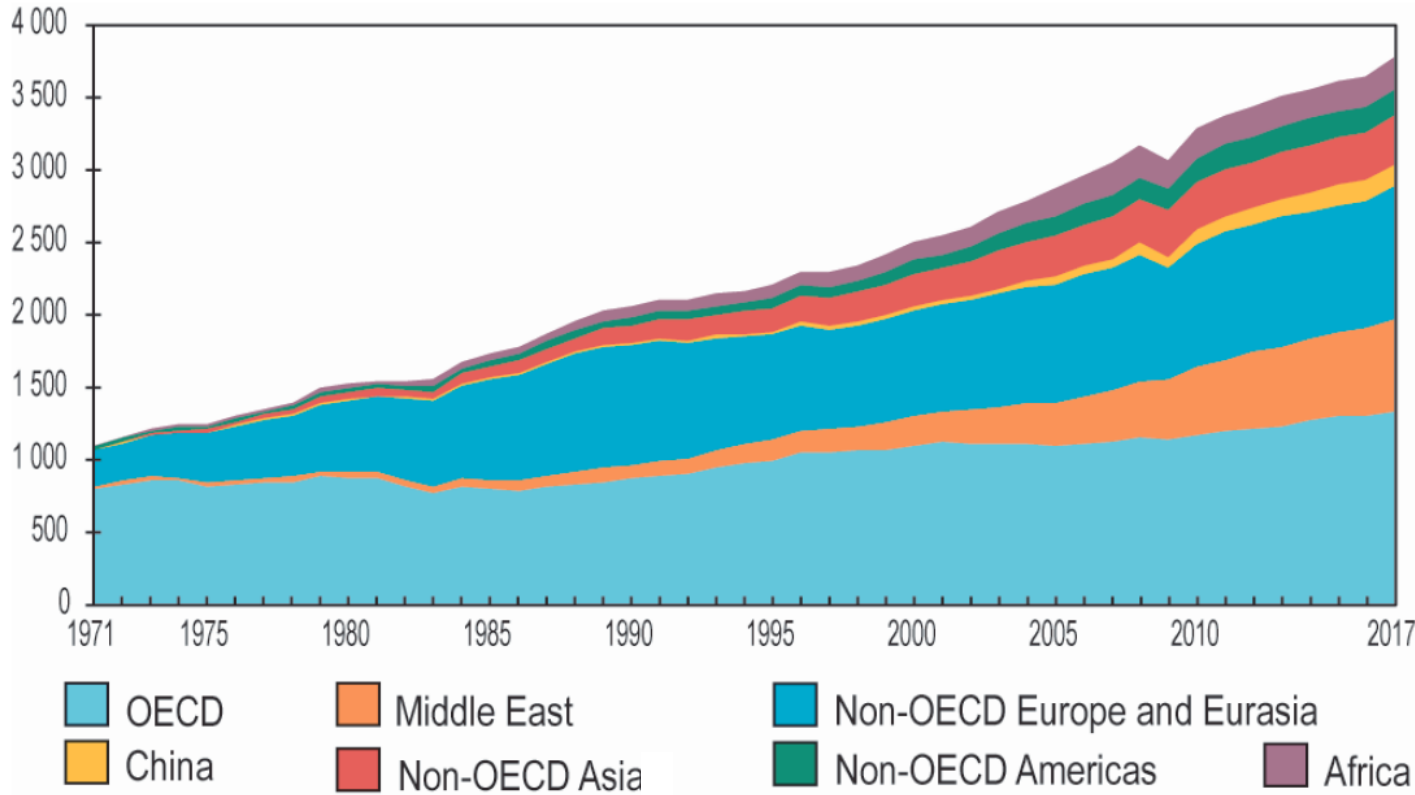
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Percent
Source: EIA

Availability is a Huge Advantage

World Natural Gas Production by Region



Producers	bcm	% of World Total
United States	760	20.2
Russia	694	18.4
Iran	214	5.7
Canada	184	4.9
Qatar	169	4.5
China	142	3.8
Norway	128	3.4
Australia	105	2.8
Algeria	94	2.5
Saudi Arabia	94	2.5
Rest of World	1,184	31.3
World	3,768	100

Billion Cubic Meters

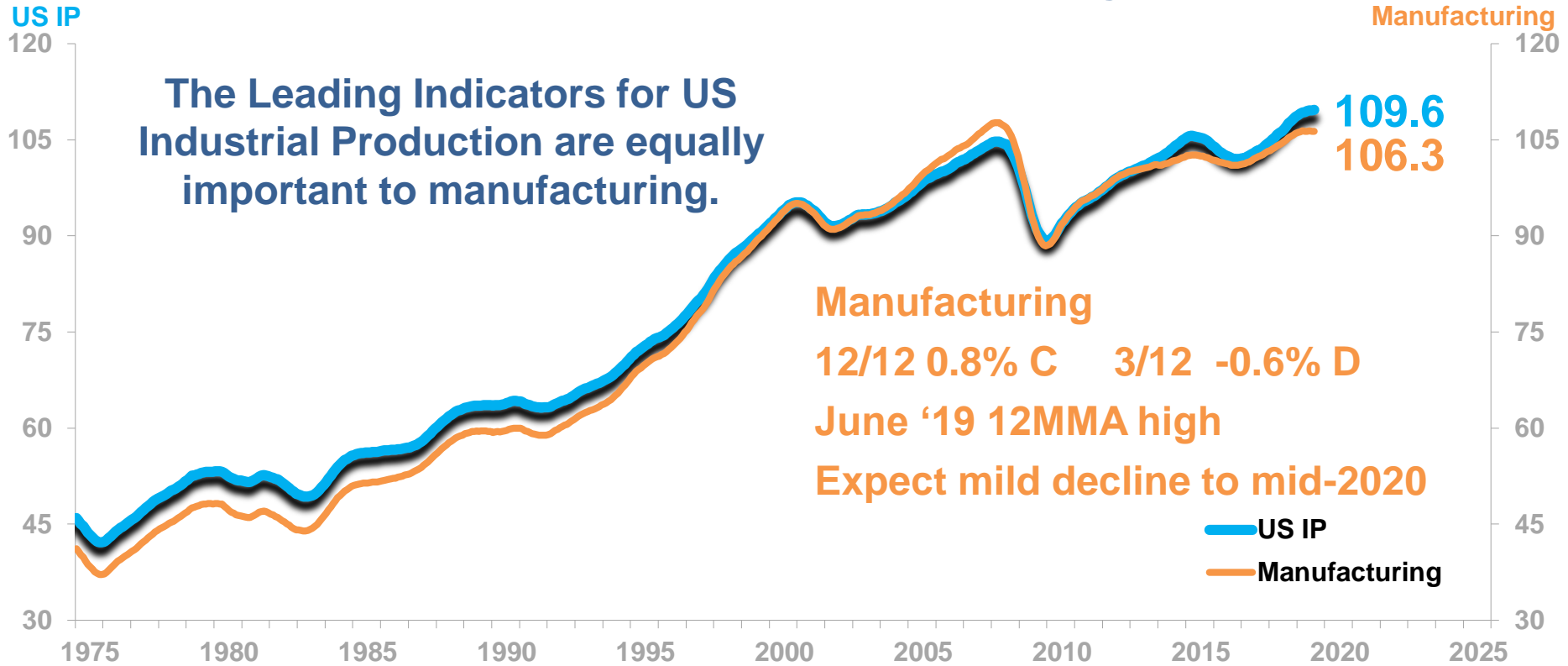
Source: IEA



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Manufacturing is Close to a Record High

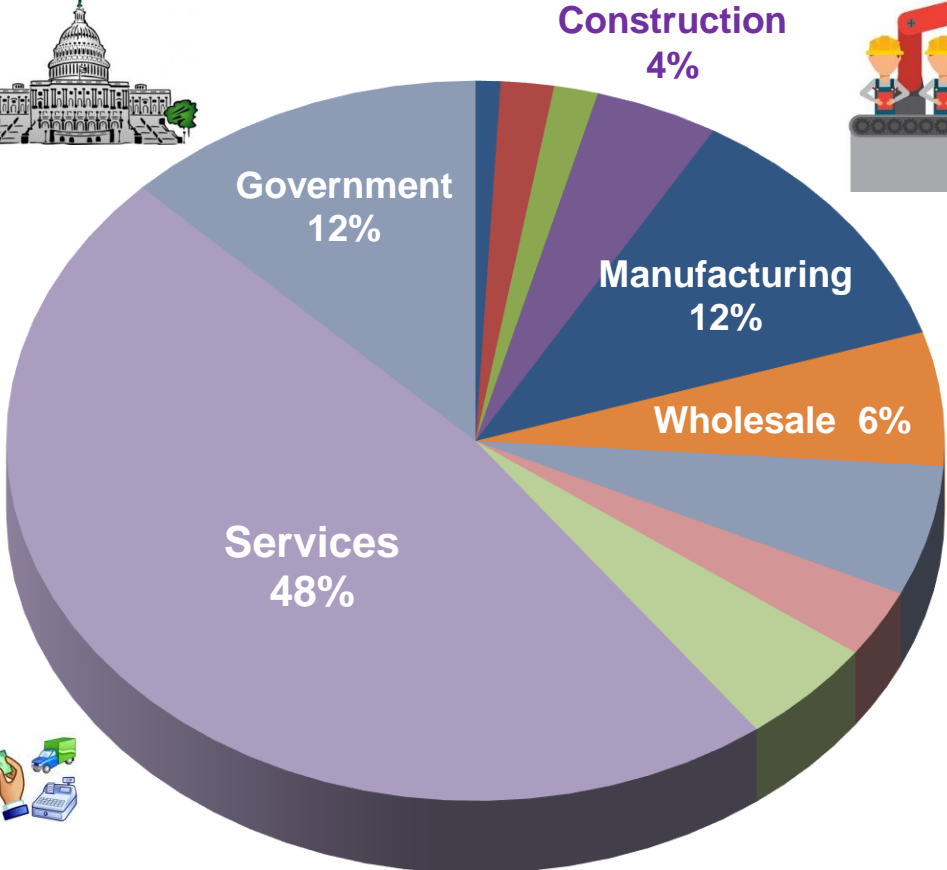
US Industrial Production Index to US Total Manufacturing Production Index



US GDP by Value Add



- Agriculture, forestry, fishing, and hunting
- Mining
- Utilities
- Construction
- Manufacturing
- Wholesale trade
- Retail trade
- Transportation and warehousing
- Information
- Services
- Government

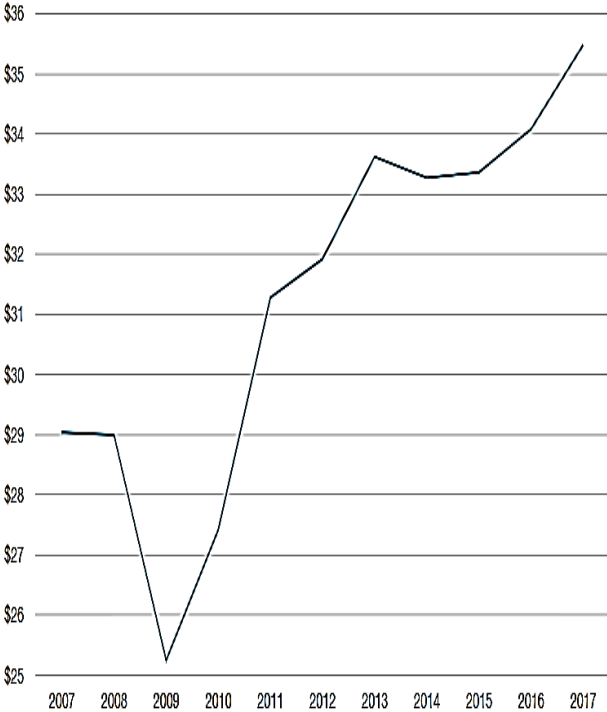


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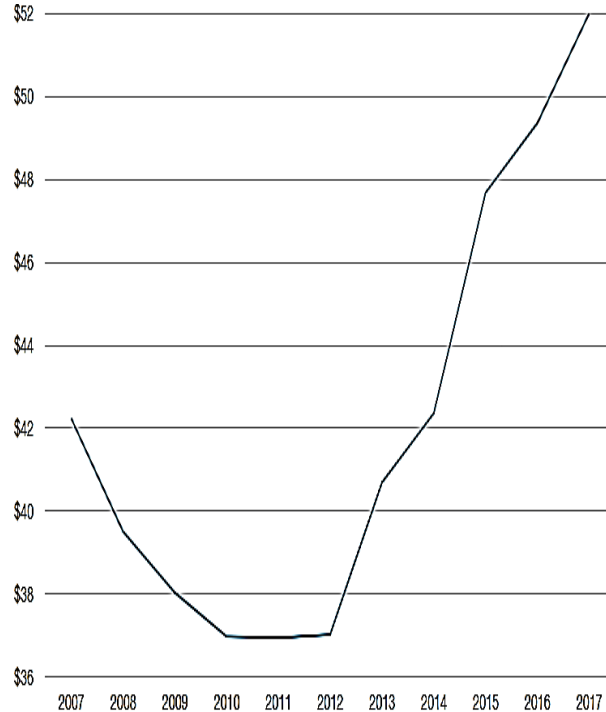
Important and On The Rise

State Manufacturing Output Through 2017

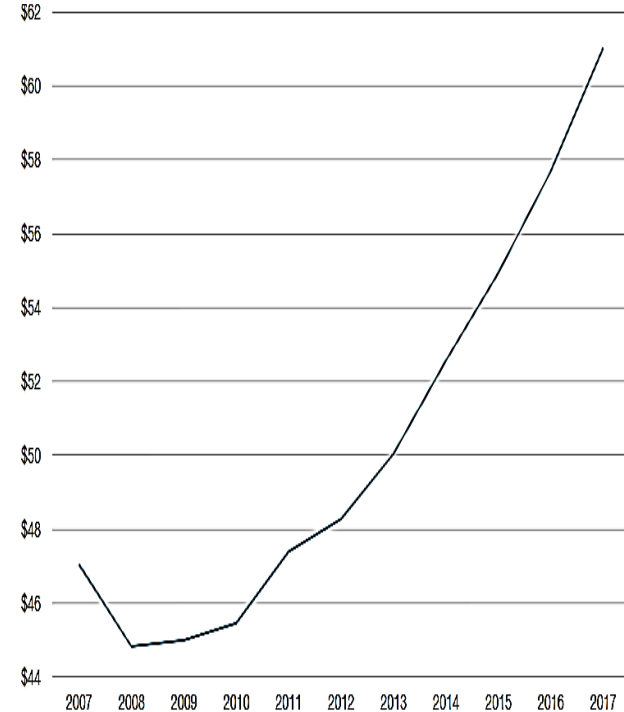
Alabama



Florida



Georgia

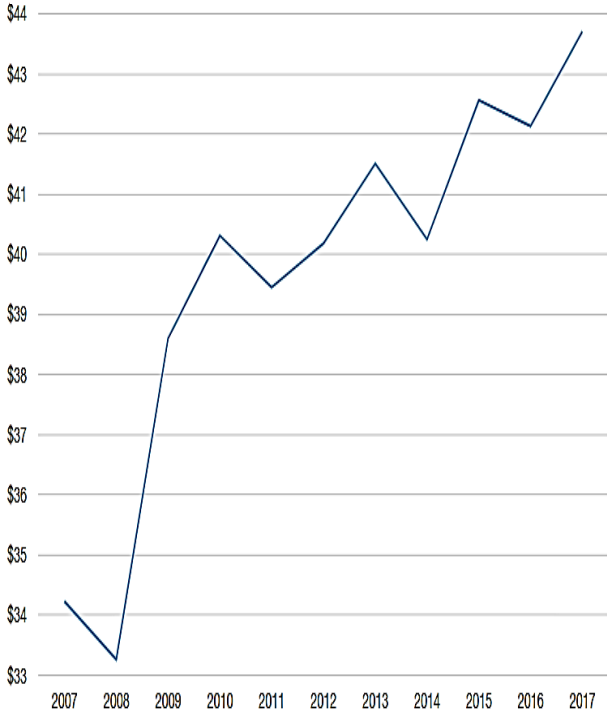


First In Forecasts Worldwide

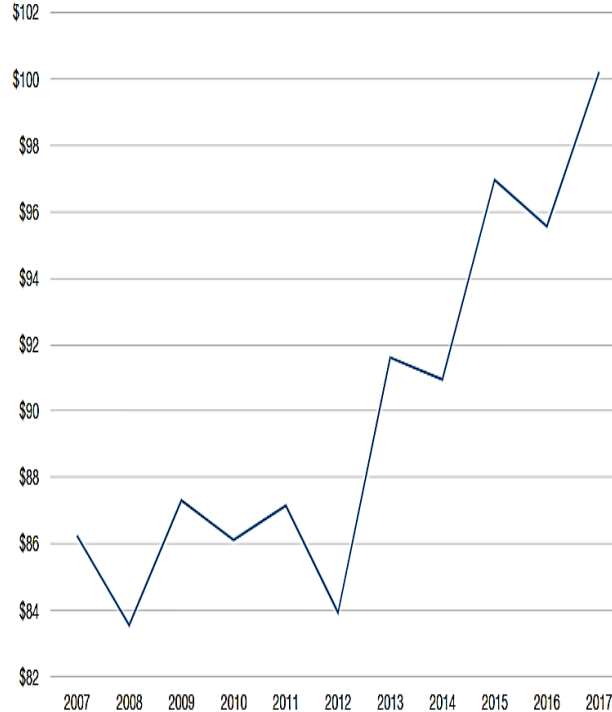
Important and On The Rise

State Manufacturing Output Through 2017

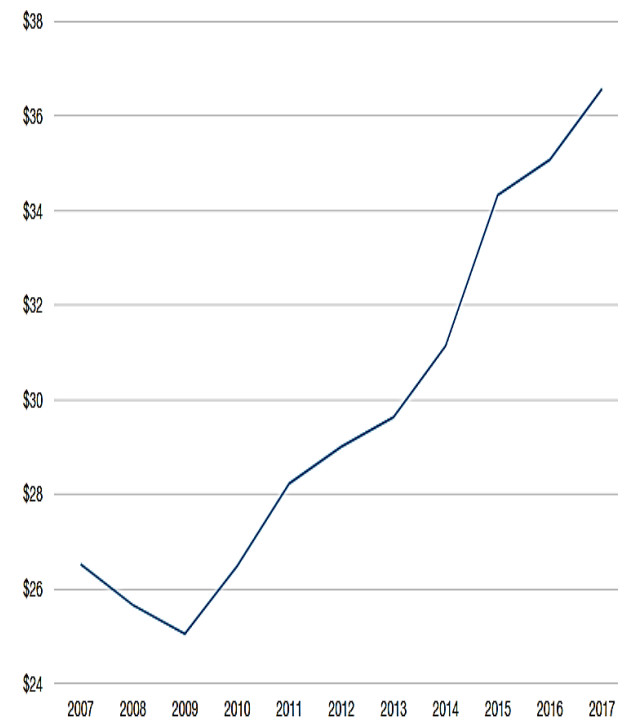
Virginia



North Carolina



South Carolina



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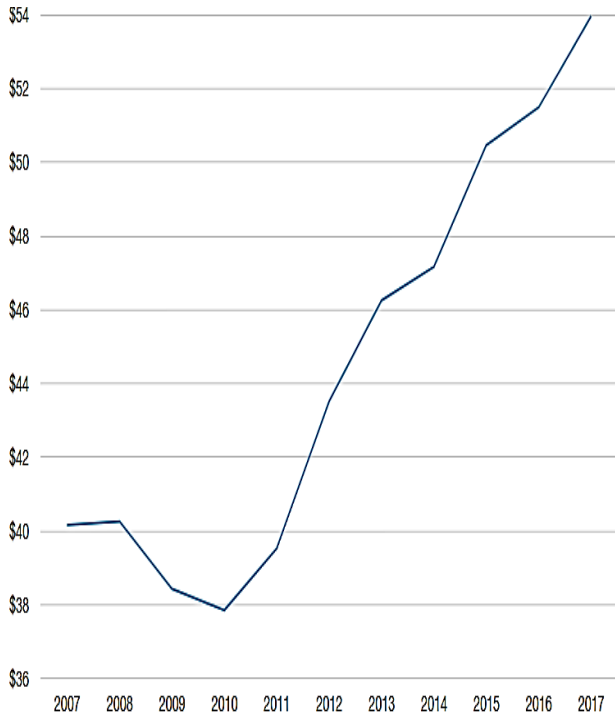
Billions of Dollars

Source: NAM.org

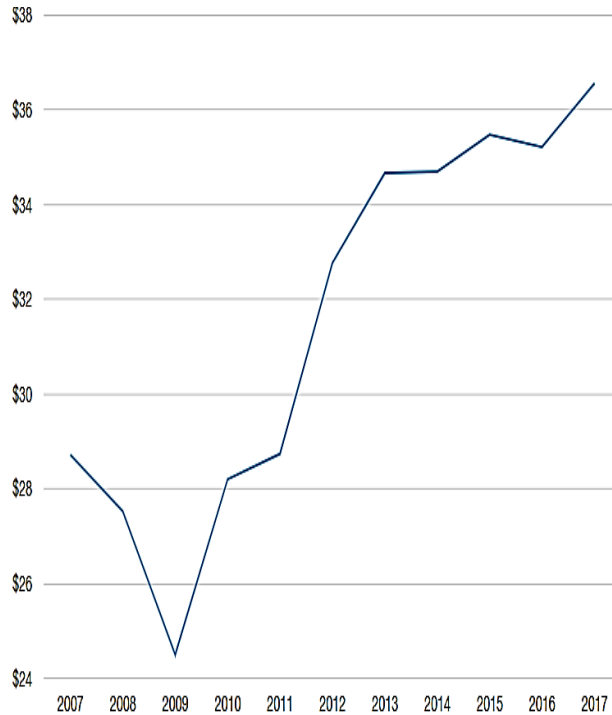
Important and On The Rise

State Manufacturing Output Through 2017

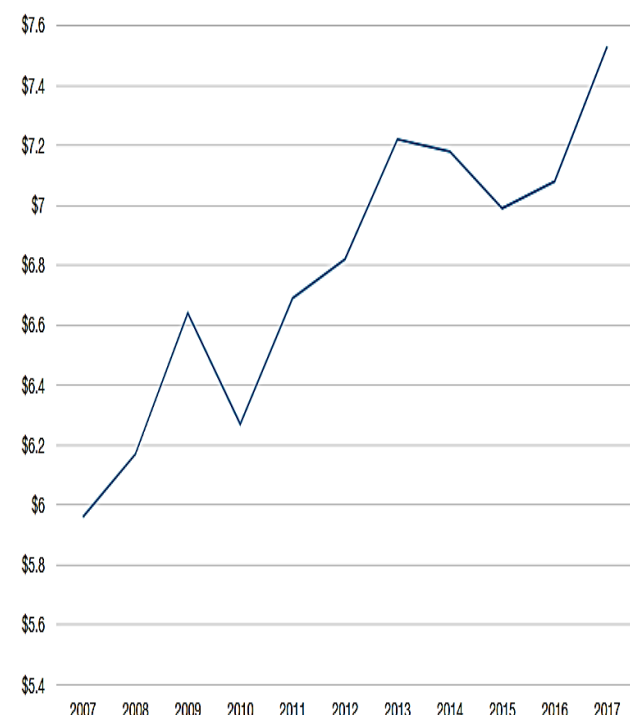
Tennessee



Kentucky



West Virginia



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US Trade in Goods with World (Exports) are an important part of economic health

US Trade in Goods with World: Exports to Imports



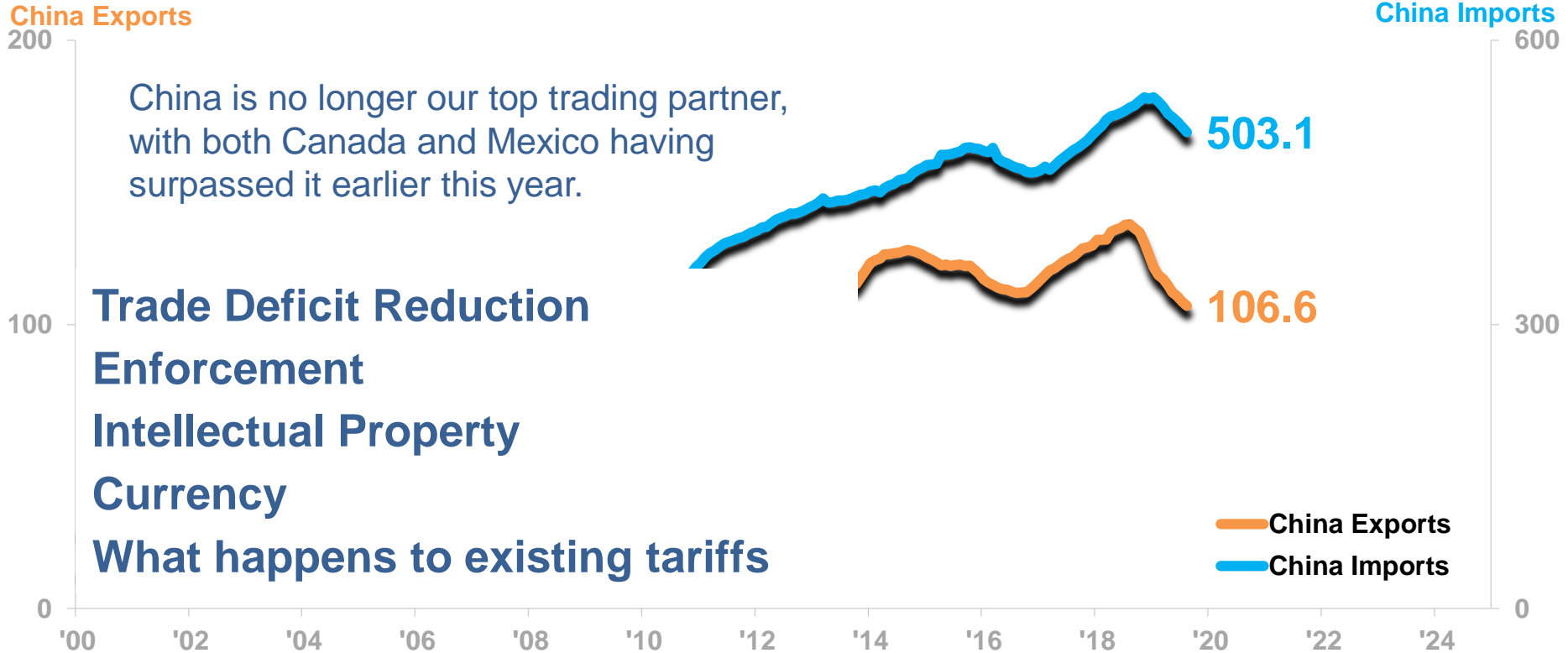
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12/12 Rates-of-Change

Sources: Census Bureau, FRED

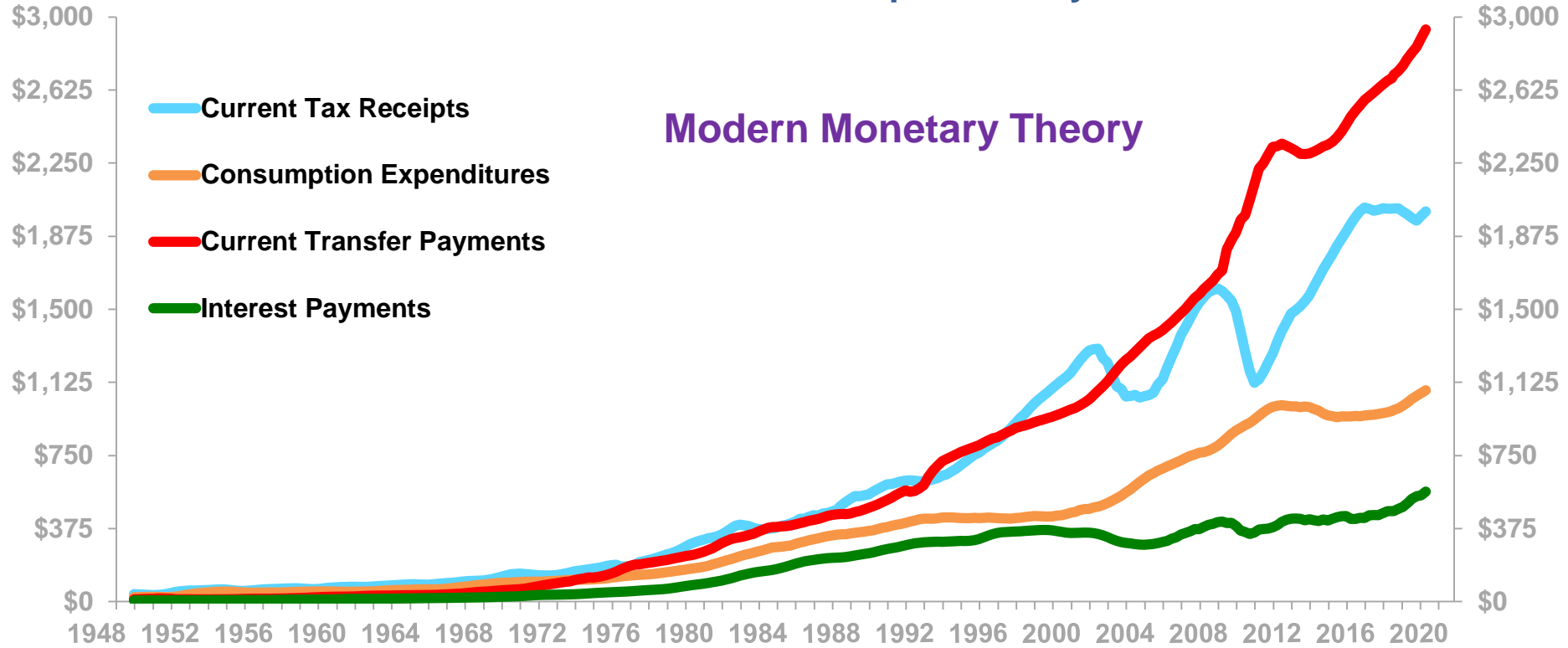
Widening Trade Imbalance with China

US Trade with China: Imports to Exports



Issues Government Will and Won't Tackle

US Federal Government Receipts and Payments





The Long View

Prosperity in the Age of Decline

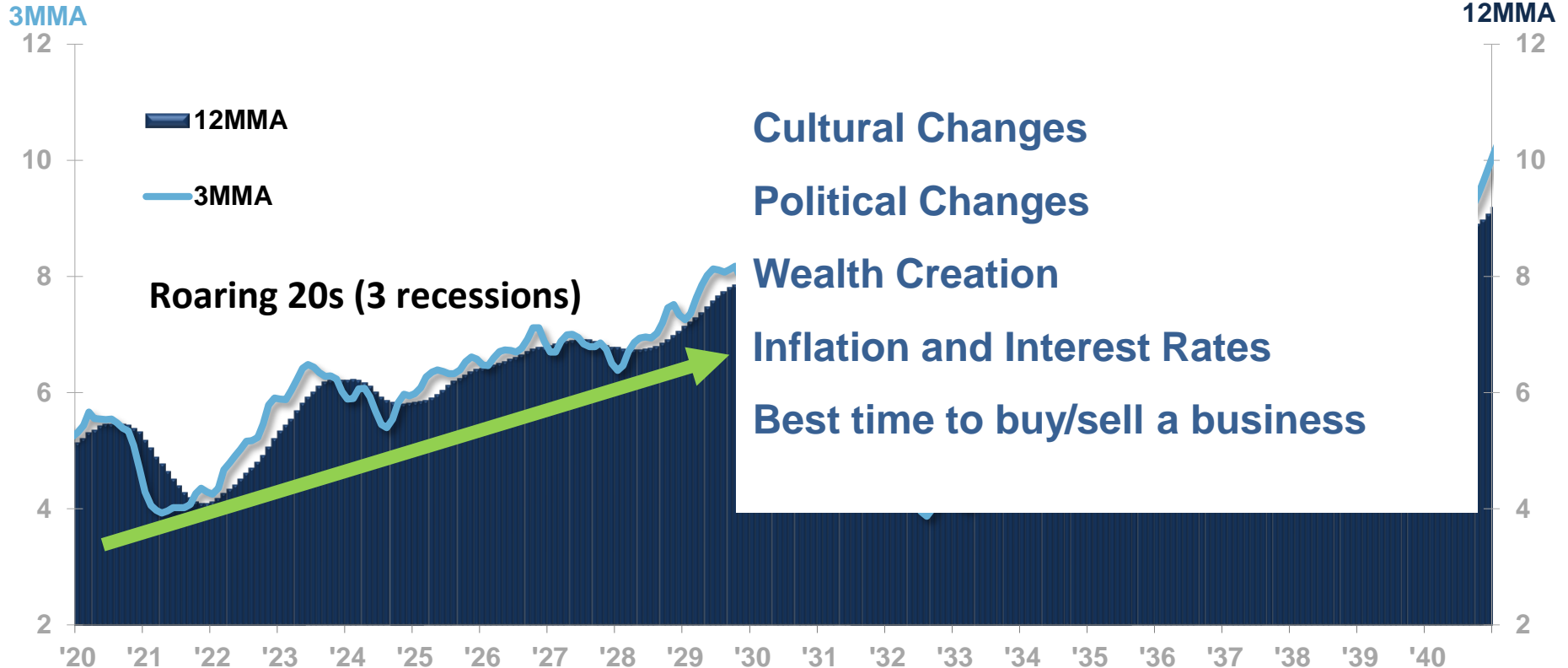


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A Model for the Future

US Industrial Production Index



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Data Trends

Source: FRB



Global Partners

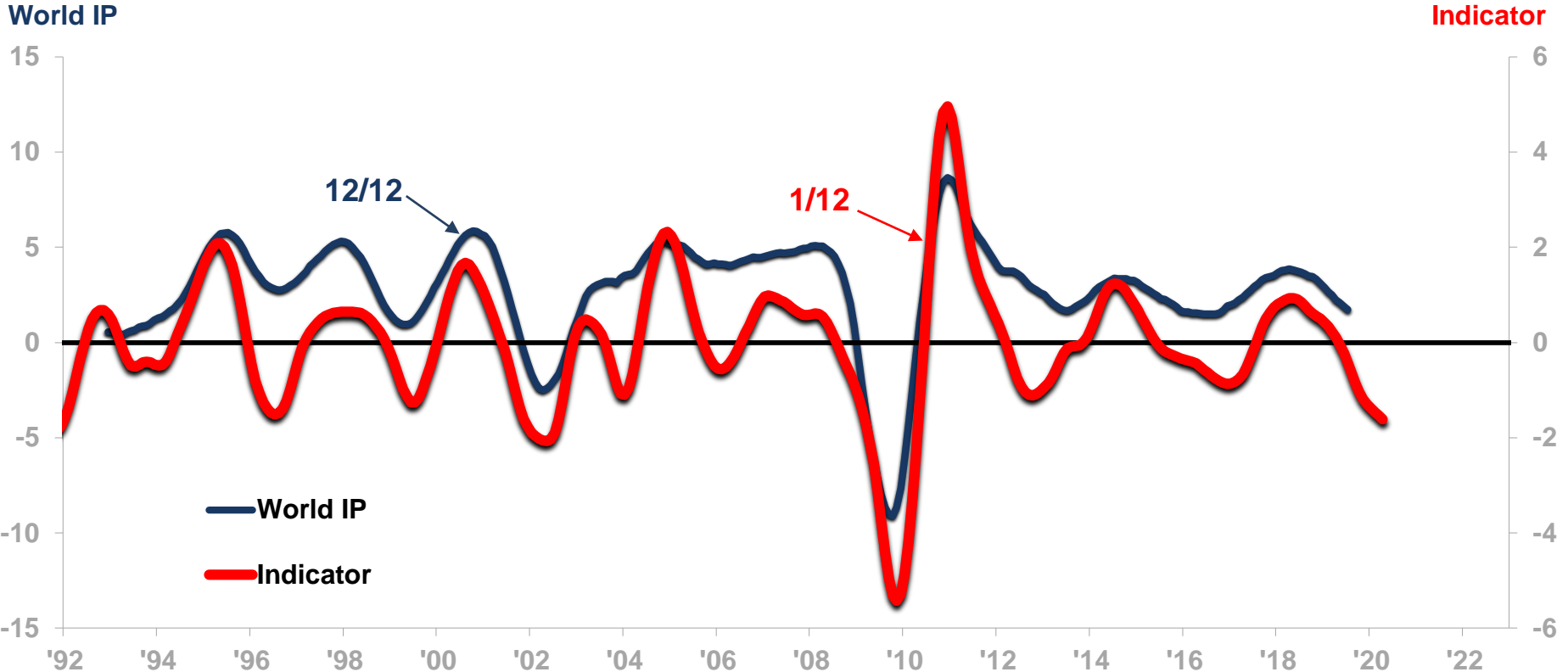


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Trade is Import During this Stage of the Business Cycle

World Industrial Production Index to G7 Leading Indicator

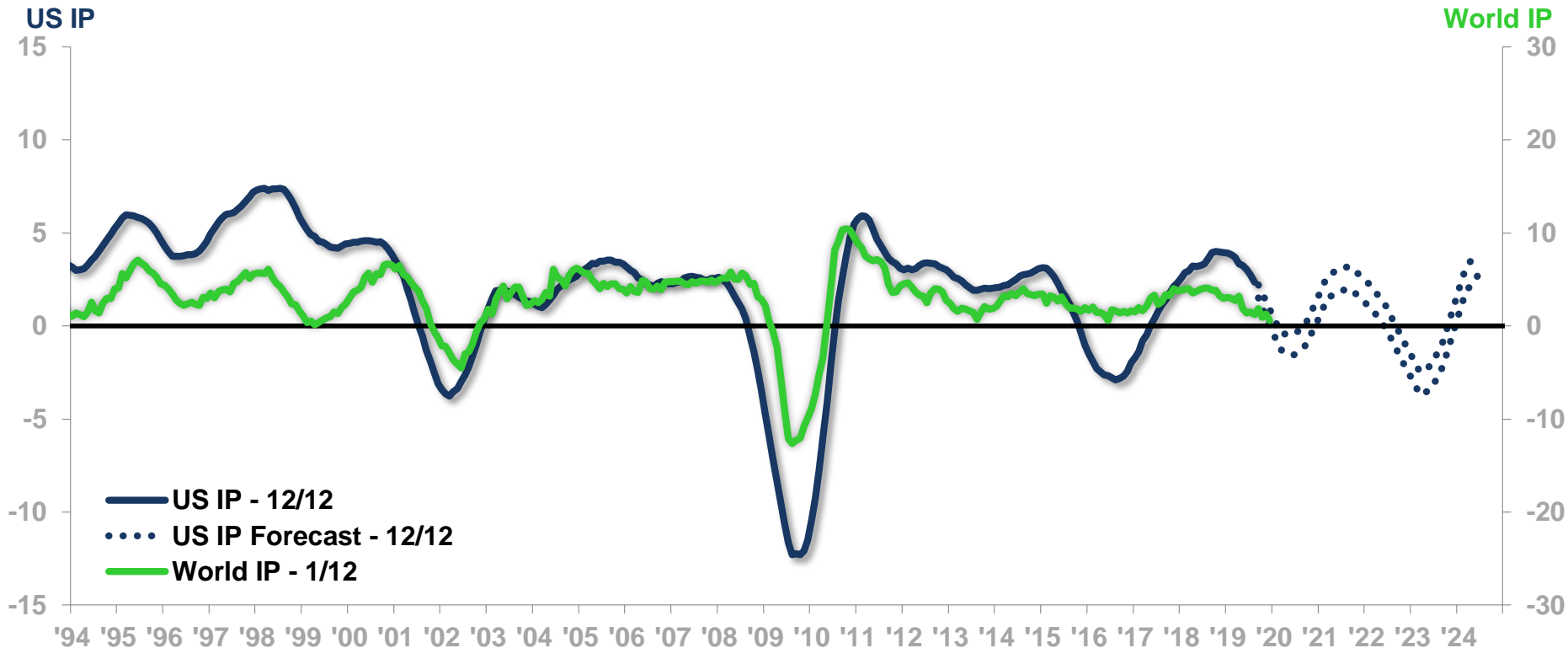


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Rates-of-Change

A Downward Signal from the World IP

US Industrial Production Index to World Industrial Production Index



First In Forecasts Worldwide

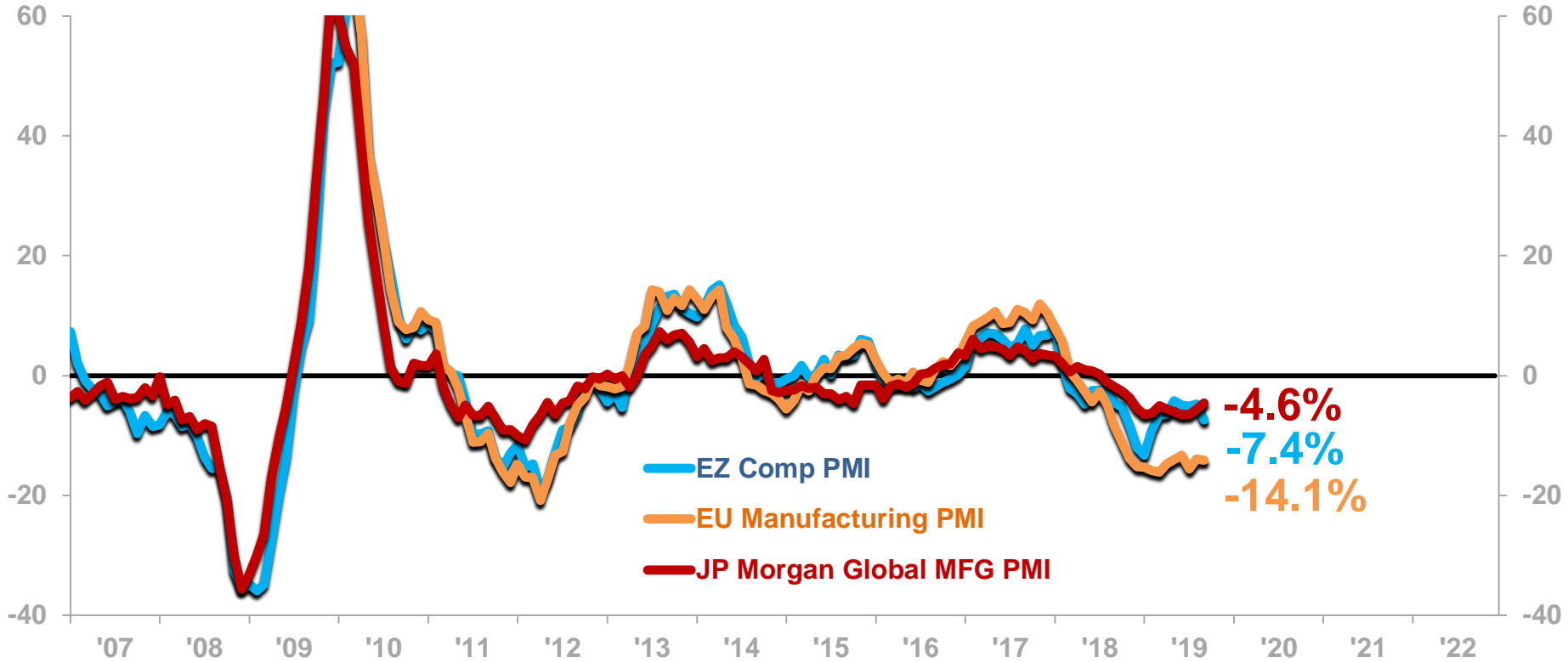
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Rates-of-Change

Sources: FRB, CEIC

Leading Indicators Portend Downward Pressure

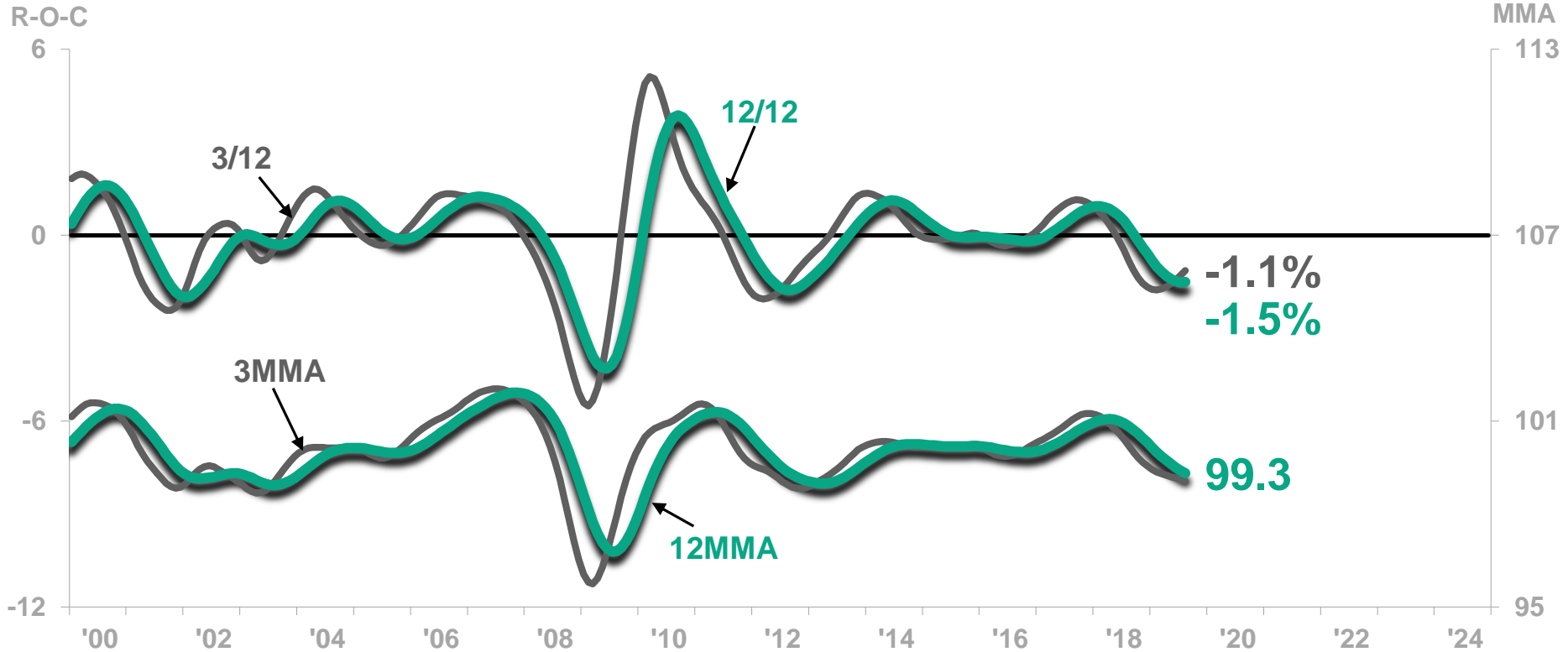
Global Leading Indicators



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Too Early to Call the 3/12 Turn

Europe Leading Indicator



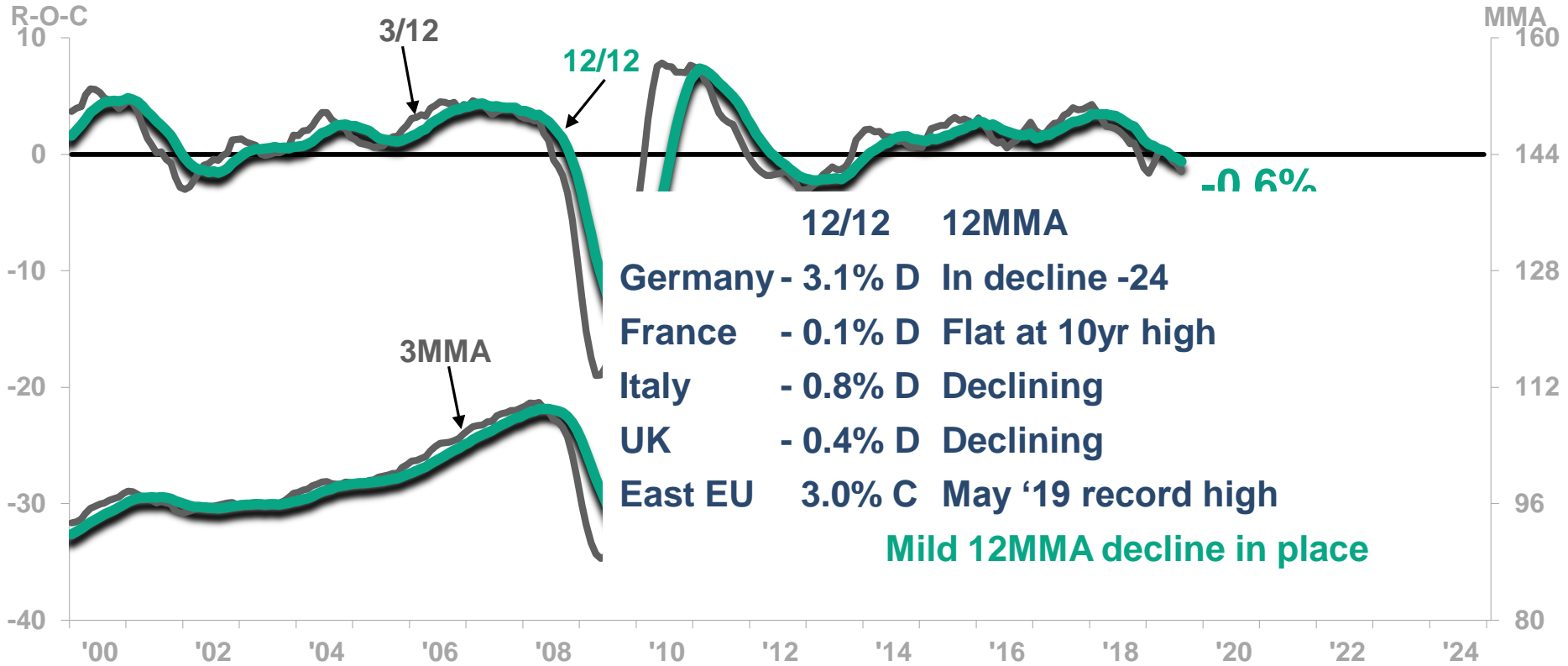
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Rates-of-Change

Source: OECD

More 12MMA Decline in 2019

Europe Industrial Production Index



Mild 12MMA decline in place



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2015 = 100 SA

Source: Eurostat 36



Leading Indicators System Approach



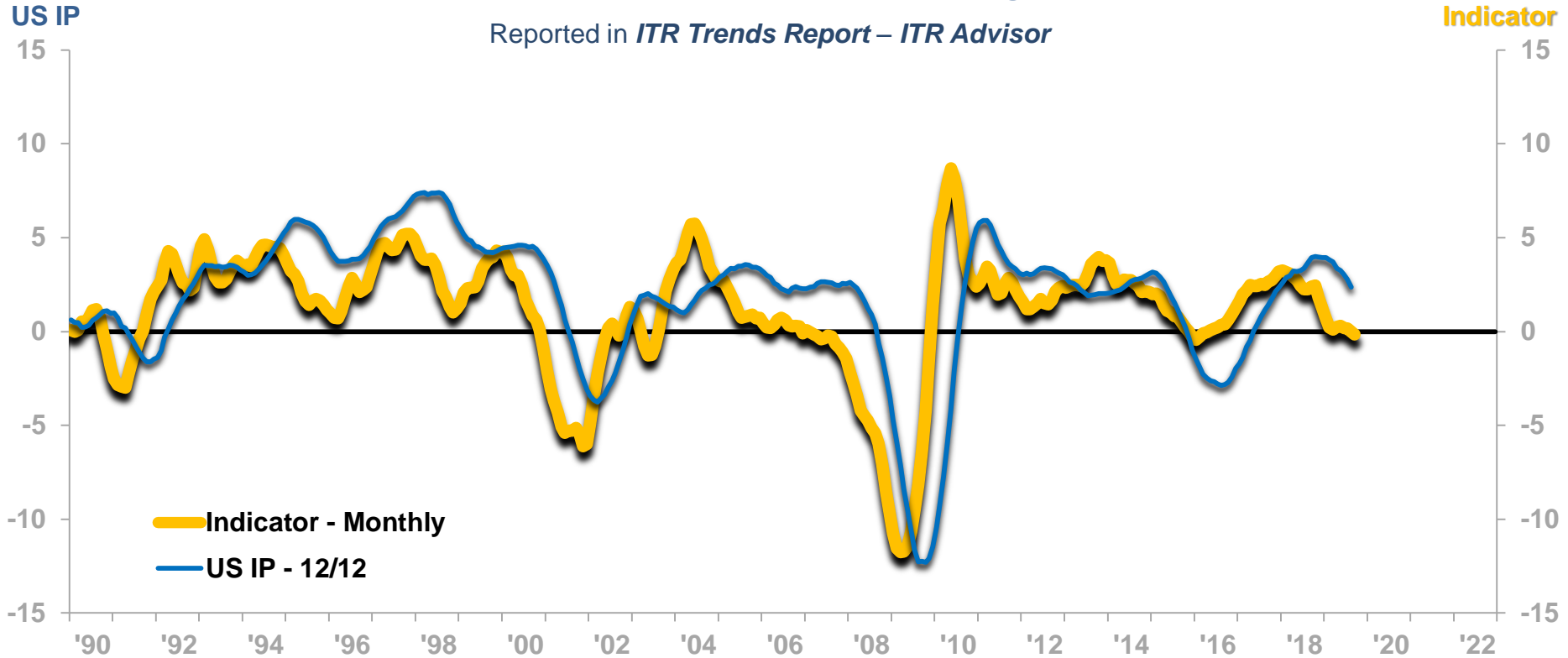
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ITR's Leading Indicator™ Says Problems Ahead

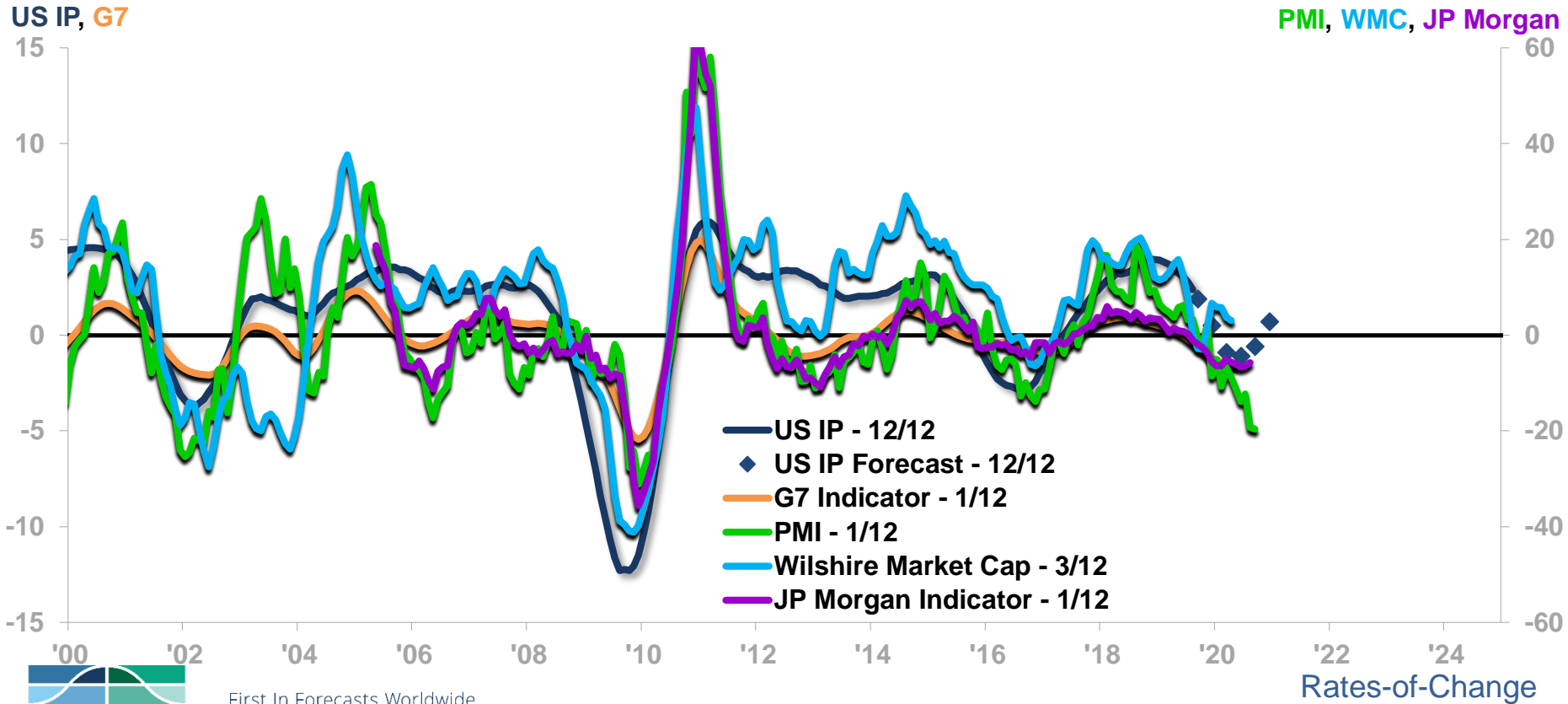
US Industrial Production to ITR Leading Indicator™

Reported in *ITR Trends Report – ITR Advisor*



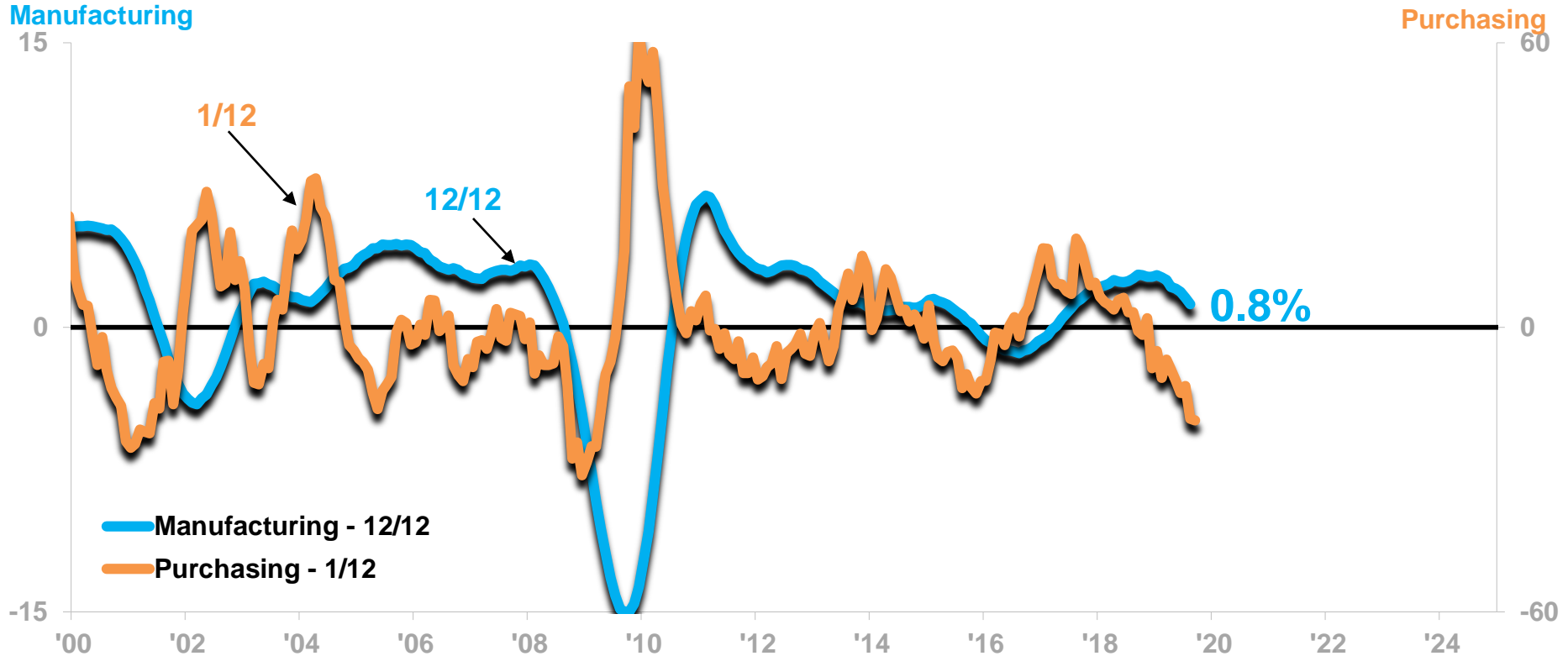
Leading Indicator System as a Powerful Tool

US Industrial Production Index to Various Leading Indicators



Downside Business Cycle Pressure Clearly Evident

US Total Manufacturing Production Index to US Purchasing Managers Index



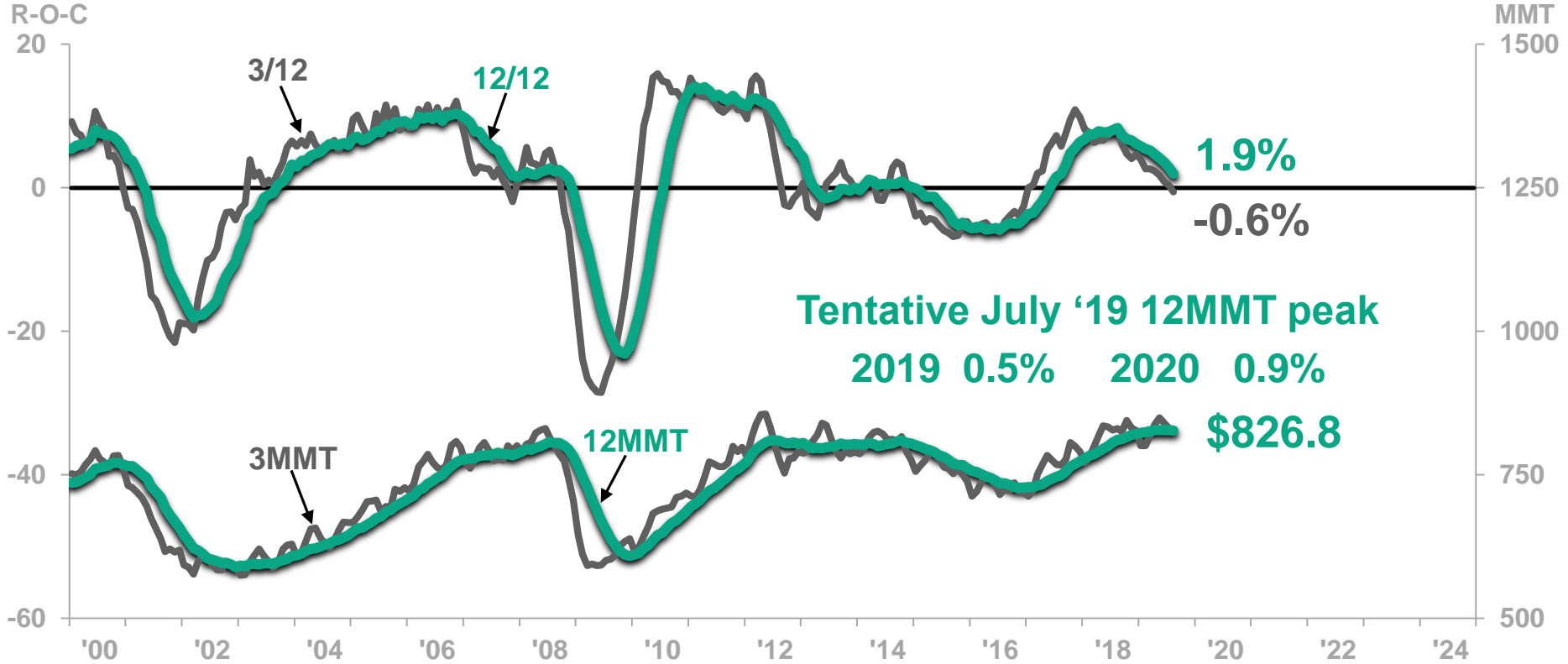
US Manufacturing Production

Industry	12/12	Phase	3/12	Phase	12MMA/T	Comments
Manufacturing (exl vehicles)	0.6%	C	-0.7%	D	Down	Mild decline in 1H20
High-Tech Industries	4.3%	C	2.0%	C	Up	Record highs
Pharmaceuticals	1.9%	C	1.2%	B	Up	Steep 2Q 3MMA rise
Machinery	-6.0%	D	-3.0%	A	Down	Lowest 12MMA in 2 yrs
Civilian Aircraft	2.2%	C	-1.3%	A	Down	Mild decline ahead
Tires	0.0%	C	-5.7%	D	Down	Steepest Q2 drop – '08
BMW Light Vehicles	9.2%	B	57.8%	B	Up	Highest 12MMT in 2 yrs



Decelerating CAPEX Trend

US Nondefense Capital Goods New Orders w/o Aircraft



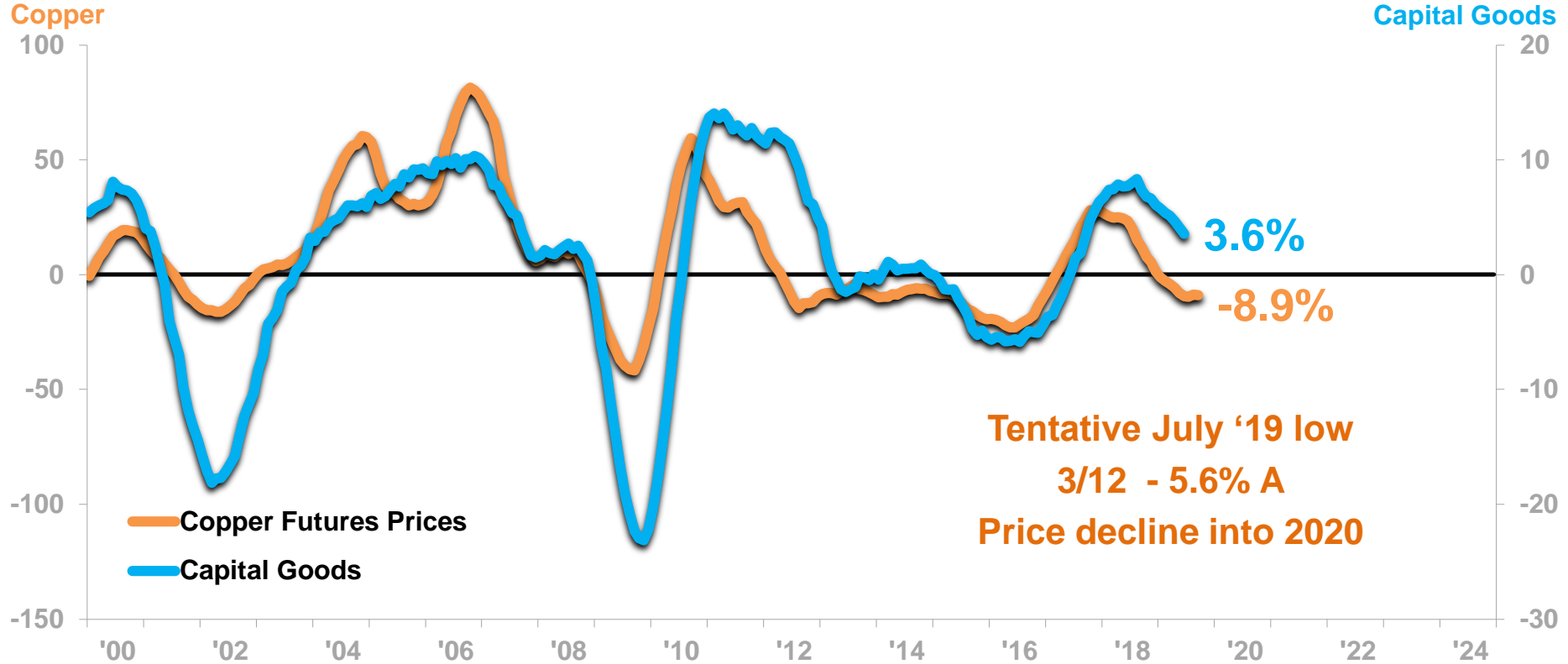
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Billions of Dollars

Source: Census Bureau

Tentative Good News for New Orders in 2020

US Copper Futures Prices to US Nondefense Capital Goods New Orders(excluding aircraft)



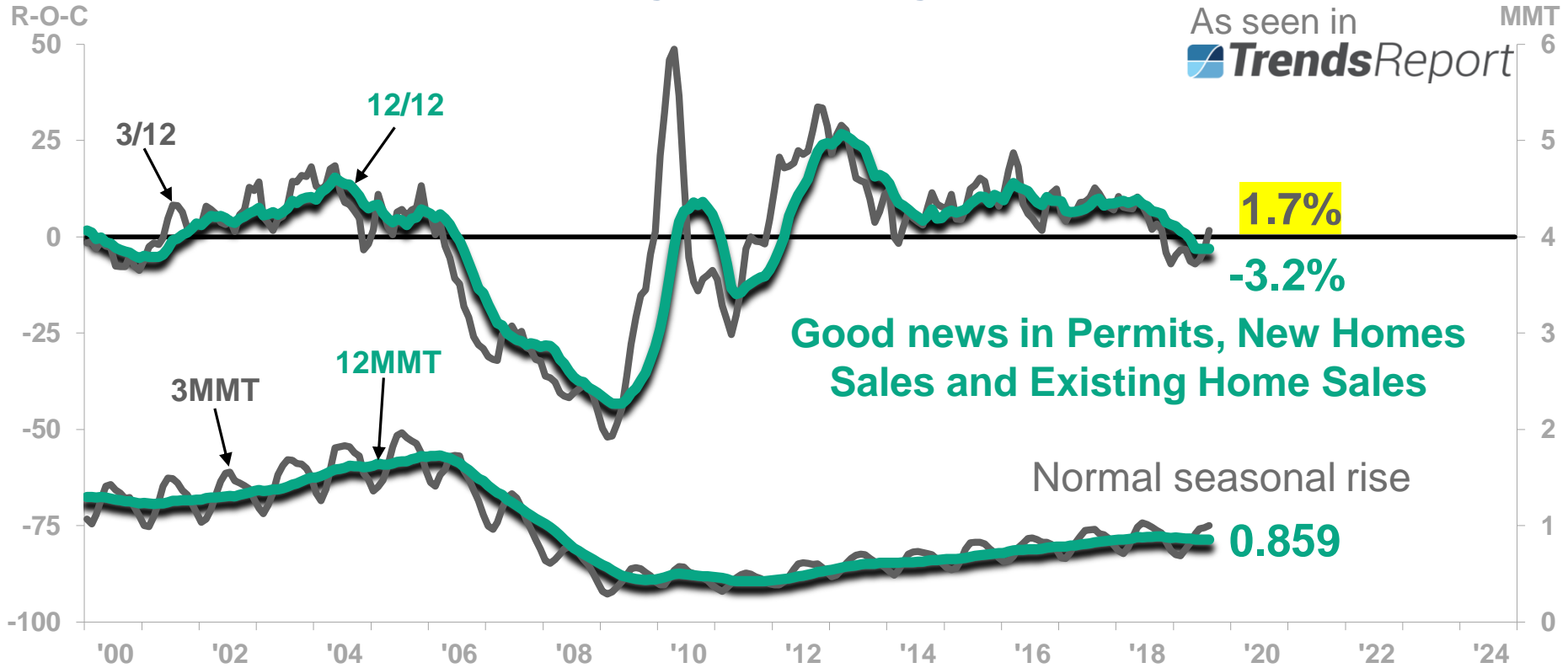
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12/12 Rates-of-Change

Sources: WSJ, Census Bureau 43

Preliminary Indication of Rise in 2020

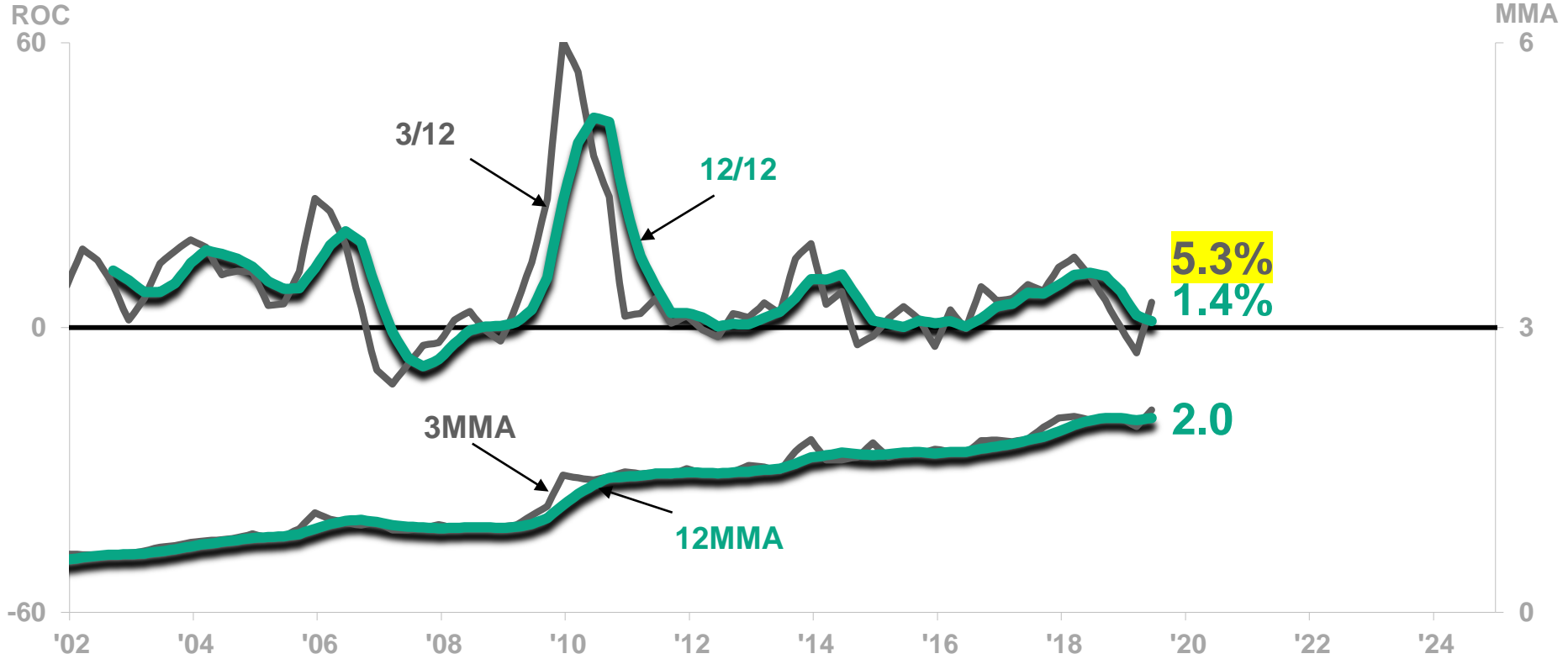
US Single Unit Housing Starts



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Good News for 2020

US Domestic Corporate Cash Holdings

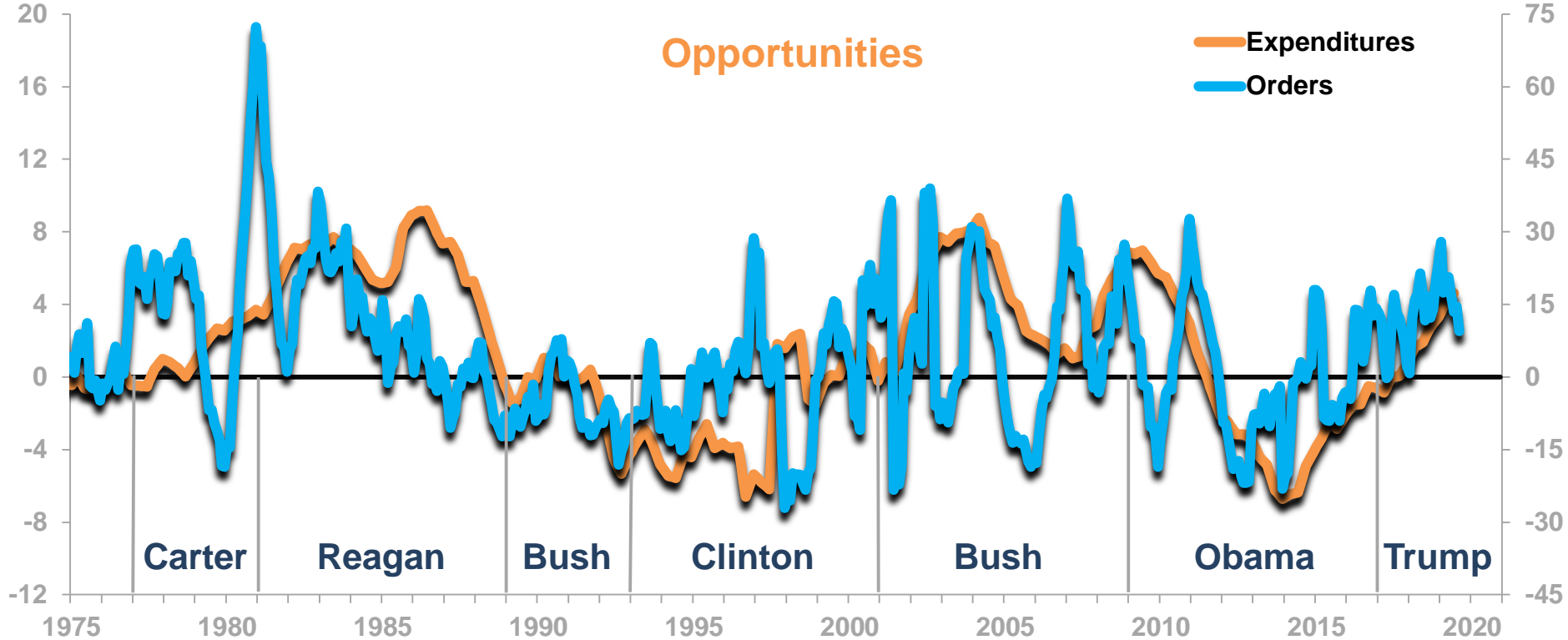


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US National Defense Expenditures to US Defense Capital Goods New Orders

Expenditures

Orders



Opportunities

Expenditures
Orders

Carter

Reagan

Bush

Clinton

Bush

Obama

Trump



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12/12 Rates-of-Change



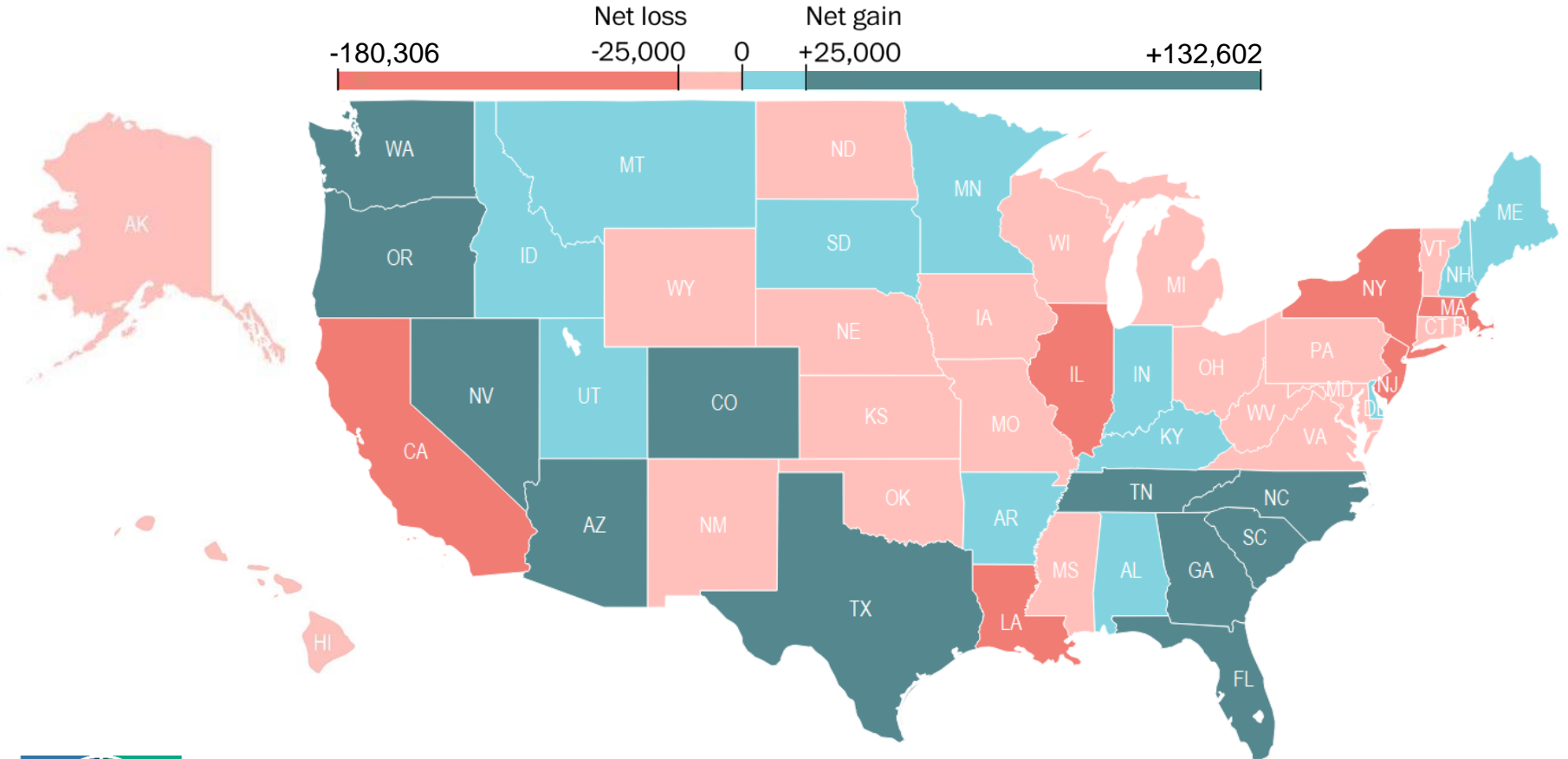
People



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Net Migration Between States, July 2017-July 2018

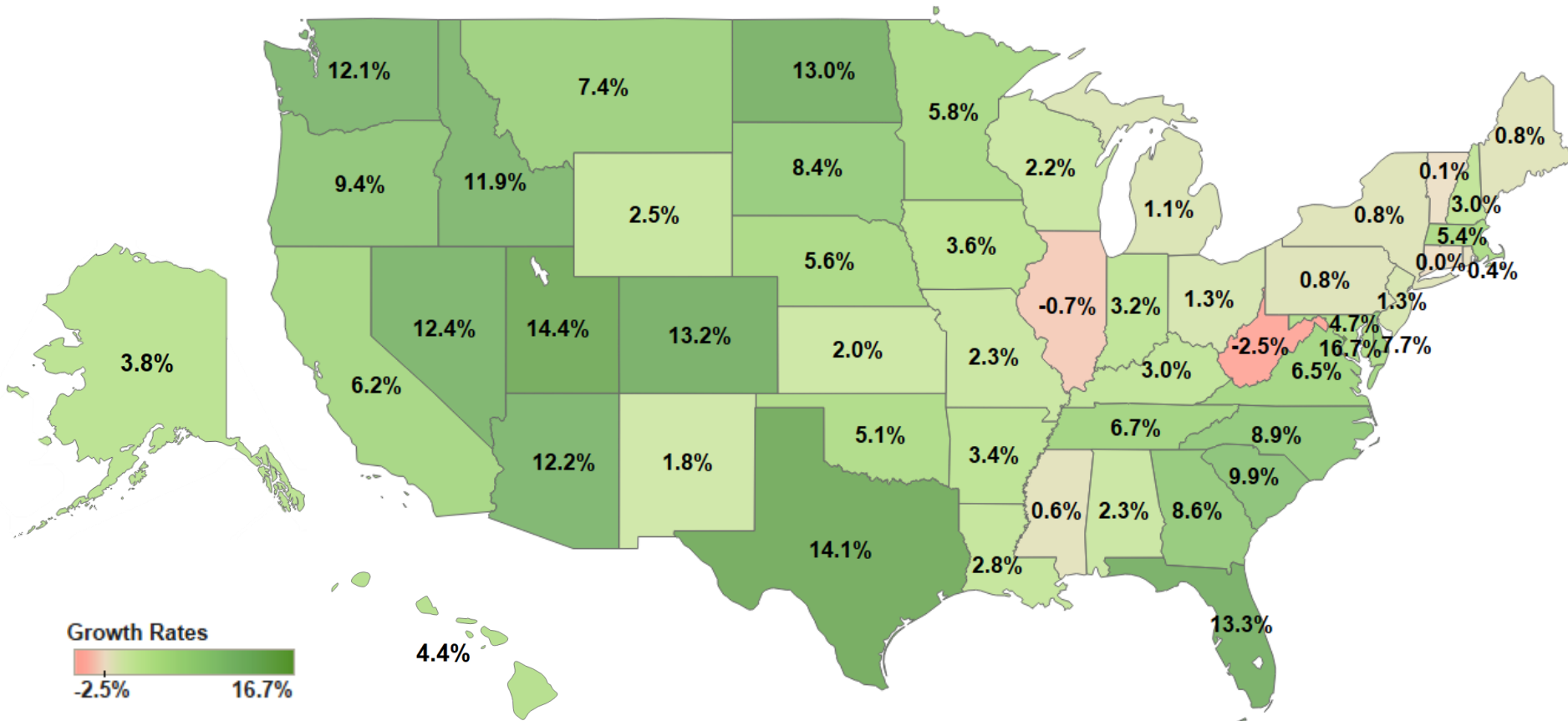


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Does not include immigration into the US

Source: Census Bureau

State Population Growth Rates



Growth Rates



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Percent Change from Population Estimates 2010 to 2018

Source: US Census Bureau

US New Business Startups

State	12/12	Phase	3/12	Trend (ths)	Direction
Alabama	-1.1%	D	3.6%	46.8	Up
Florida	2.5%	C	-6.7%	441.9	Down
Georgia	-1.4%	D	-19.6%	156.3	Down
Kentucky	8.2%	B	7.8%	63.8	Up
North Carolina	5.0%	B	8.4%	151.0	Up
South Carolina	11.4%	B	10.4%	64.9	Up
Tennessee	4.0%	B	4.6%	60.8	Up
Virginia	-6.5%	D	-9.2%	131.8	Down
West Virginia	-3.1%	A	-1.3%	18.8	Down



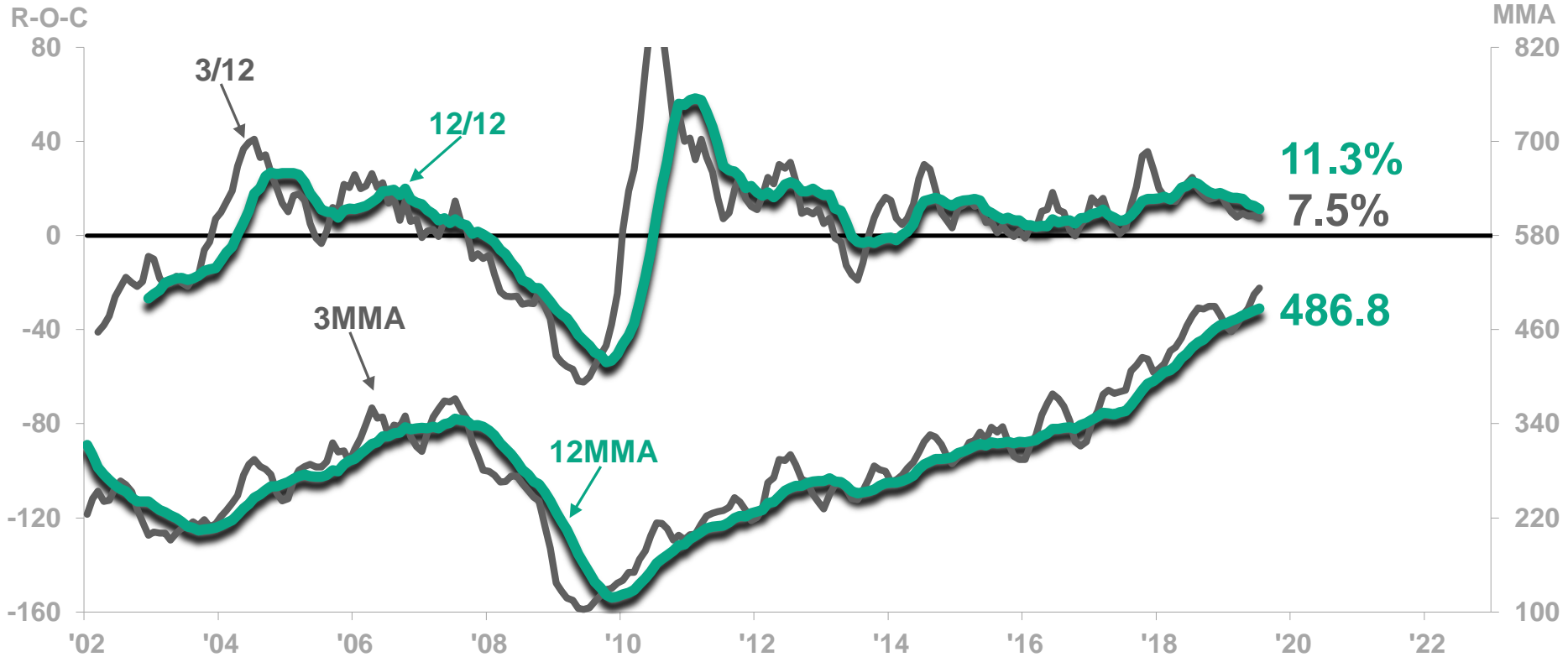
US Manufacturing Employment

State	12/12	Phase	3/12	Trend (ths)	Direction
Alabama	2.9%	B	12.2%	13.2	Up
Florida	3.1%	B	3.0%	379.4	Up
Georgia	1.1%	C	1.0%	410.4	Up
Kentucky	1.4%	B	1.4%	254.6	Up
North Carolina	0.3%	C	-0.9%	473.8	Down
South Carolina	3.1%	C	2.8%	253.2	Up
Tennessee	2.1%	B	2.3%	355.7	Up
Virginia	3.0%	C	2.4%	245.1	Up
West Virginia	2.1%	C	1.6%	47.8	Up



The Job Market Will Remain Very Tight

US Total Manufacturing Job Openings

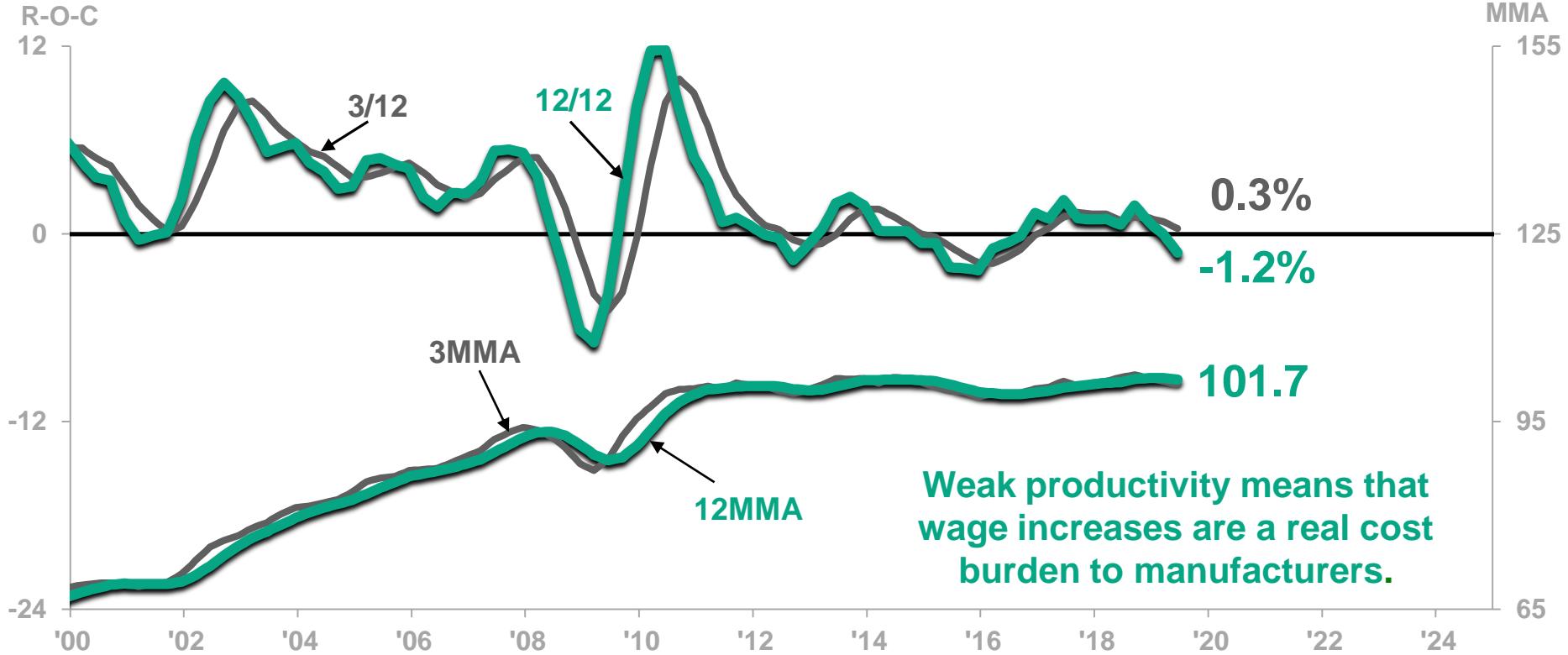


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Thousands

This Tends to Indicate Labor is Getting More Expensive

US Manufacturing Labor Productivity Index



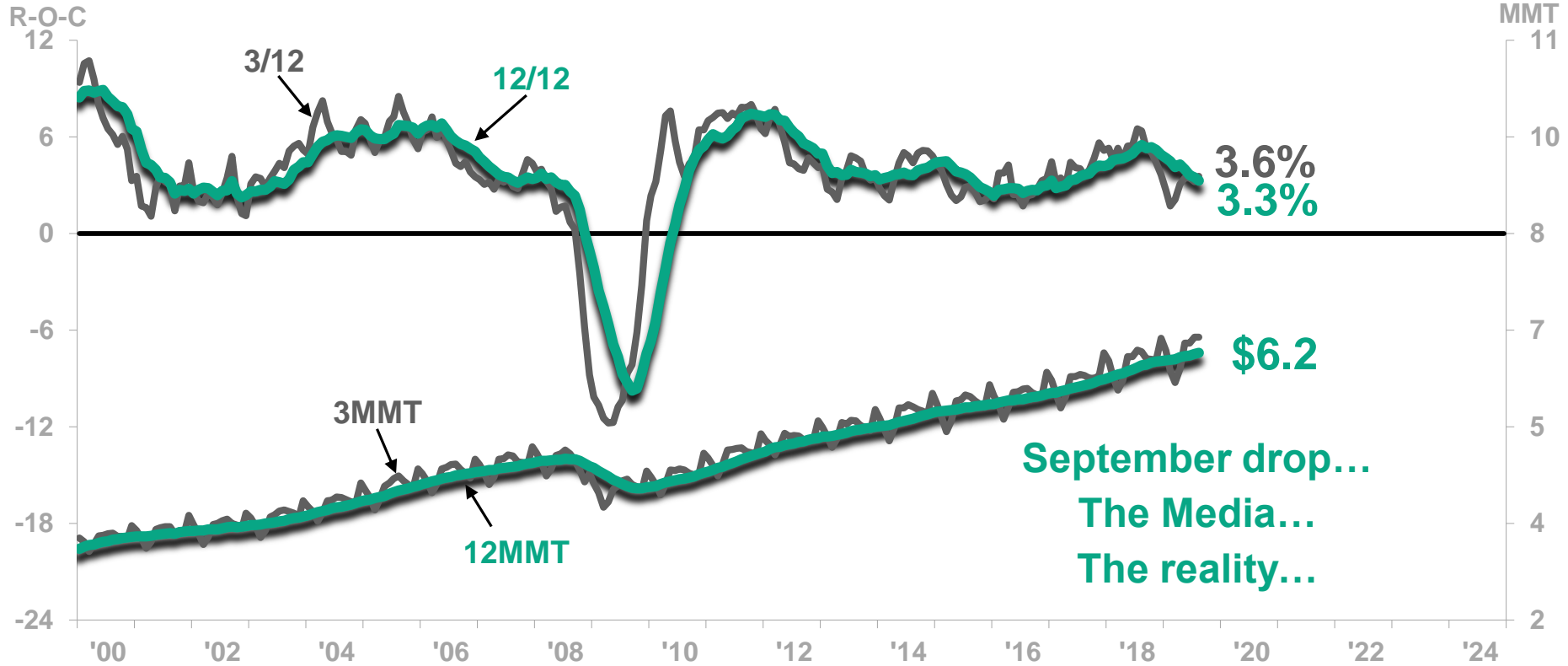
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2012 = 100

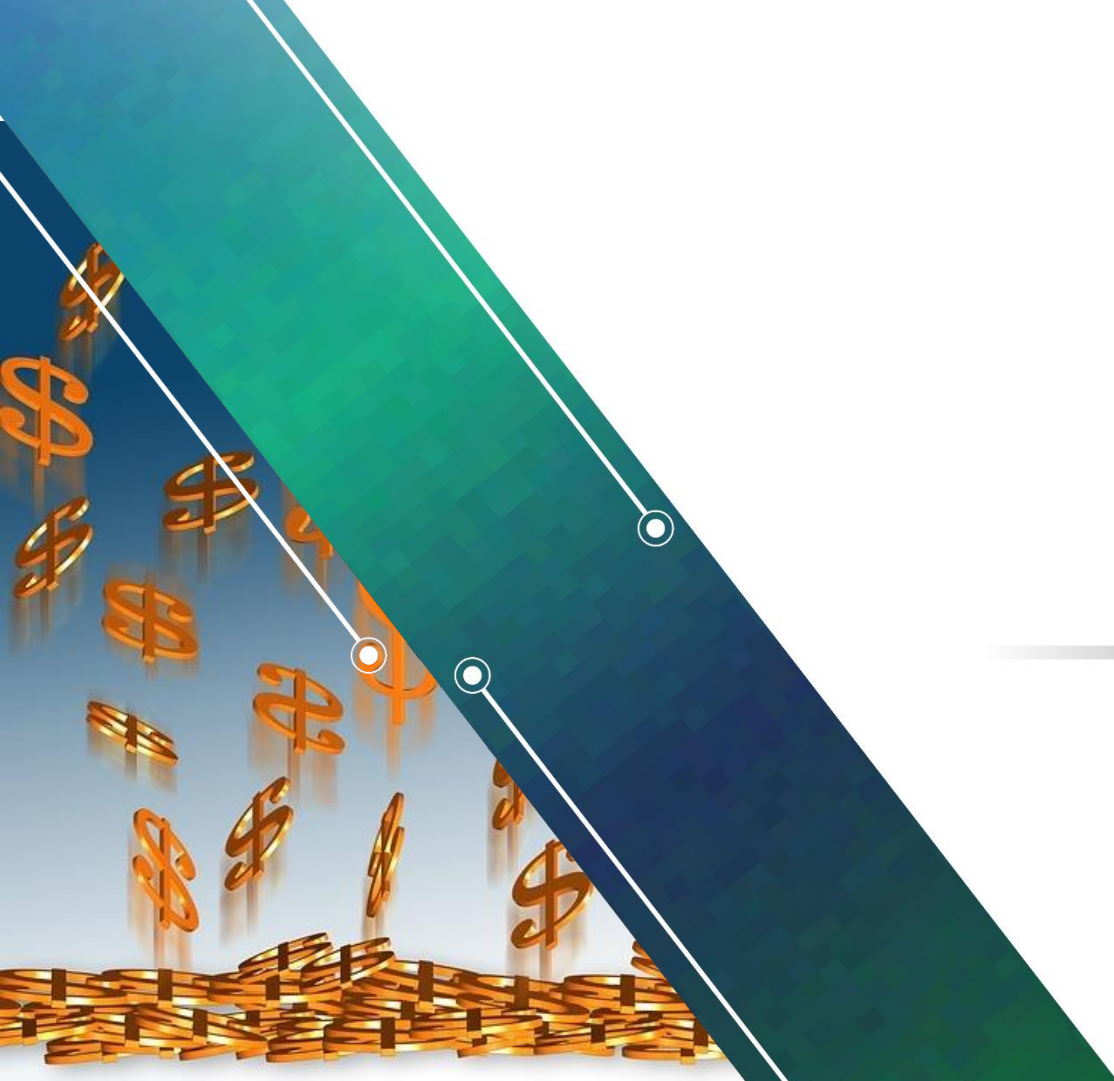
Source: Bureau of Labor Statistics

Encouraging News

US Total Retail Sales



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Prices

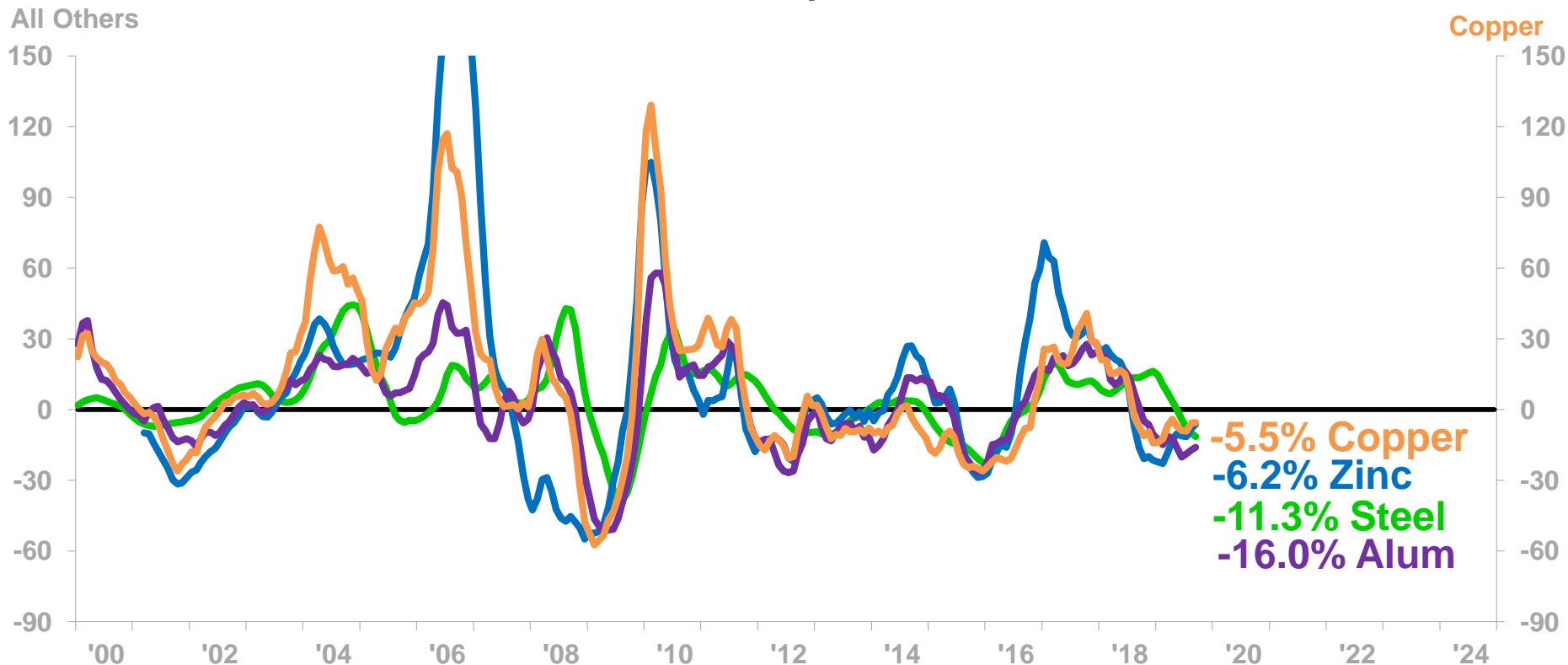


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Cyclical Troughs Appear to be Forming

Commodity Prices



-5.5% Copper
-6.2% Zinc
-11.3% Steel
-16.0% Alum



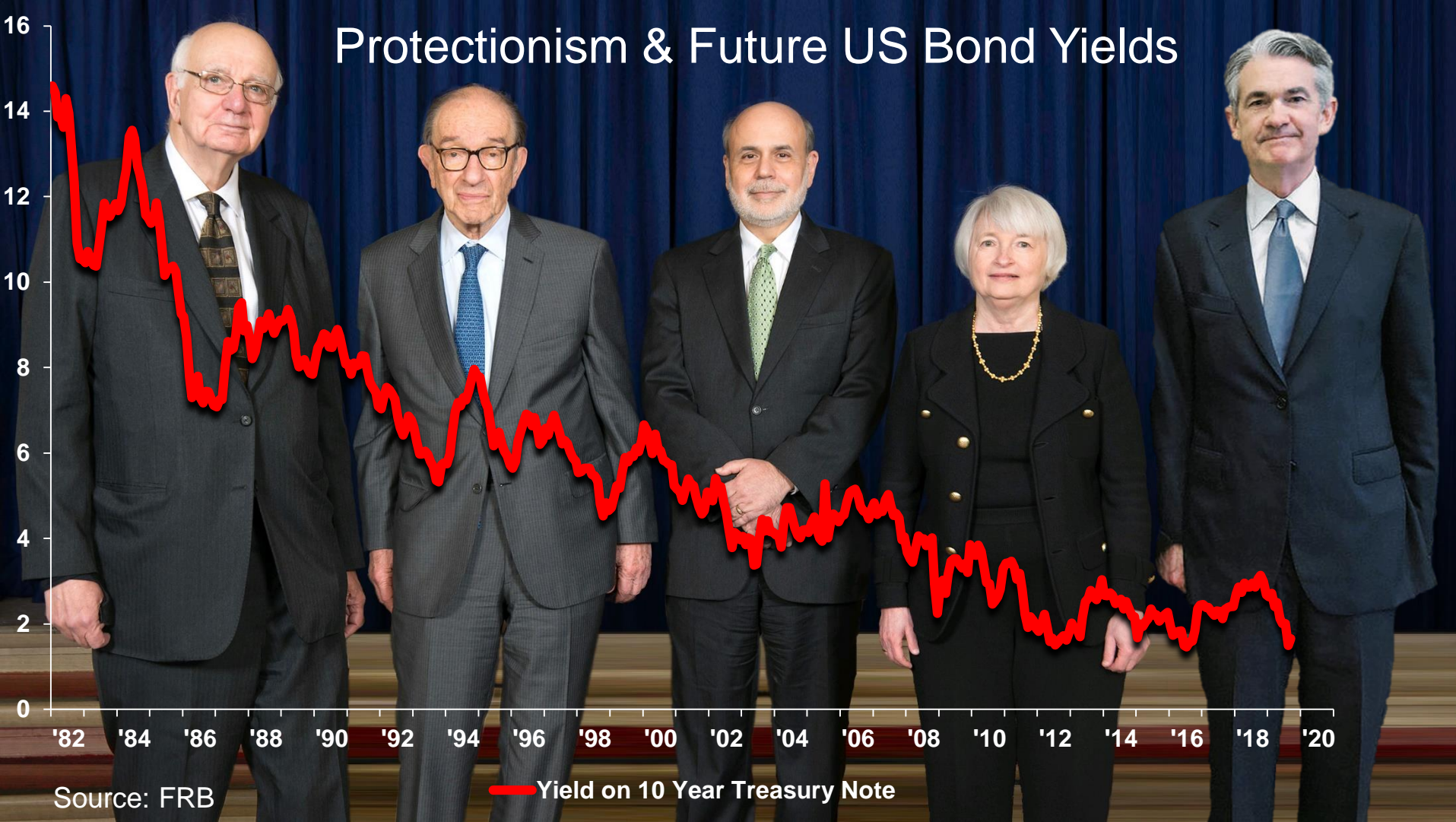
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3/12 Rates-of-Change

Sources: Wall Street Journal, London Metal Exchange, Bureau of Labor Statistics

Protectionism & Future US Bond Yields

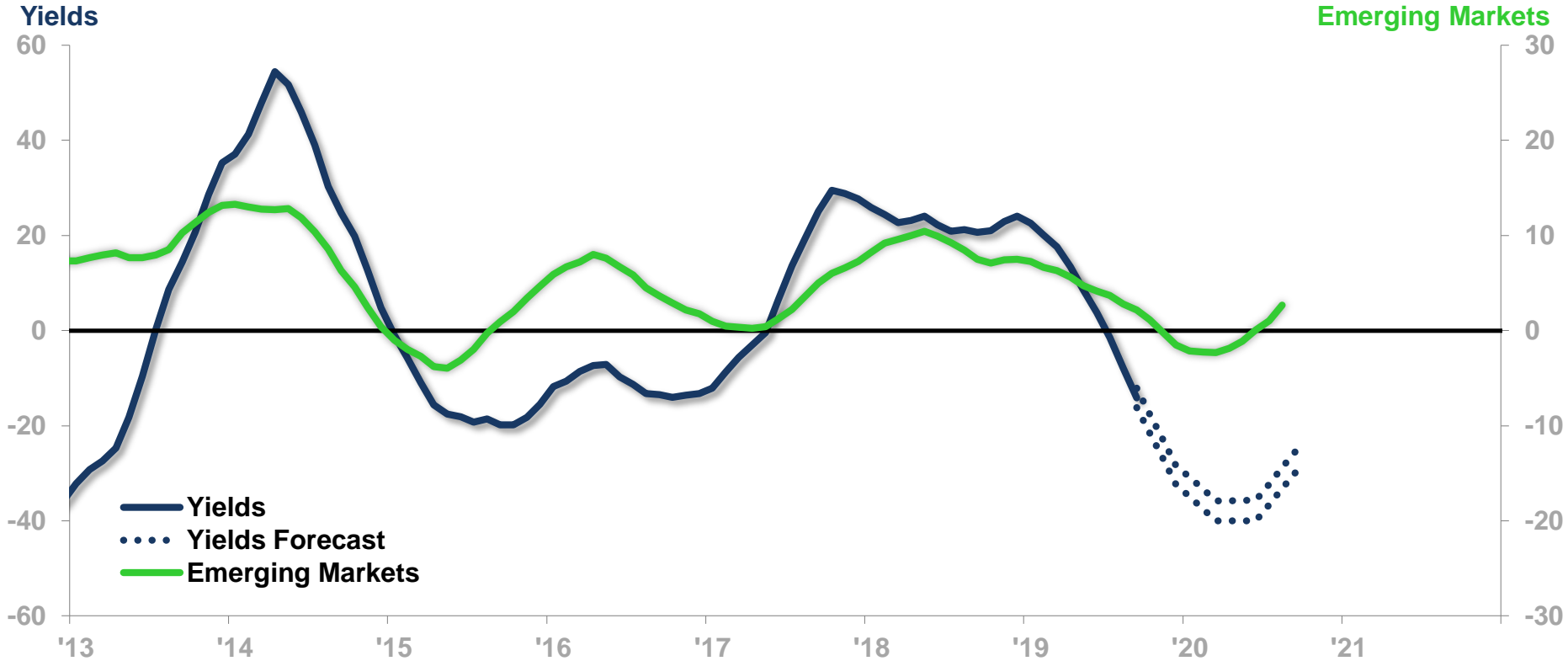


Source: FRB

— Yield on 10 Year Treasury Note

Research Results for Bond Yields

US Government Long-Term Bond Yields to Emerging Markets Bond ETF



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12/12 Rates of Change

Sources: FRB, Yahoo Finance

The Road Ahead

It is important to know where you are relative to the general economic trend

2019 Decelerating growth through the rest of the year

2020 1H20 low point in the business cycle, growth in 2H20

2021 Growth

2022 Backside of the Business Cycle



5 Pieces of Actionable Advice for Phase C

1. Develop your rates-of-change so you will know when the trough is near
(Use the ITR Checking Points™)
2. Focus on the segments of the business that are the most profitable in Phase C
3. Trumpet your Phase C competitive advantages and start developing your message for the next phase (B or D, depending on your industry)
4. Cash Management for proper allocation and Inventory Control if applicable
5. Ask yourself what you shouldn't be doing? (resource management and diversion to more profitable parts of the company)



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Any Questions?