

33RD ANNUAL
ECONOMIC OUTLOOK SYMPOSIUM

FRIDAY, DECEMBER 13, 2019



Heavy Machinery: Wrapping up 2019, looking to 2020-2021



LEADER IN COMMERCIAL VEHICLE INDUSTRY DATA, MARKET ANALYSIS,
FORECASTING SERVICES FOR THE NORTH AMERICAN MARKETS.

1986

FOUNDED

18

MO./QTR. REPORTS

50+

SPEAKING/YEAR

2

SEMINARS/YEAR



WINNER OF THE 2019 LAWRENCE R. KLEIN BLUE CHIP FORECASTING AWARD

Transition in 2019, anxieties for 2020 & 2021...

- Expansion cycle is mature
- 2018 growth solid, 2019 hurt by trade tensions
- Manufacturing sector deteriorated from 2018-Dec peak
- Probabilities grow for recession in 2020-21 (~30% chance)
- Global momentum weaker in EU, JA, CH
- Beltway could be worse, but it's bad enough...
....with 2020 election season well underway

U.S. Business Cycles since 1960

		Duration (months)	Compound Annual Growth Rate (CAGR)	
Start	End		GDP	Mfg IP
Feb-61	Dec-69	106	5.1	6.8
Nov-70	Nov-73	36	5.5	9.4
Mar-75	Jan-80	58	4.6	6.7
Nov-82	Jul-90	92	4.1	4.0
Mar-91	Mar-01	120	3.8	5.6
Nov-01	Dec-07	73	3.0	2.8
Average		81	4.4	5.9
Jun-09	>Dec-19	126 plus	2.3	1.4
Over the last 12 mos			2.2	-1.4

Weakest Post-World War II recovery

Main Street generally OK or better

Anxieties focus on Washington & Rest of World

Happy

- Business/consumer confidence
- Job market
- Stocks
- Corporate profits growth
- Residual momentum from 2017 tax reform
- Credit standards and loan availability still good

Not-so-happy

- Trade & tariff risk
 - Flat or inverted yield curve
 - Growth in mfg 3% last year, minus 1.5% ytd
 - Housing construction tentative
 - 2020 election cycle already underway
 - Weakened global economy w/higher risk
Hong Kong, China, Iran, UK, Syria, China, Iraq, NKorea, Turkey, Russia, Venezuela, Afghanistan
-and the roster of trouble spots shifts around every month

Our Favorite Leading Indicators

- Yield curve (long/short interest rate spread)
- Stock market trends
- Purchasing Managers Index
- Energy prices
- Confidence surveys

Our Favorite NA Leading Indicators

- Yield curve (spread of long & short term interest rates)
 - Inverted – in the past reliable 5 to 8 quarter recession lead
- Stock Market Trends
 - Volatile but close to record highs
- Purchasing Managers' Index (US/NA):
 - Subpar in NA, flat-or-down ROW
- Energy and commodity prices:
 - Stable energy, weakness in other commodities
- Confidence surveys:
 - Took an early 2019 hit due after government shutdown
 - But stabilized and bounced back, near highs



THE WALL STREET JOURNAL.

MARKETS | U.S. MARKETS

Dow Sheds 800 in Biggest Drop of Year

Plunge in stocks, bond yields sends fresh recession signals

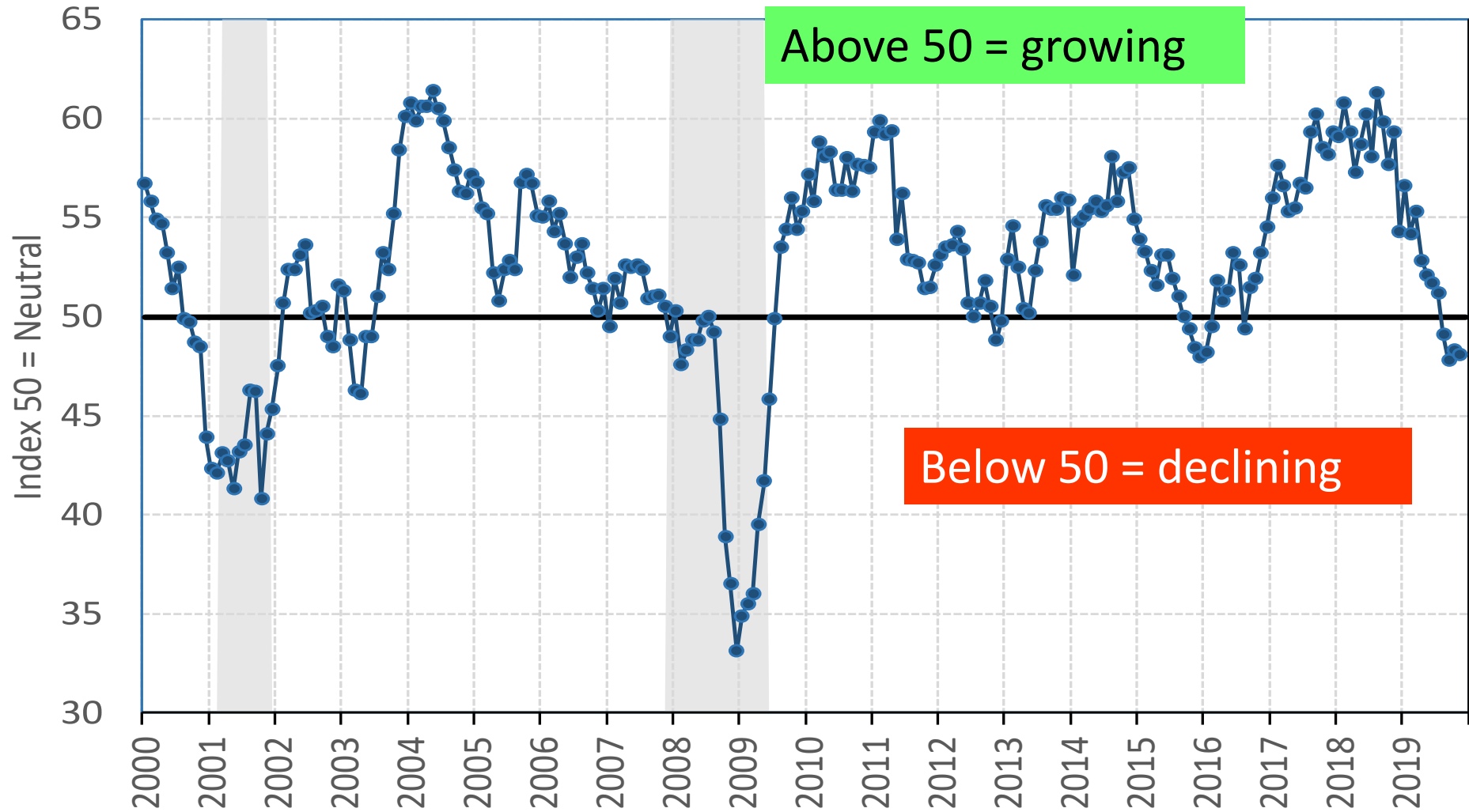
By Corrie Driebusch, Britton O'Daly and Paul J. Davies

Updated Aug. 14, 2019 5:31 pm ET

The Dow Jones Industrial Average posted its largest decline this year and government-bond markets sent a fresh warning about the risk of a coming recession, highlighting anxiety on Wall Street about the prospects for the decadelong economic expansion.

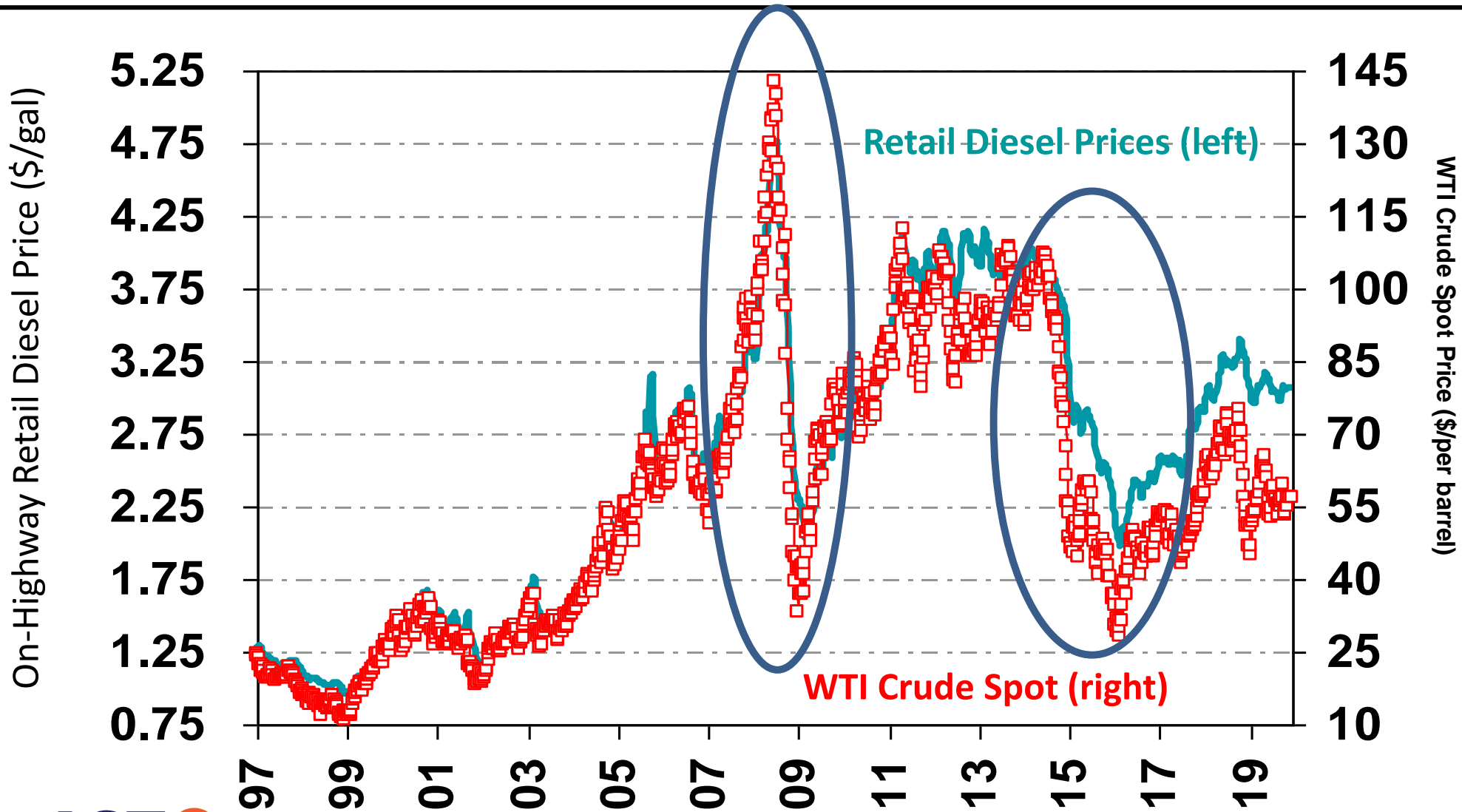
The worries spurred investors to rush to the relative safety of U.S. bonds, which still offer some of the best yields among developed countries despite their recent drop. As the demand pushed up long-term bond prices, yields on the 10-year Treasury note briefly fell below two-year yields for the first time since 2007. That inversion between short and long-term yields is viewed by many as a signal that a recession is looming.

ISM Purchasing Managers' Index -- Manufacturing



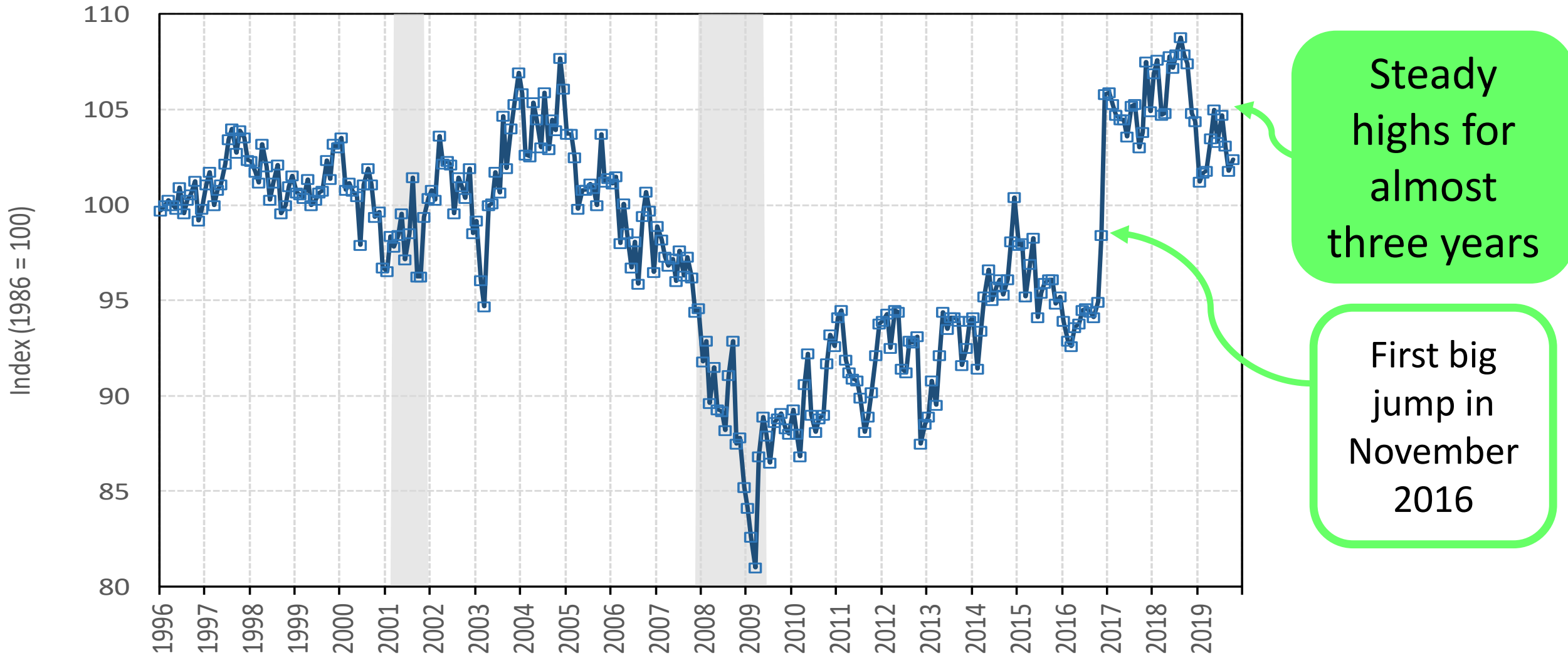
Manufacturing decelerates from 2017-18 the two best growth years of decade long expansion

U.S. Oil and U.S. Diesel Prices

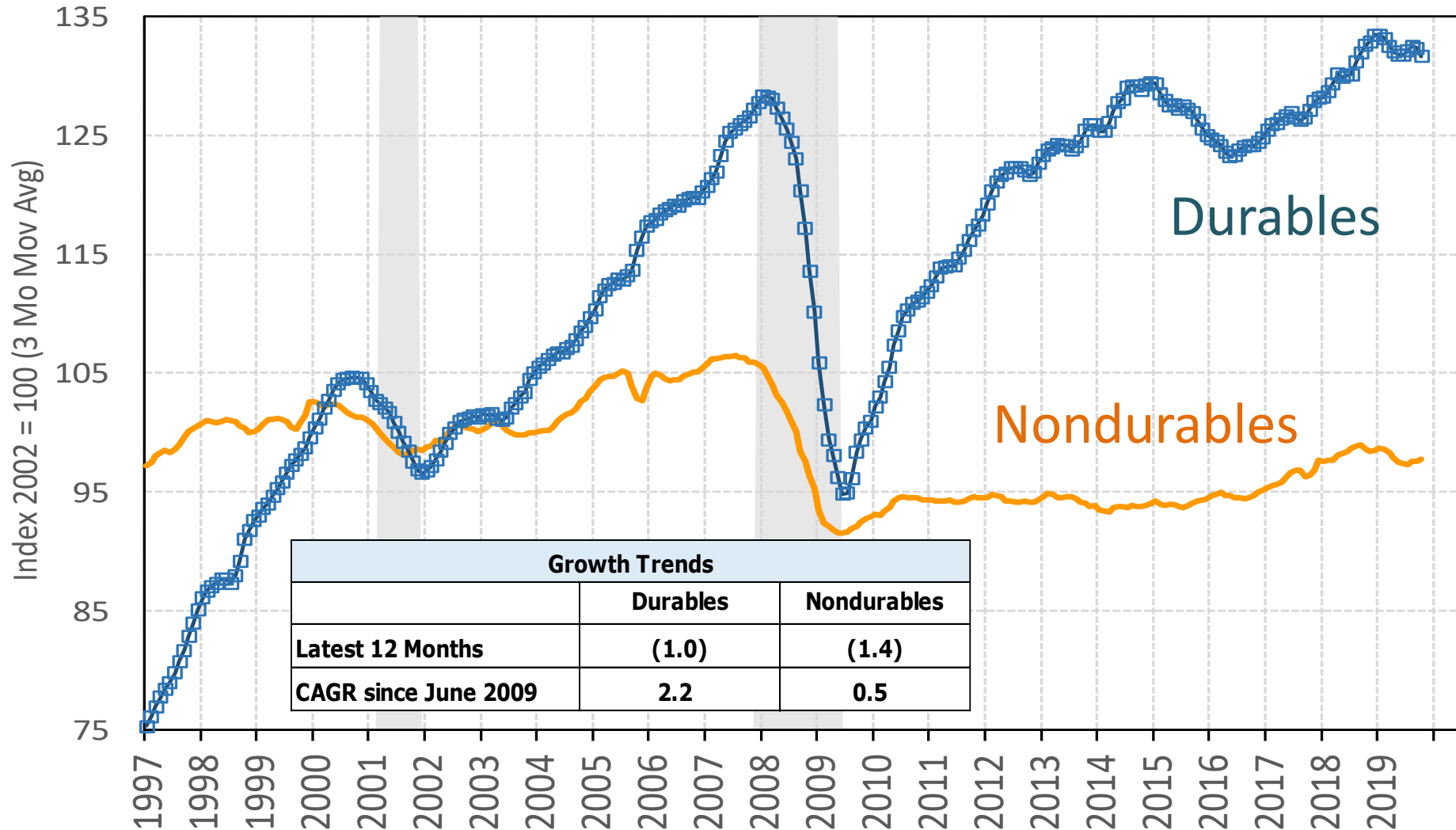


Oil prices in \$50-65 range healthy; some volatility but it's not 2008 or 2015

NFIB Small Business Optimism Index



U.S. Industrial Production by NAICS sector

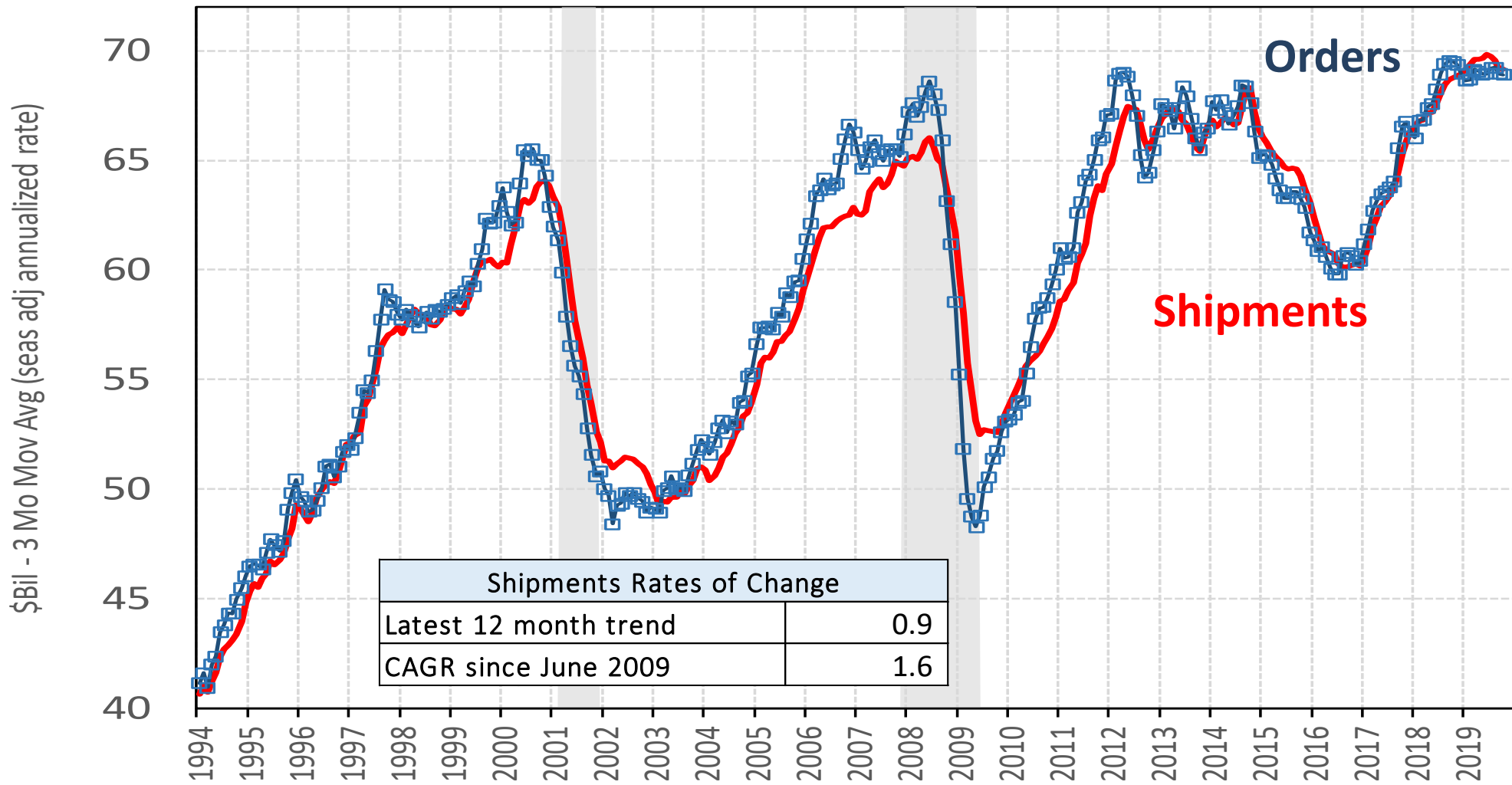


Manufacturing output has slowed from 3.0% in 2018 to minus 2.2% since Dec-2018 peak

Manufacturing Output 3 digit NAICS detail

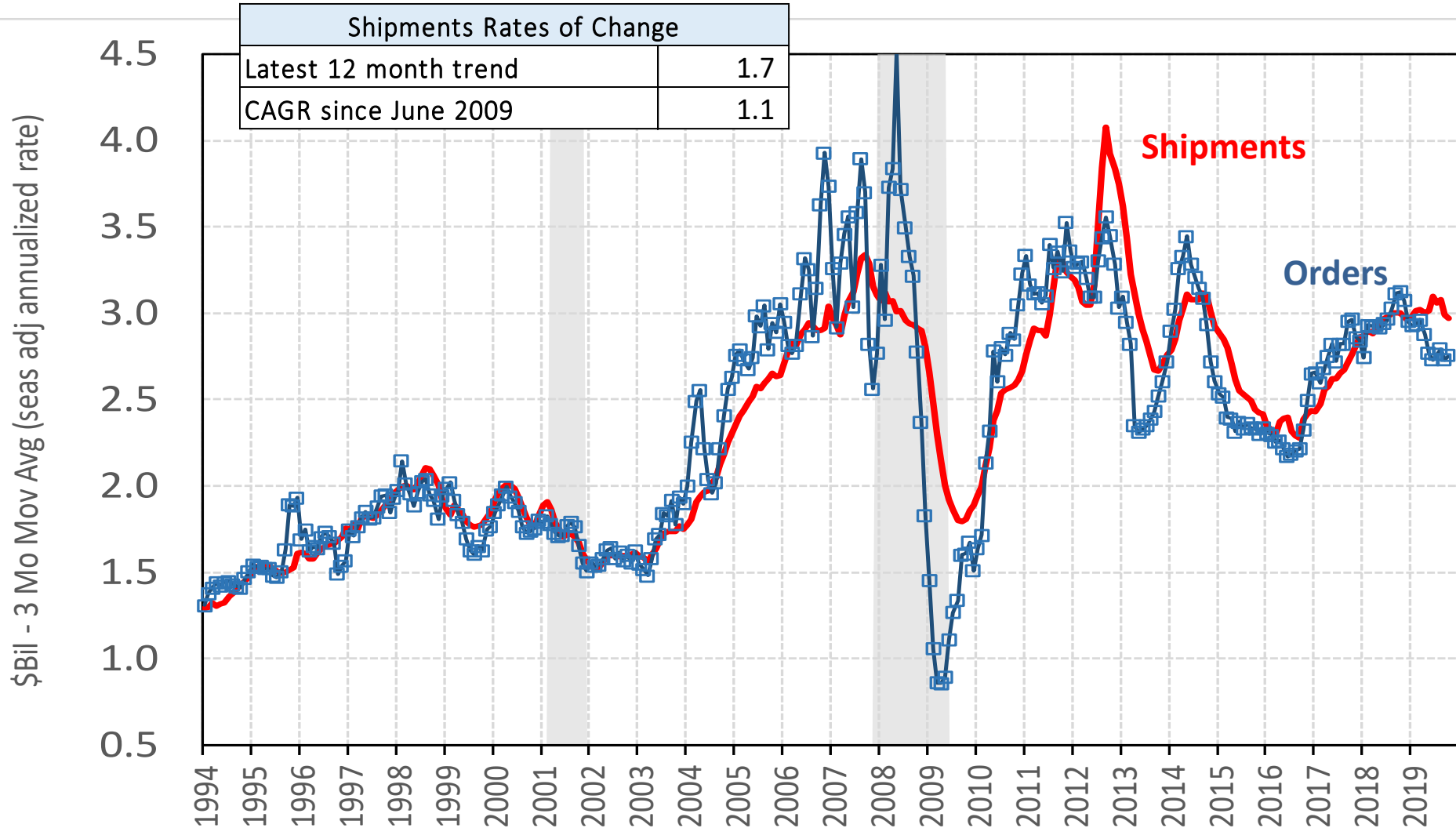
<i>US Industrial Sector Performance 2009 to date</i>		<i>Rate of Change</i>		
<i>NAICS code</i>	<i>Sector</i>	<i>%Share of IP Output</i>	<i>Oct 2018 to Oct 2019</i>	<i>CAGR since June 2009</i>
	Total (Mfg, Mining, Utilities)	100.0	-1.1	1.6
	Manufacturing Total	74.4	-1.4	1.4
	Nondurable manufacturing	34.5	-1.2	0.5
311	Food	6.2	1.5	1.6
312	Beverage and tobacco product	1.9	-1.5	-0.2
313-4	Textiles and products	0.7	-4.6	-0.4
315-6	Apparel and leather goods	0.2	-6.6	-5.0
322	Paper	2.6	-4.9	-0.3
323	Printing and related support activities	1.5	-3.6	-0.7
324	Petroleum and coal products	2.7	-0.7	0.9
325	Chemical	12.3	-1.3	-0.2
326	Plastics and rubber products	3.5	-3.5	2.1
	Durable manufacturing	39.9	-1.5	2.2
321	Wood product	1.2	2.3	3.8
327	Nonmetallic mineral product	2.1	0.6	2.8
331	Primary metal	2.3	-4.4	0.2
332	Fabricated metal product	5.6	-1.5	1.2
333	Machinery	5.9	-5.3	0.7
334	Computer and electronic product	5.9	6.5	4.3
335	Electrical equipment, appliance, and components	2.0	-0.6	1.2
3361-3	Motor vehicles and parts	5.8	-6.6	5.9
3364-9	Aerospace and miscellaneous transportation eq.	4.6	-1.8	1.2
337	Furniture and related product	1.3	-1.3	1.7
339	Miscellaneous	3.2	1.6	-0.2

U.S. Non-defense Capital Goods (excluding aircraft)



Capital goods orders flat in 2019 after 2+ year upswing

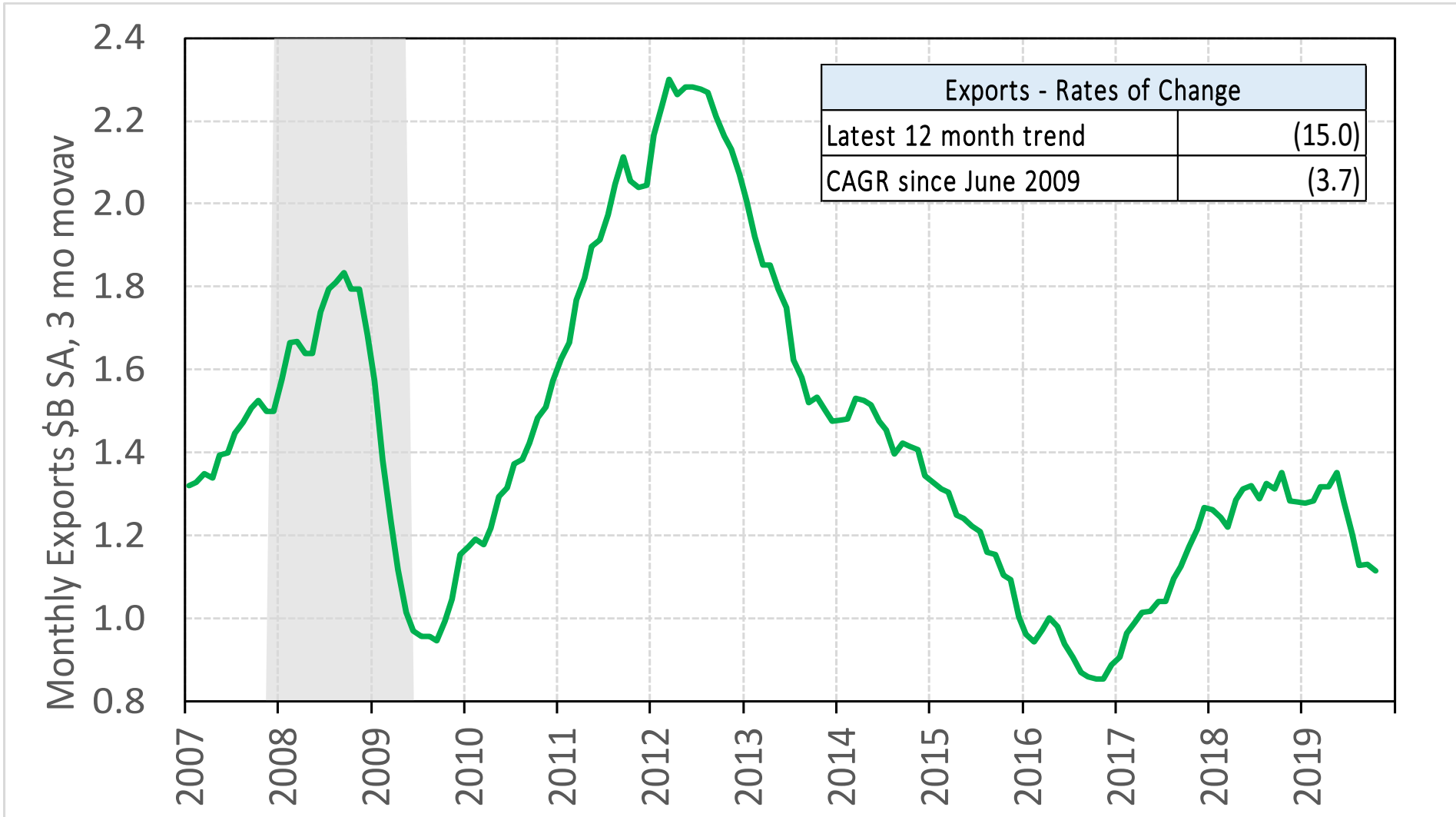
U.S. Construction Equipment



**FLATTISH 2019,
DOWN 2020 AHEAD**

- *Building flat*
- *Trade impacts, export headwind*
- *Used equipment prices weakening*

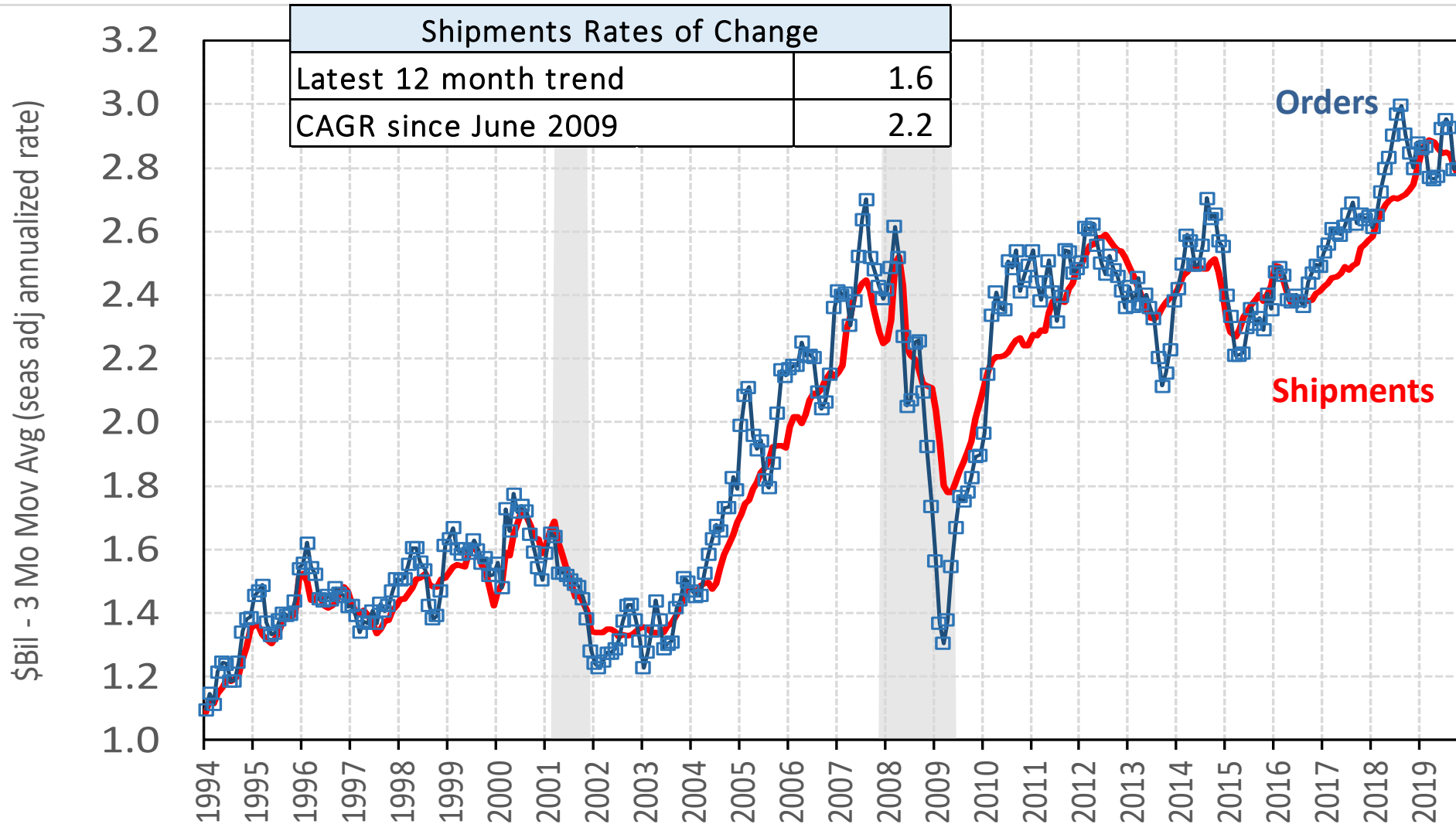
U.S. Construction Equipment Exports



EXPORTS FACING HEADWINDS

- *Strong dollar*
- *European recession*
- *Brexit*
- *USA-China trade tensions*

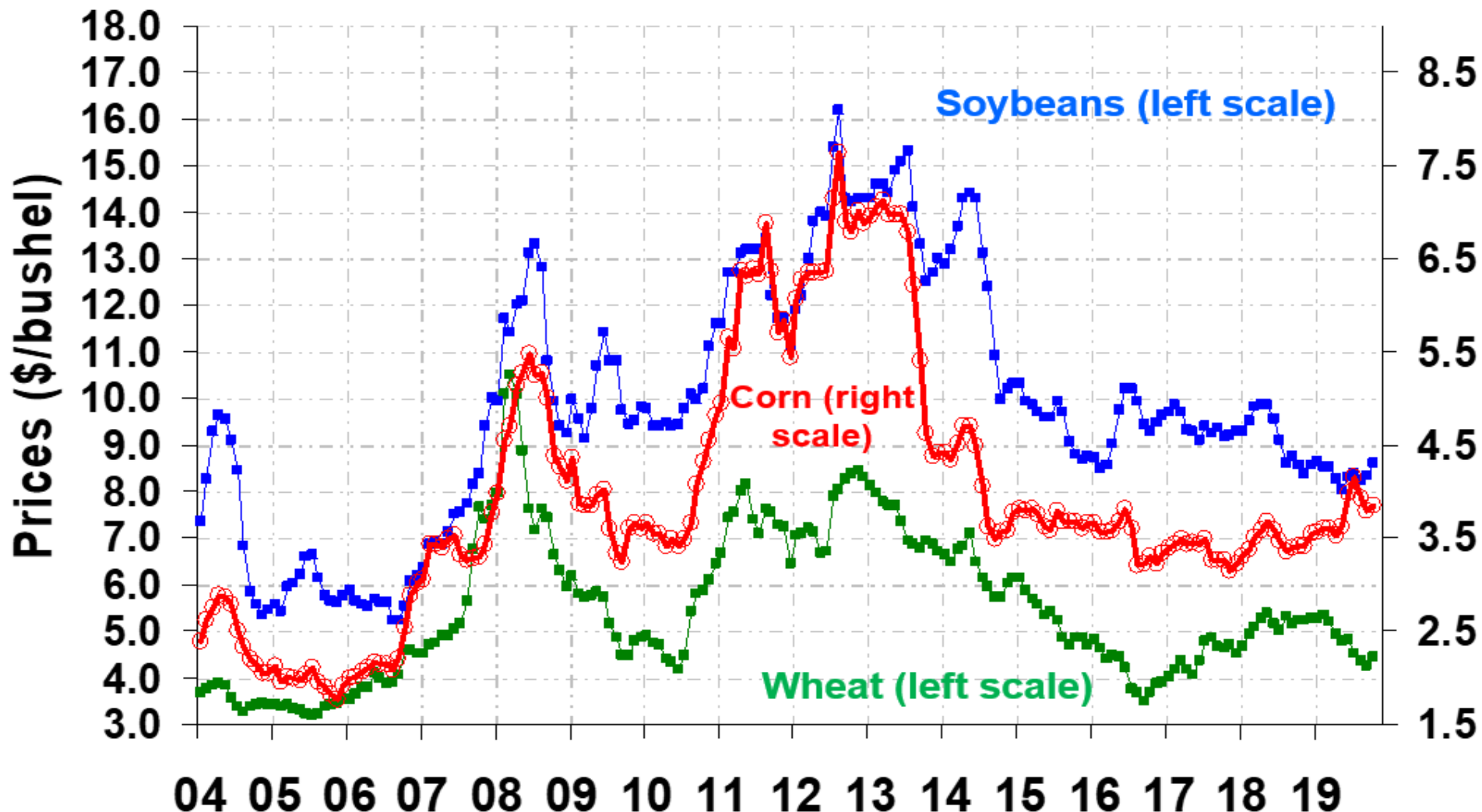
U.S. Material Handling Equipment



**FLATTISH 2019,
SOME 2020
POTENTIAL**

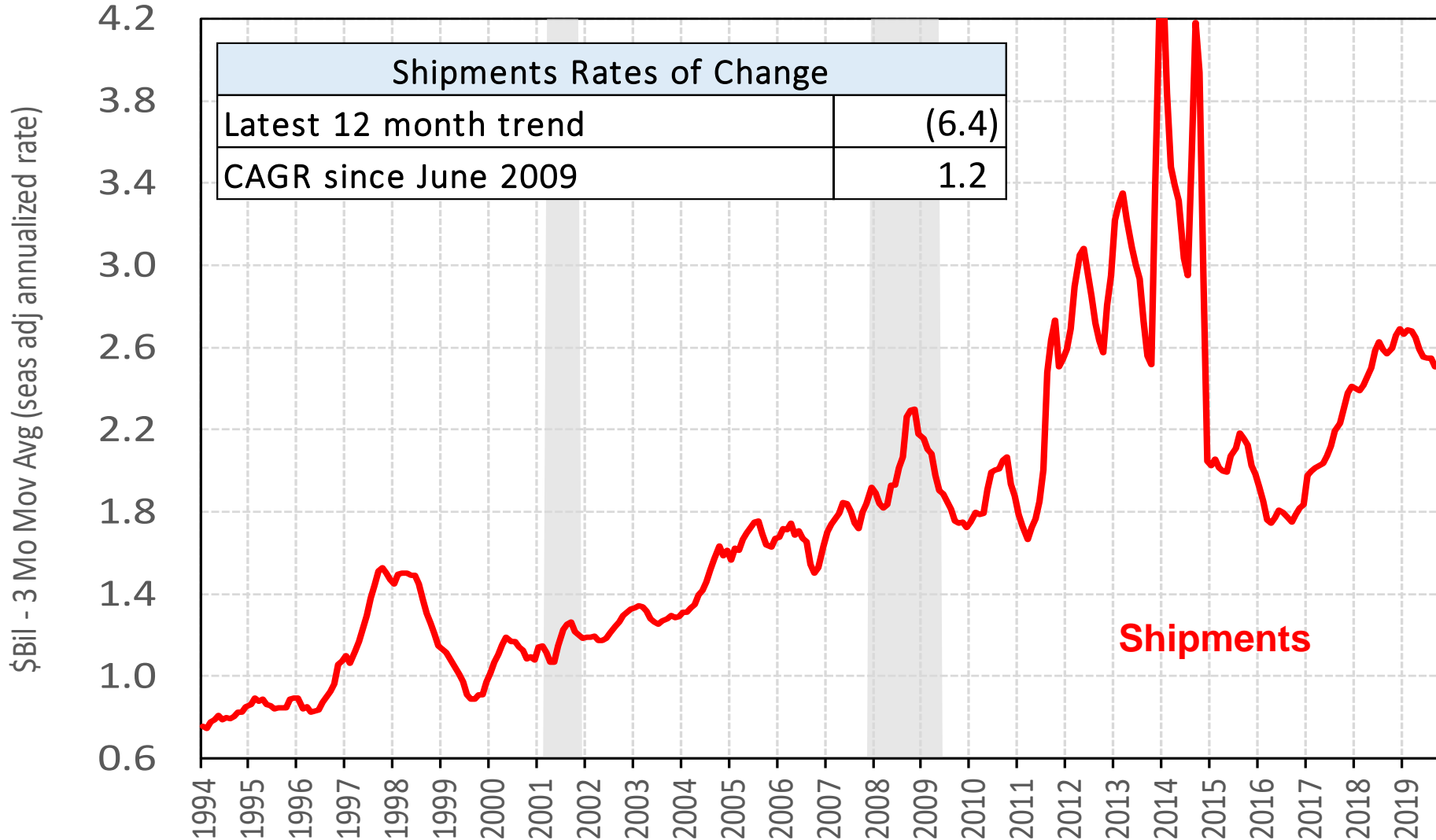
- Warehouse construction slowing after 3 big years
- E-commerce still a positive

Corn, soybean, wheat prices



Ag commodity prices weak, soybean and wheat prices y/y decline as a trade war casualty

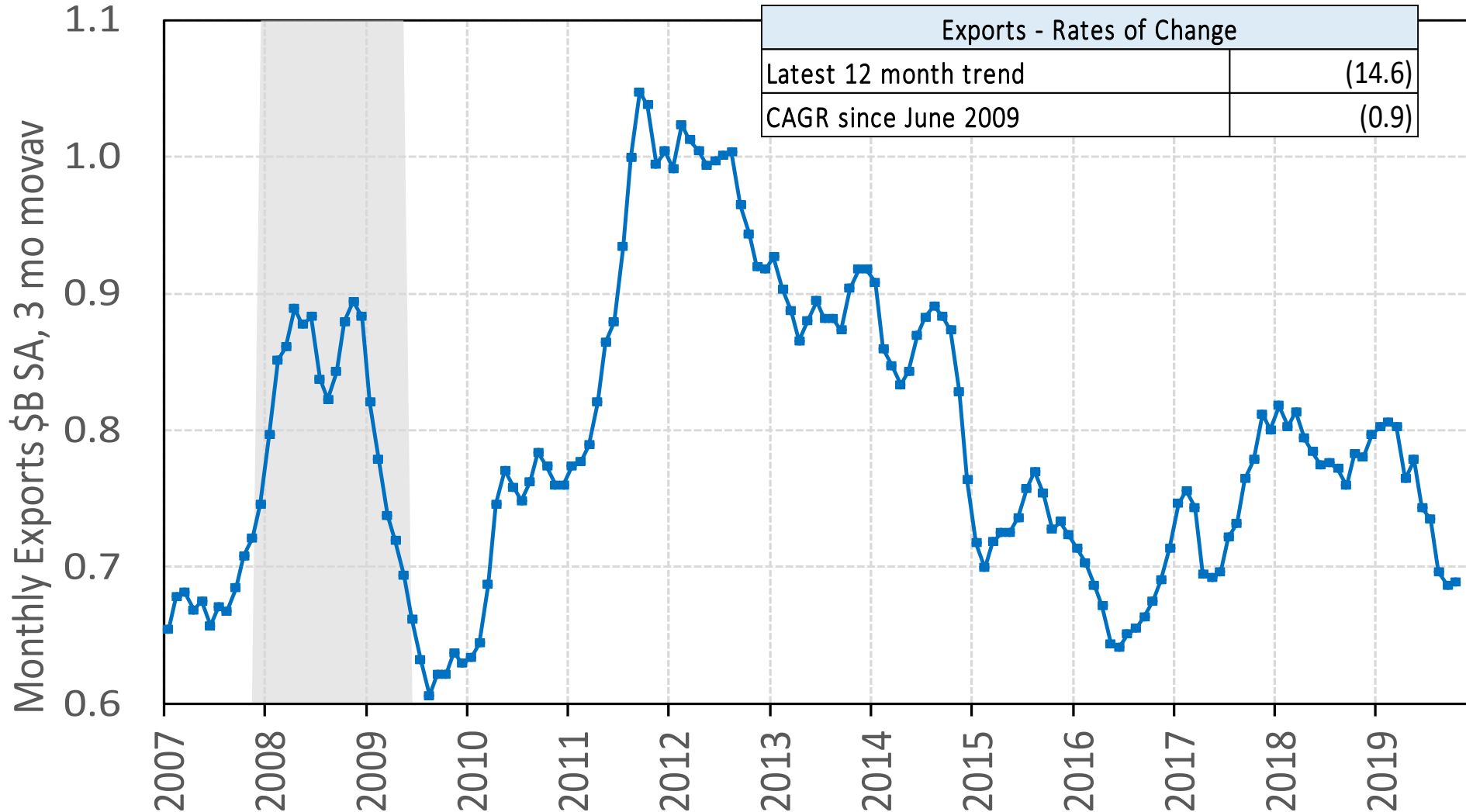
U.S. Farm Machinery



VICTIM OF TRADE WAR & USA-CHINA TENSION

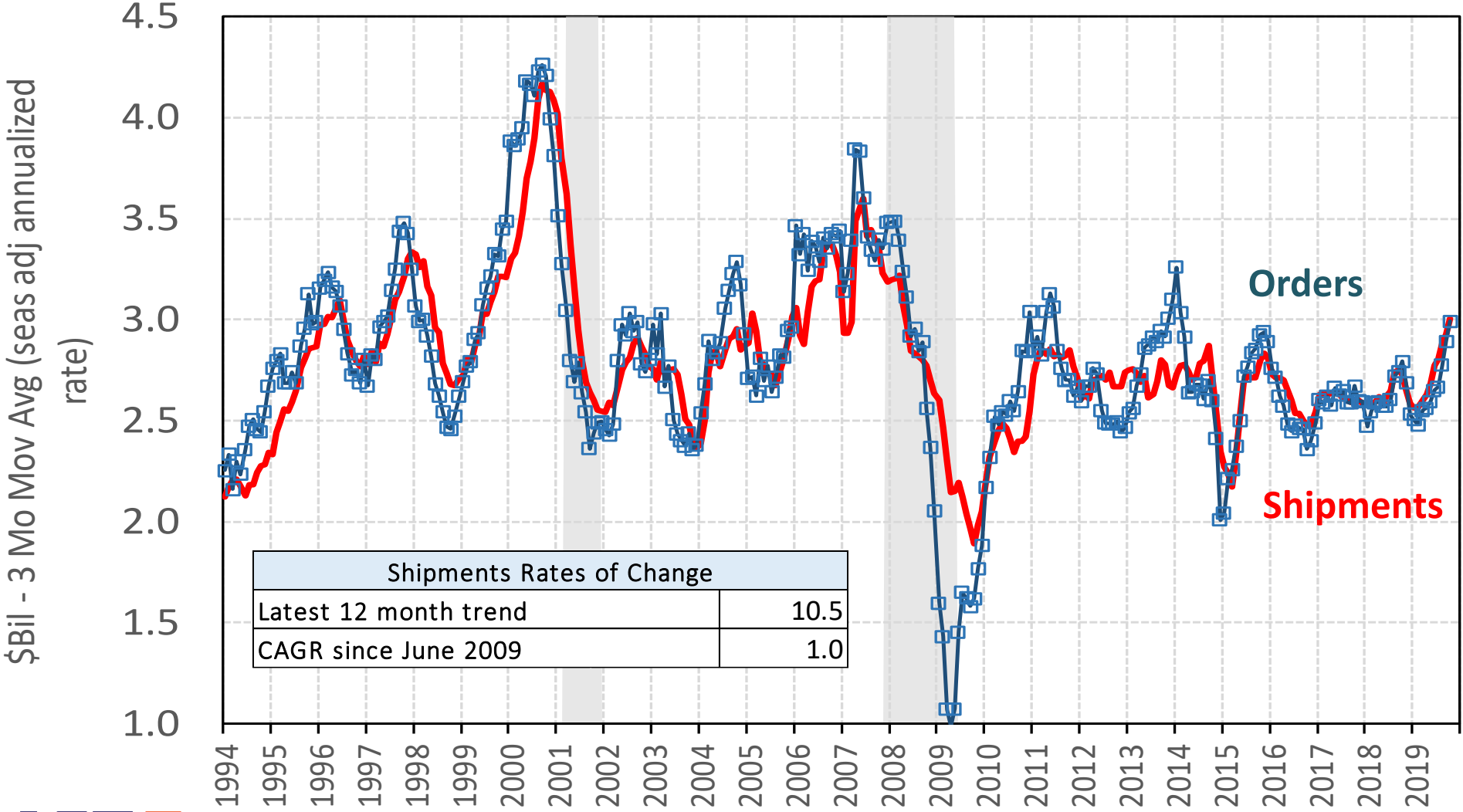
- *Collateral damage in U.S.-China trade war*
- *Corn & wheat prices stable, soybeans weak, all at low levels*
- *Exports hold the key – both for crops and equipment*

U.S. Farm Machinery Exports



Soft overseas markets, plus weak ag commodity prices are a global problem

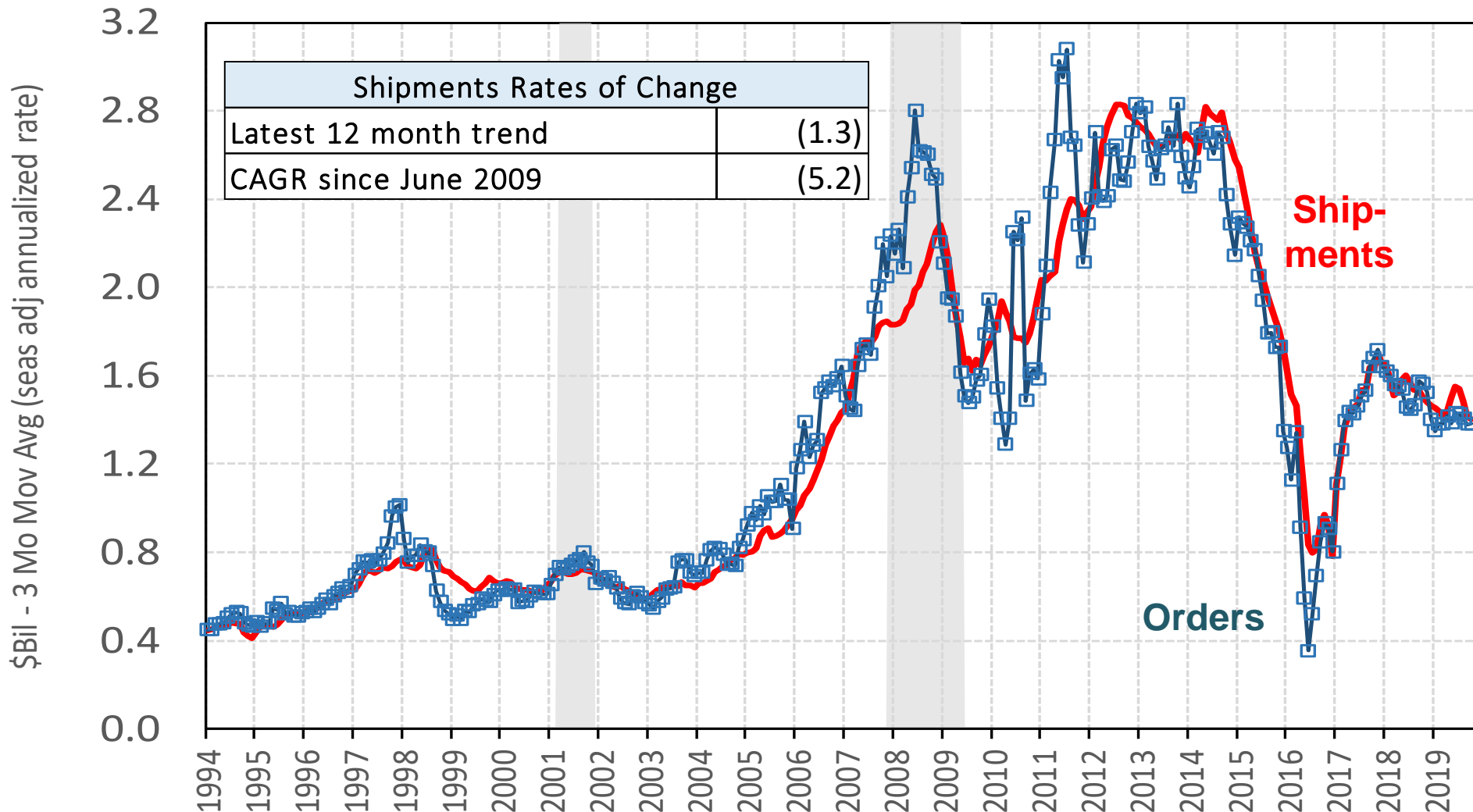
U.S. Industrial Equipment



ERRATIC, DATA SAYS UP BUT FUNDAMENTALS WEAK

- *Slowing domestic & International manufacturing sectors*
- *Exports trending down*

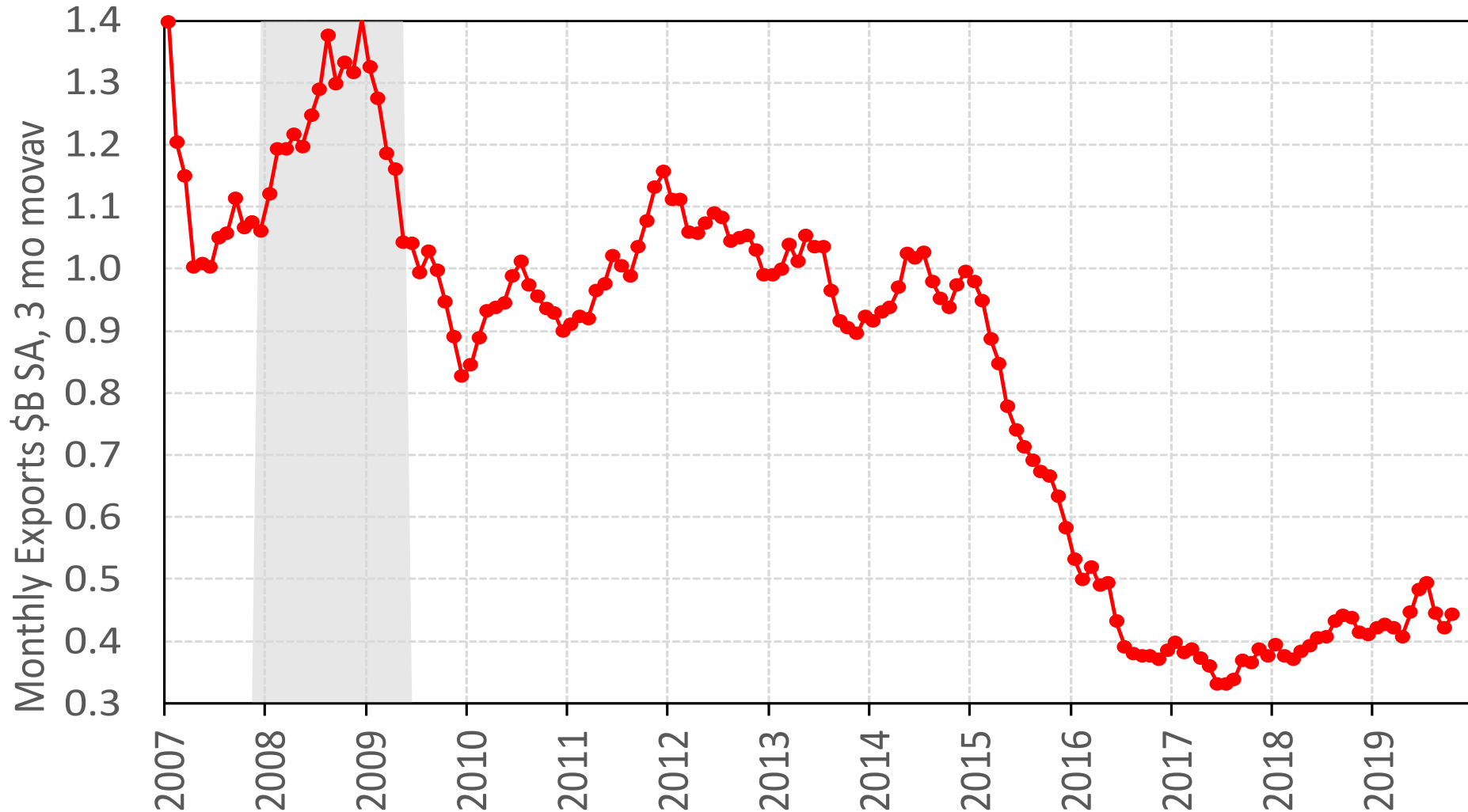
U.S. Mining, Oilfield, Gas Equipment



FAR LOWER THAN 5 YEARS AGO PLUS DECLINING TREND

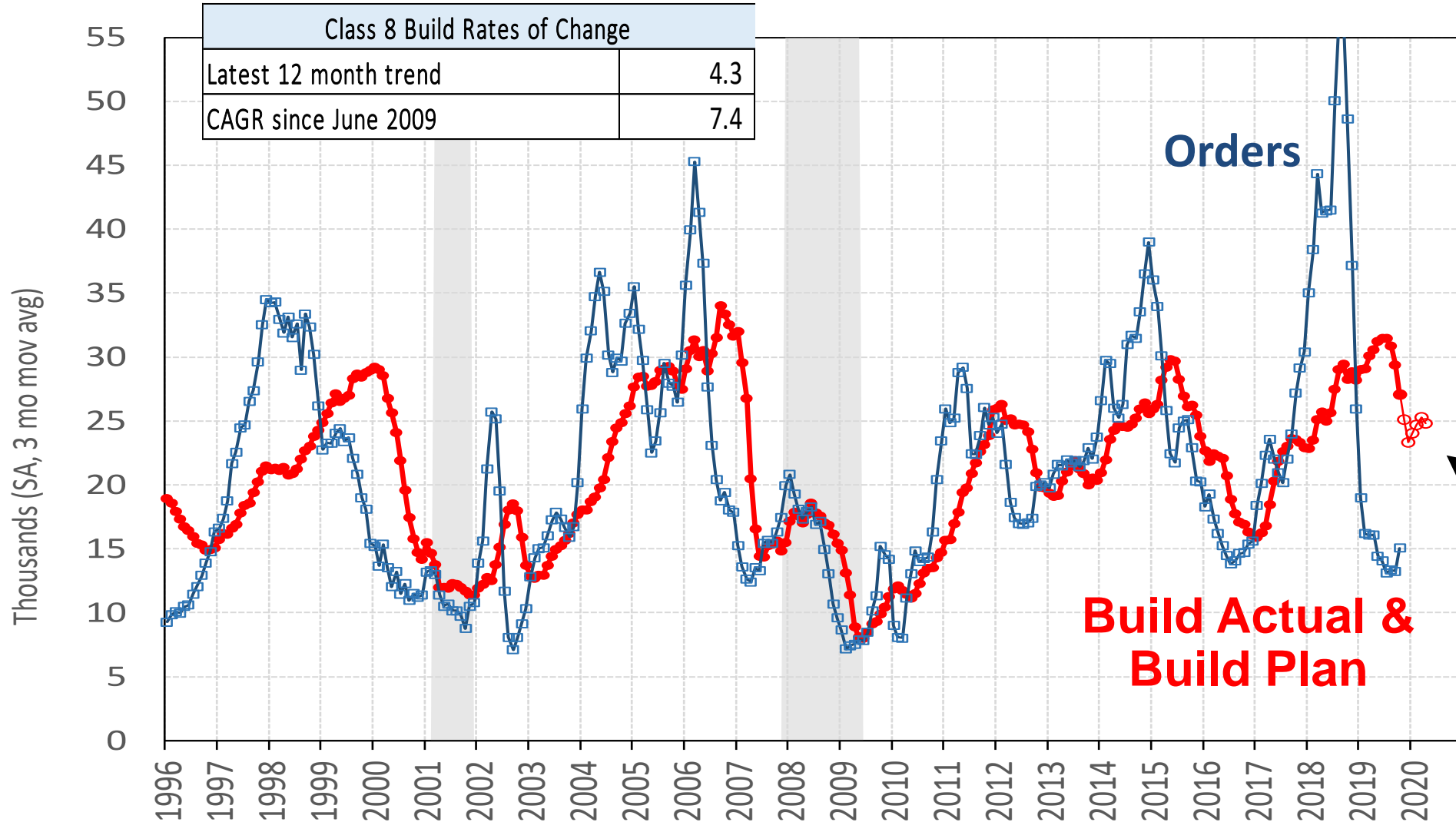
- Recovery aborted by volatile crude oil price movement
- Exports weak
- Ever-present fear of OPEC discipline breakdown, return to sub-\$50/bbl where we were one year ago

U.S. Mining, Oilfield, Gas Equipment Exports



Post 2014
recession
continues

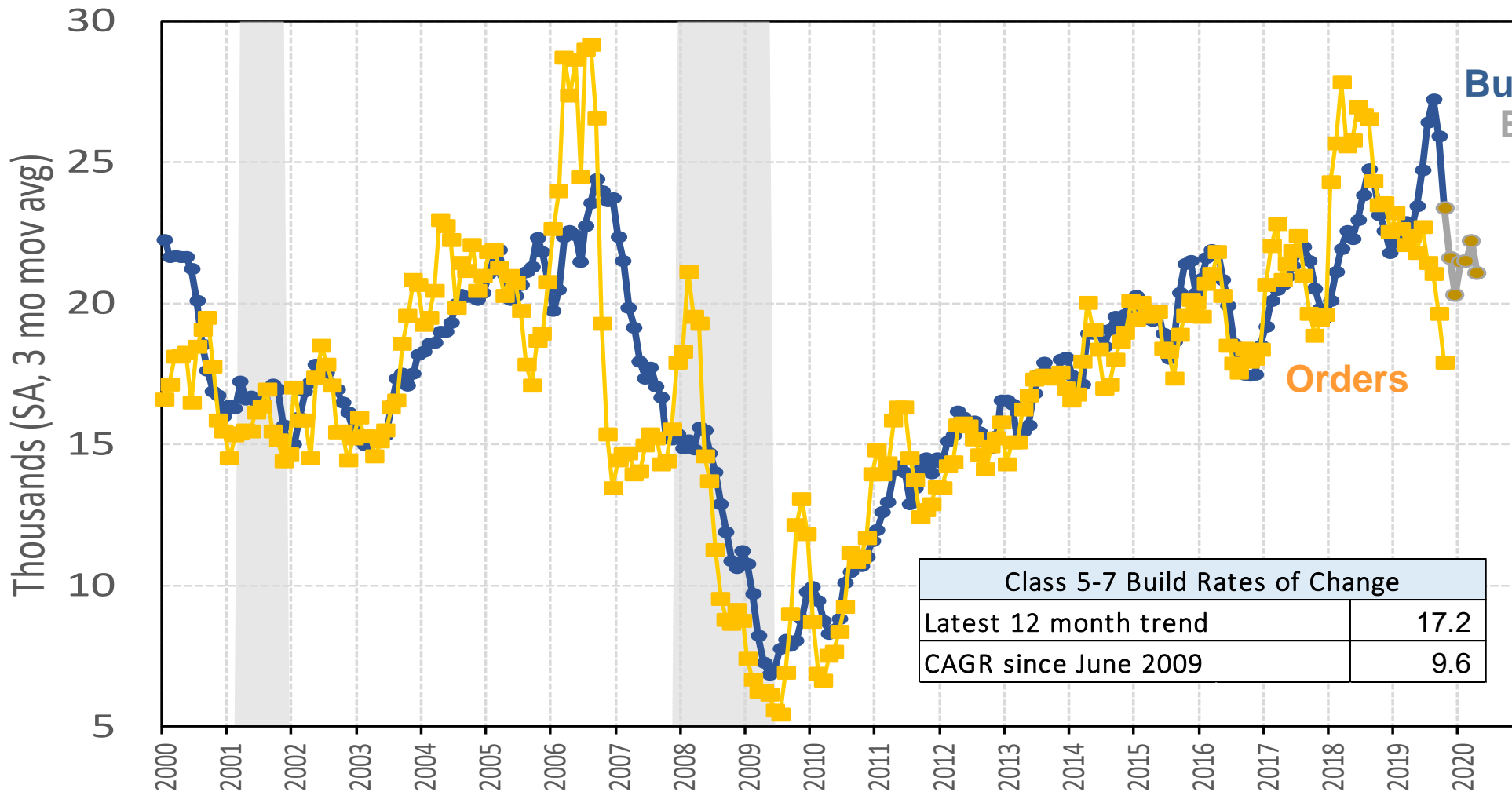
NA Class 8 Trucks - Orders and Build



***BIG CORRECTION
IN STORE***

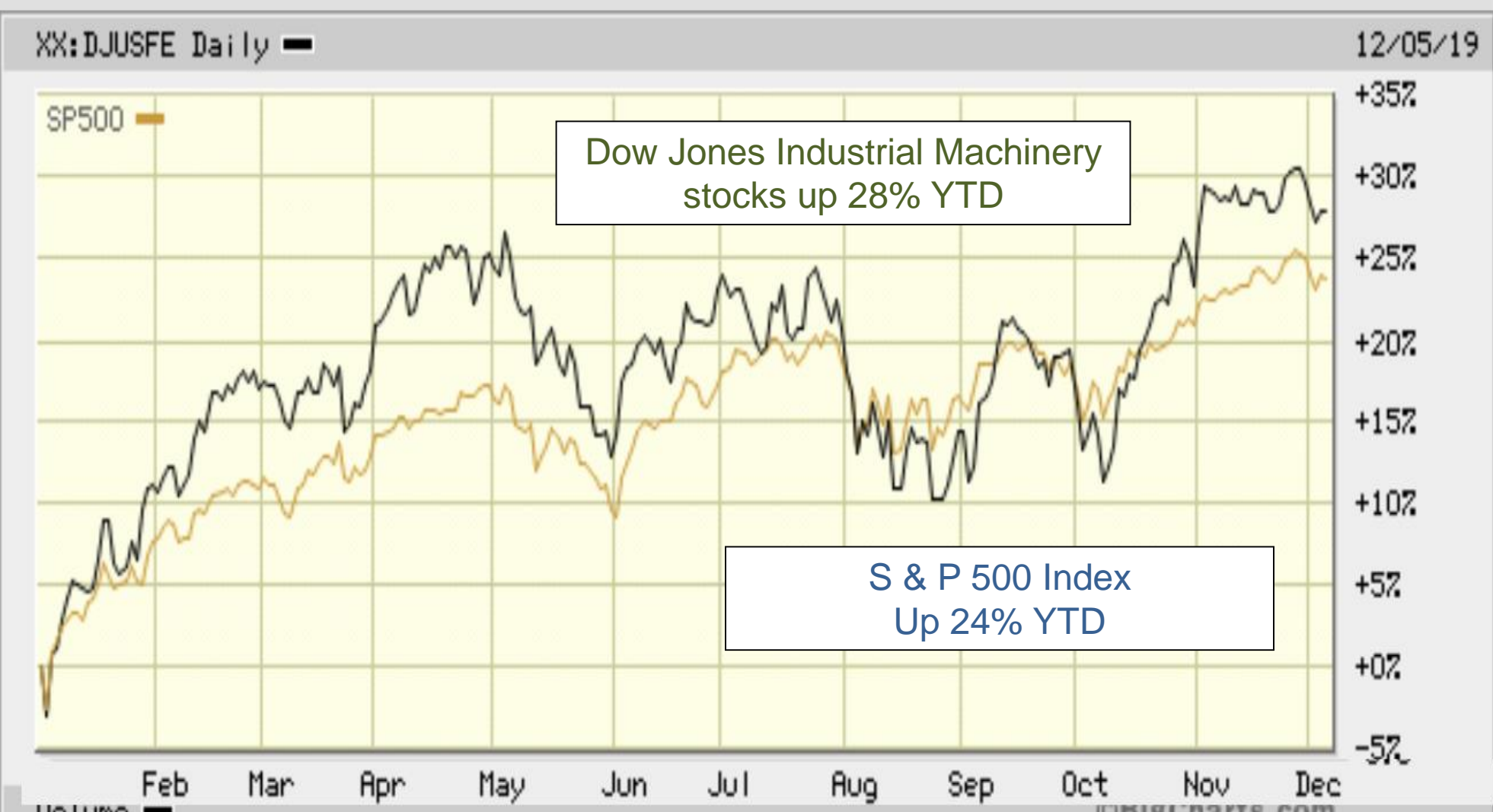
- 2018: not enough trucks
- 2019: supply-demand equilibrium
- 2020: too many trucks, classic overshoot

NA Class 5-7 Trucks, Buses, RVs - Orders and Build



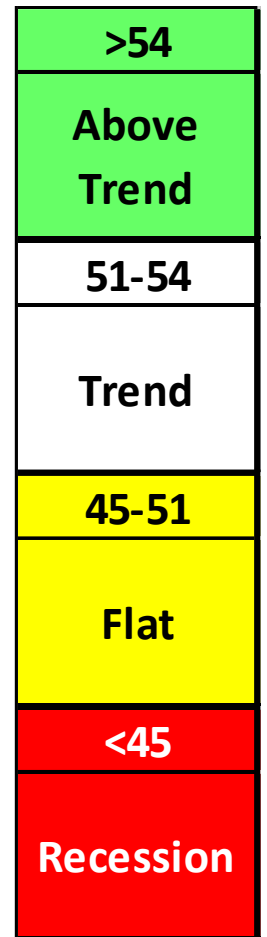
Medium duty tied to consumer, services, construction – marked by stability, slow growth

In spite of headwinds, Industrial Equipment stocks are matching S&P500 ytd gains

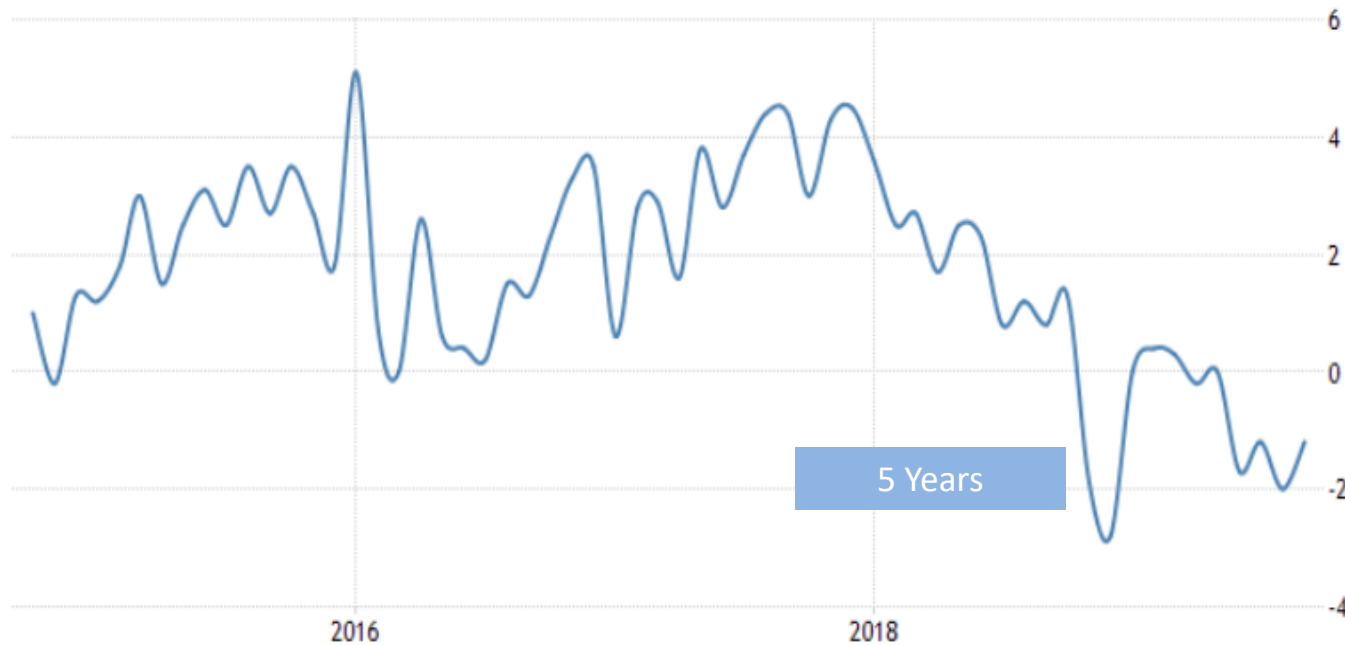


Manufacturers' Purchasing Managers Indexes

	2018 First Quarter			2019 Year-to-date										
	Jan-18	Feb-18	Mar-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19
Global	54.4	54.2	53.3	50.7	50.6	50.5	50.4	49.8	49.4	49.3	49.5	49.7	49.8	50.3
United States	55.5	55.3	55.6	54.9	53.0	52.4	52.6	50.5	50.6	50.4	50.3	51.1	51.3	52.6
Canada	55.9	55.6	55.7	53.0	52.6	50.5	49.7	49.1	49.2	50.2	49.1	51.0	51.2	51.4
Mexico	52.6	51.6	52.4	50.9	52.6	49.8	50.1	50.0	49.2	49.8	49.0	49.1	50.4	48.0
Eurozone	59.6	58.6	56.6	50.5	49.3	47.5	47.9	47.7	47.6	46.5	47.0	45.7	45.9	46.9
Germany	61.1	60.6	58.2	49.7	47.6	44.1	44.4	44.3	45.0	43.2	43.5	41.7	42.1	44.1
France	58.4	55.9	53.7	51.2	51.5	49.7	50.0	50.6	51.9	49.7	51.1	50.1	50.7	51.7
Italy	59.0	56.8	55.1	47.8	47.7	47.4	49.1	49.7	48.4	48.5	48.7	47.8	47.8	47.6
Spain	55.2	56.0	54.8	52.4	49.9	50.9	51.8	50.1	47.9	48.2	48.8	47.7	46.8	47.5
UK	55.3	55.0	55.1	52.6	52.0	55.1	53.1	49.1	48.0	48.0	47.4	48.3	49.6	48.9
Russia	52.1	50.2	50.6	50.9	50.1	52.8	51.8	49.8	48.6	49.3	49.1	46.3	47.2	45.6
Japan	54.8	54.1	53.1	50.3	48.9	49.2	50.2	49.8	49.3	49.4	49.3	48.9	48.4	48.9
China	51.5	51.6	51.0	48.3	49.9	50.8	50.2	50.2	49.4	49.9	50.4	51.4	51.7	51.8
India	52.4	52.1	51.0	53.9	54.3	52.6	51.8	52.7	52.1	52.5	51.4	51.4	50.6	51.2
Brazil	51.2	53.2	53.4	52.7	53.4	52.8	51.5	50.2	51.0	49.9	52.5	53.4	52.2	52.9

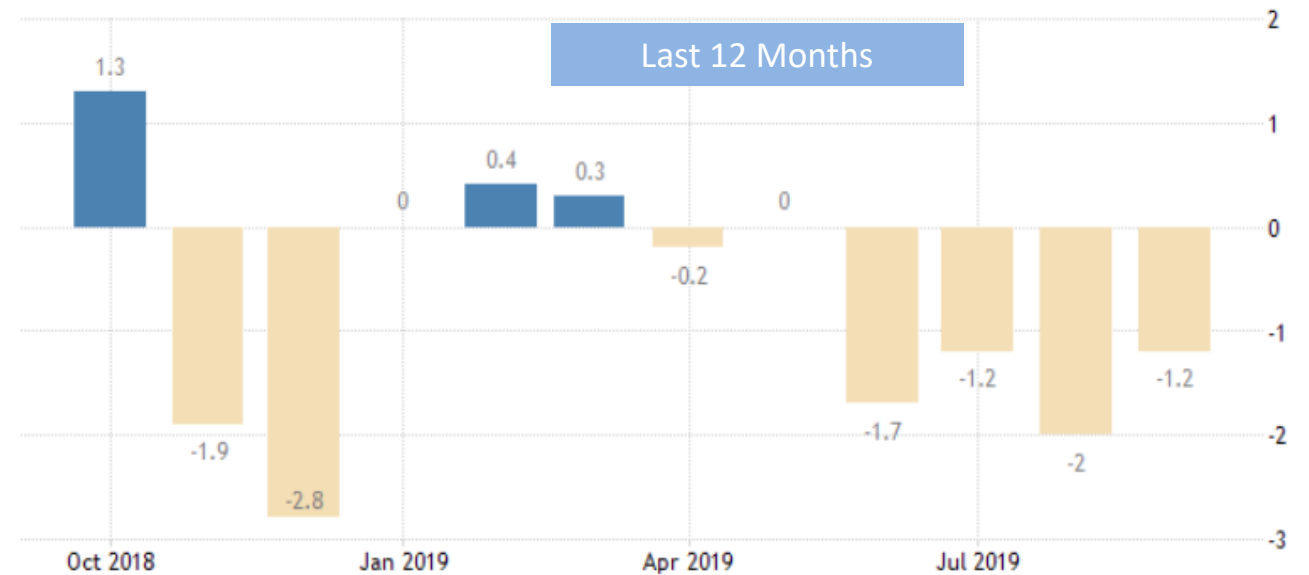


Year-on-Year (YoY) Growth



European Union Industrial Production Y/Y growth

Year-on-Year (YoY) Growth



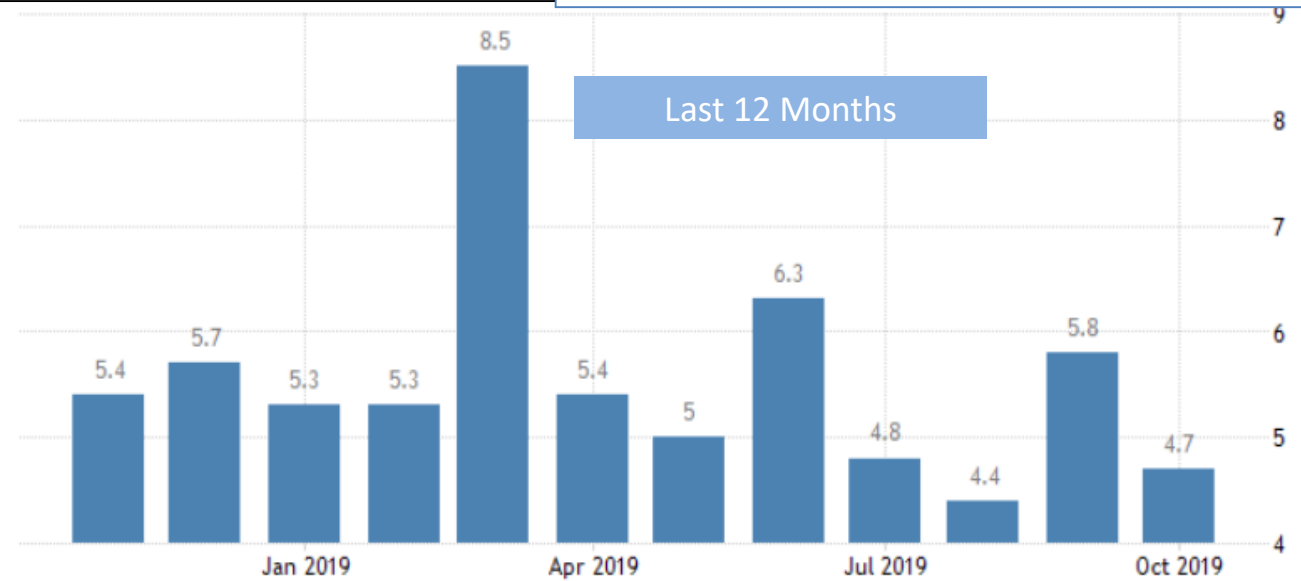
China Industrial Production Y/Y growth

Year-on-Year (YoY) Growth



SOURCE: TRADINGECONOMICS.COM | NATIONAL BUREAU OF STATISTICS OF CHINA

Year-on-Year (YoY) Growth



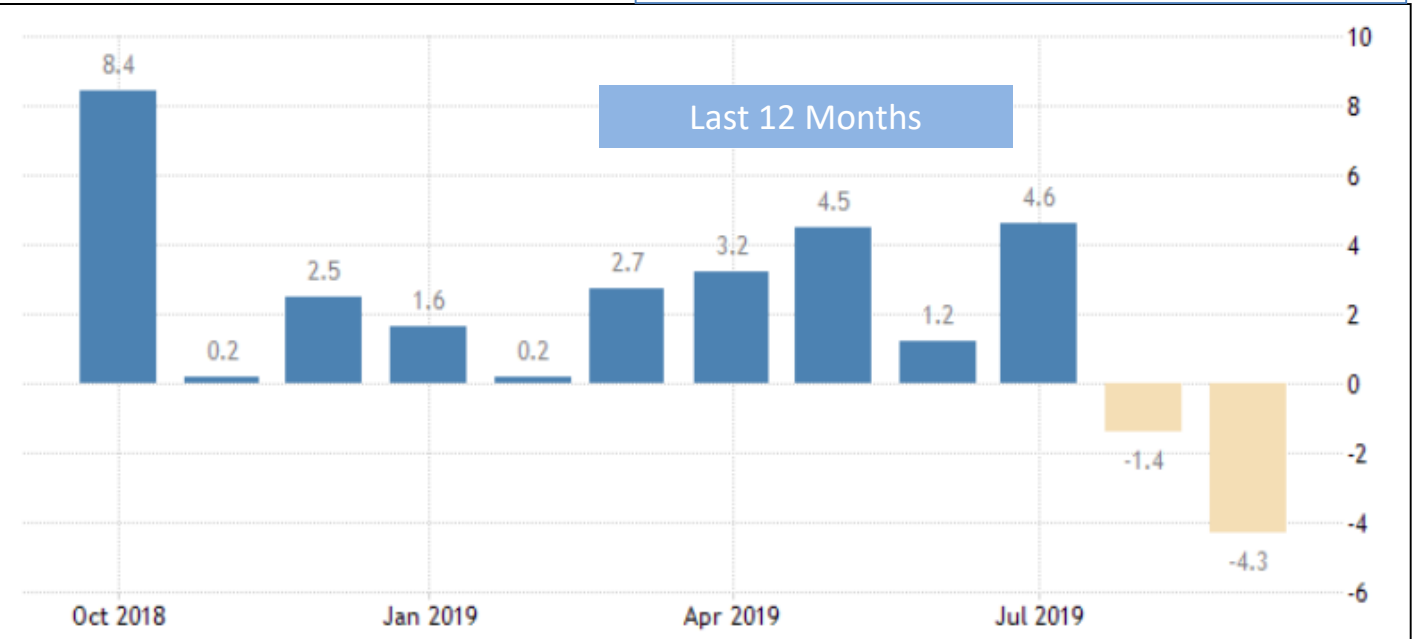
SOURCE: TRADINGECONOMICS.COM | NATIONAL BUREAU OF STATISTICS OF CHINA

Year-on-Year (YoY) Growth



India Industrial Production Y/Y growth

Year-on-Year (YoY) Growth



U.S. Macroeconomic Outlook

	2016 Actual	2017 Actual	2018 Actual	2019 Forecast	2020 Forecast
Real GDP	1.6	2.4	2.9	2.3	1.7
Consumer Spending	2.7	2.6	3.0	2.5	2.4
Capital Spending	0.7	4.4	6.4	2.4	1.0
Equipment	-1.3	4.7	6.8	2.2	0.7
Structures	-5.0	4.7	4.1	1.8	0.0
Intellectual Property	7.9	3.7	7.4	5.5	4.0
Residential Investment	6.5	3.5	-1.5	-1.0	0.0
Government Consumption	1.8	0.7	1.7	0.2	0.5
Net Exports (2009 \$B)	-784	-850	-920	-979	-1045
Mfg Industrial Production	-0.7	2.0	2.7	0.0	0.4
Housing Starts (M)	1.18	1.21	1.24	1.26	1.27
US Light Vehicle Sls (M)	17.5	17.1	17.2	16.8	16.5
NA Lt Veh Production (M)	17.5	16.9	16.9	16.6	16.3
Unemployment Rate (%)	4.9	4.4	3.9	3.7	3.8
90 Day Treasury Yield	0.3	0.9	1.9	2.1	1.7
10 Year Treasury Yield	1.8	2.3	2.9	2.1	1.8
GDP Deflator	1.0	1.9	2.4	1.8	2.1

N.A./U.S. Industrial Markets/Production Outlook

	2016 Actual	2017 Actual	2018 Actual	2019 Fcst	2020 Fcst
NA Lt Veh Production (M)	17.5	16.9	16.8	16.6	16.3
NA CI 5-7 Truck Prod (K)	171	183	208	213	199
NA Class 8 Truck Prod (K)	228	256	324	340	224
US Farm Machinery Eq Shp	-22.5	11.5	17.7	1	-8
US Construction Eq Shp	-8.5	14.4	9.8	2	-5
US Mining & Oilfield Eq Shp	-31.3	22.4	-0.3	-5	-8
US Industrial Machinery Shp	-0.4	1.2	0.7	3	0
US Metalworking Eq Shipmnts	-4.6	5.5	3.2	-3	-2
US Material Handling Shipmnts	1.8	4.1	8.5	5	3
Housing Starts (M)	1.18	1.21	1.24	1.26	1.27
Mfg. Capacity Utilization %	75.0	75.2	76.3	76.0	75.5
Oil Prices (WTI \$/bbl)	43.1	50.9	66.0	55	55

Percent Change (except where indicated)

Wrap-up and Summary

- Expansion – long duration but slow growth
- Main street is OK – problems in Beltway, rest of world
- 2020 headwinds after 2017 – 2018 tailwinds, 2019 transition
- Most likely – 2020 heavy machinery flattish in a tepid economy ... watch credit, used equipment
- BIG IF – dodge 2020 or 2021 recession....
... **expansion goes to 2023 or 2024**



ACT Research Company, LLC

4440 Middle Road
Columbus, IN 47203

Phone: (812) 379-2085

Fax: (812) 378-5997

Email: trucks@actresearch.net

www.actresearch.net