

Economic Outlook

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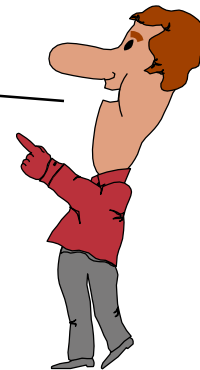
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**Excuse me.
Can you tell
me where I
am?**

**You're in
a balloon.**





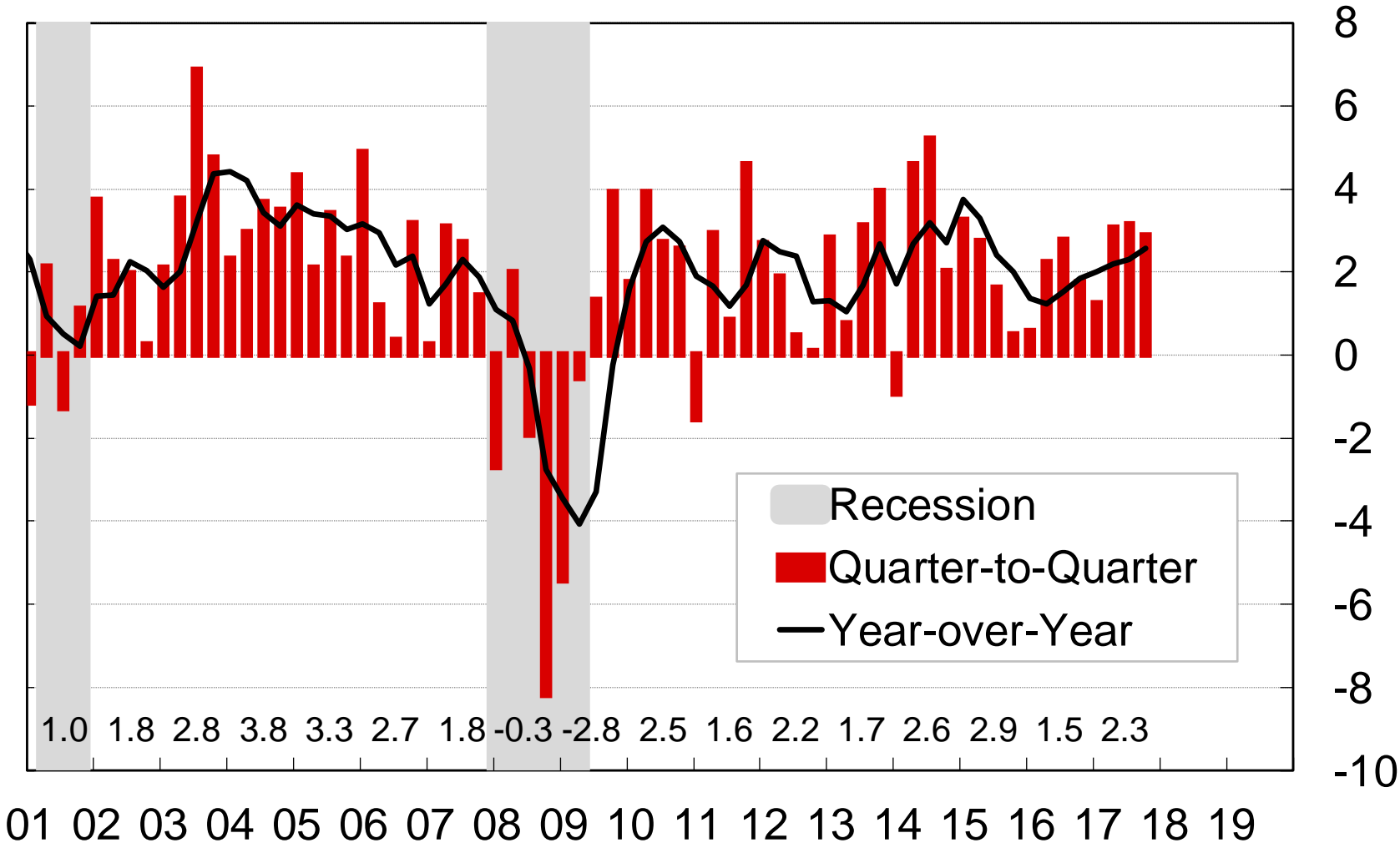
**You must
be a economist.
Your answer is
perfectly correct
and totally
useless.**

**You must be a manager. You
have a great view, but don't
know where you are.**

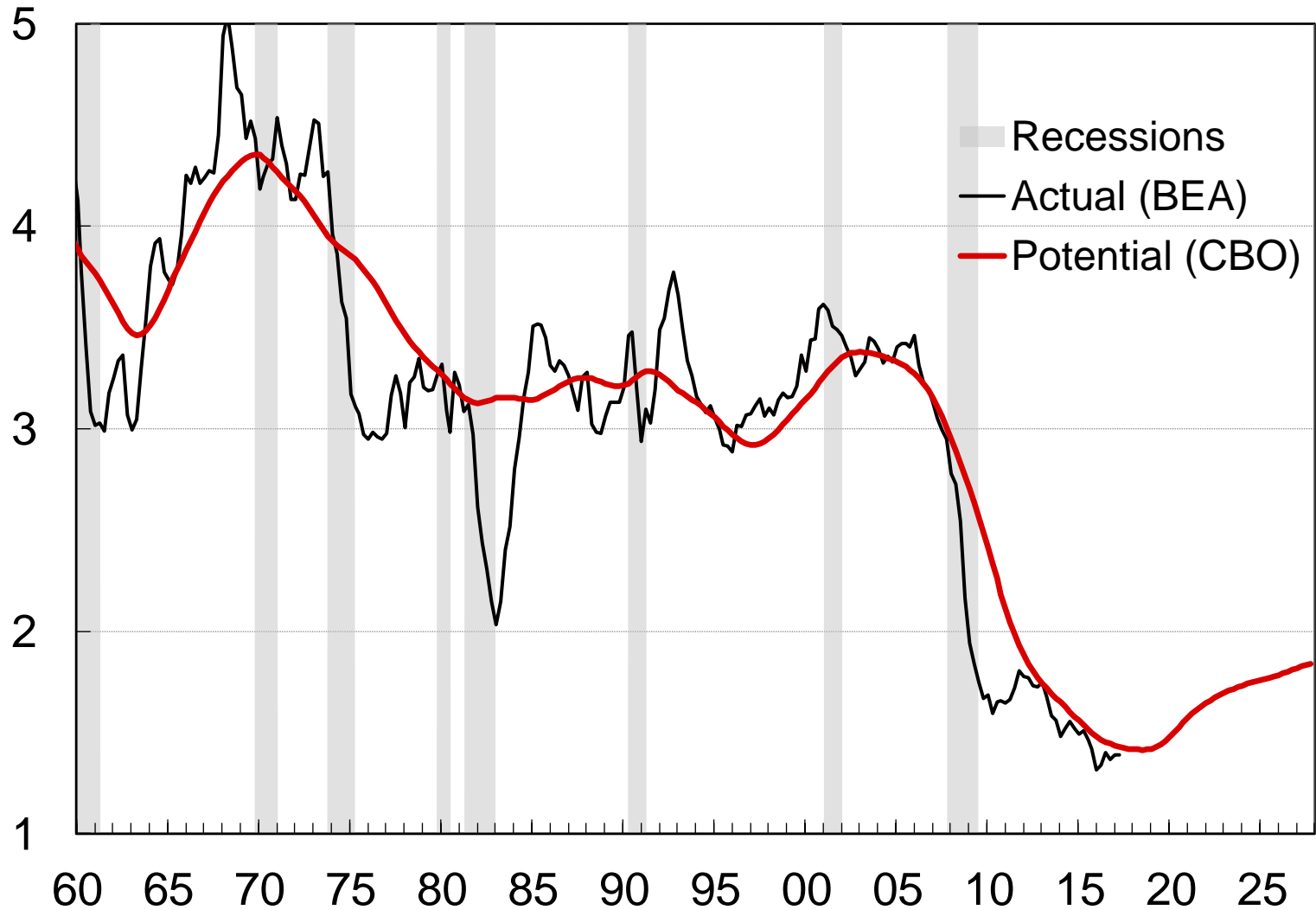


US Real Gross Domestic Product

Annualized Growth Rates



US Real Gross Domestic Product *10-Year Annualized Growth Rate*



Why did growth slow so much?

Population growth has slowed.

We've run out of low-hanging technological fruit. (Robert Gordon)

High government debt slows long-term growth. (Reinhart and Rogoff)

Recoveries after financial crises are weaker. (Reinhart and Rogoff)

The combination produces secular stagnation. (Larry Summers)

Excessive regulation held back productivity growth.

High US corporate taxes (relative to abroad) held down investment.

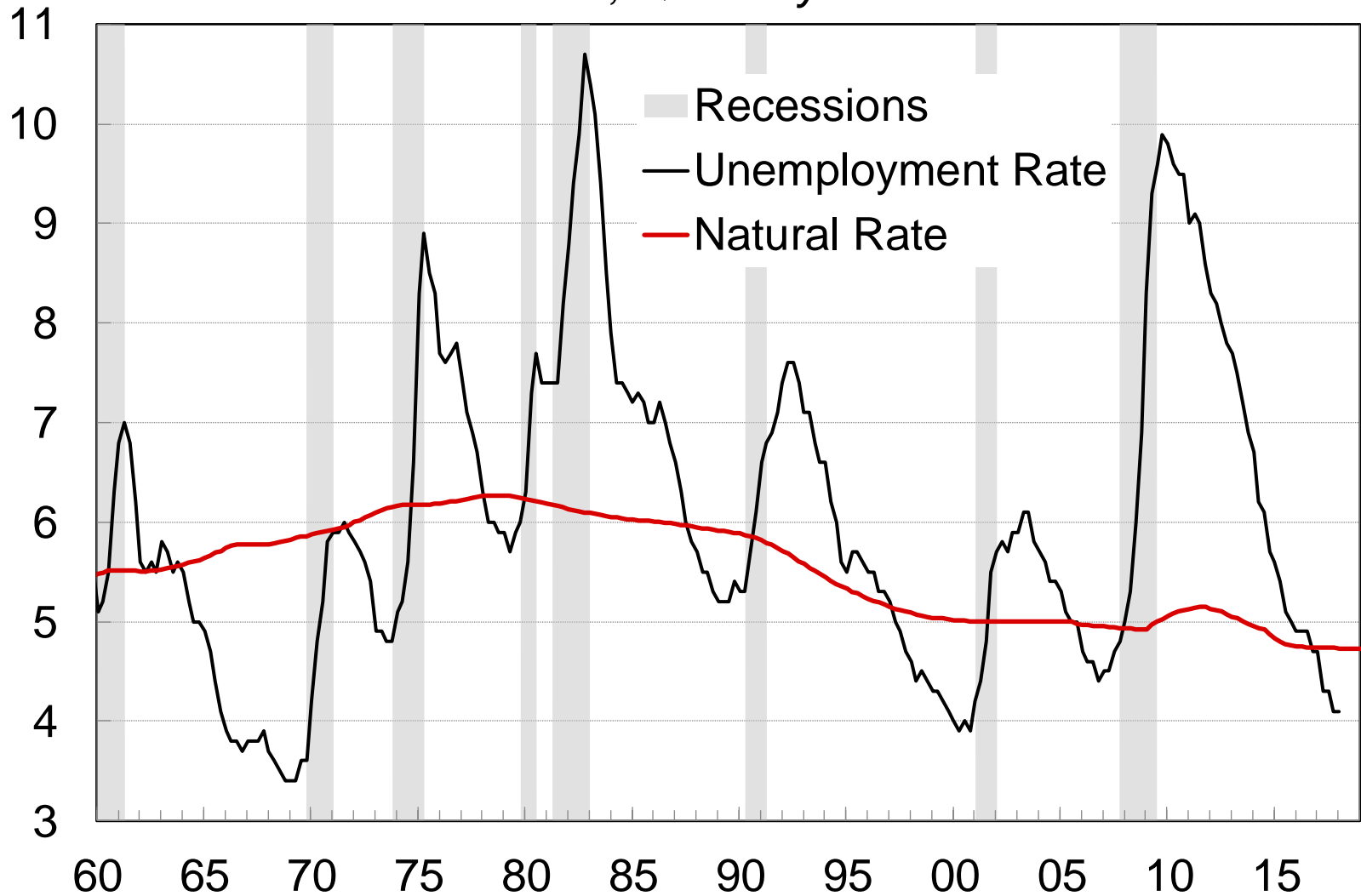
Oil prices were extremely high from 2010 to 2014.

Increased industry concentration boosts prices, holds back output.

Whatever the reason(s), CBO thinks slow growth will continue.

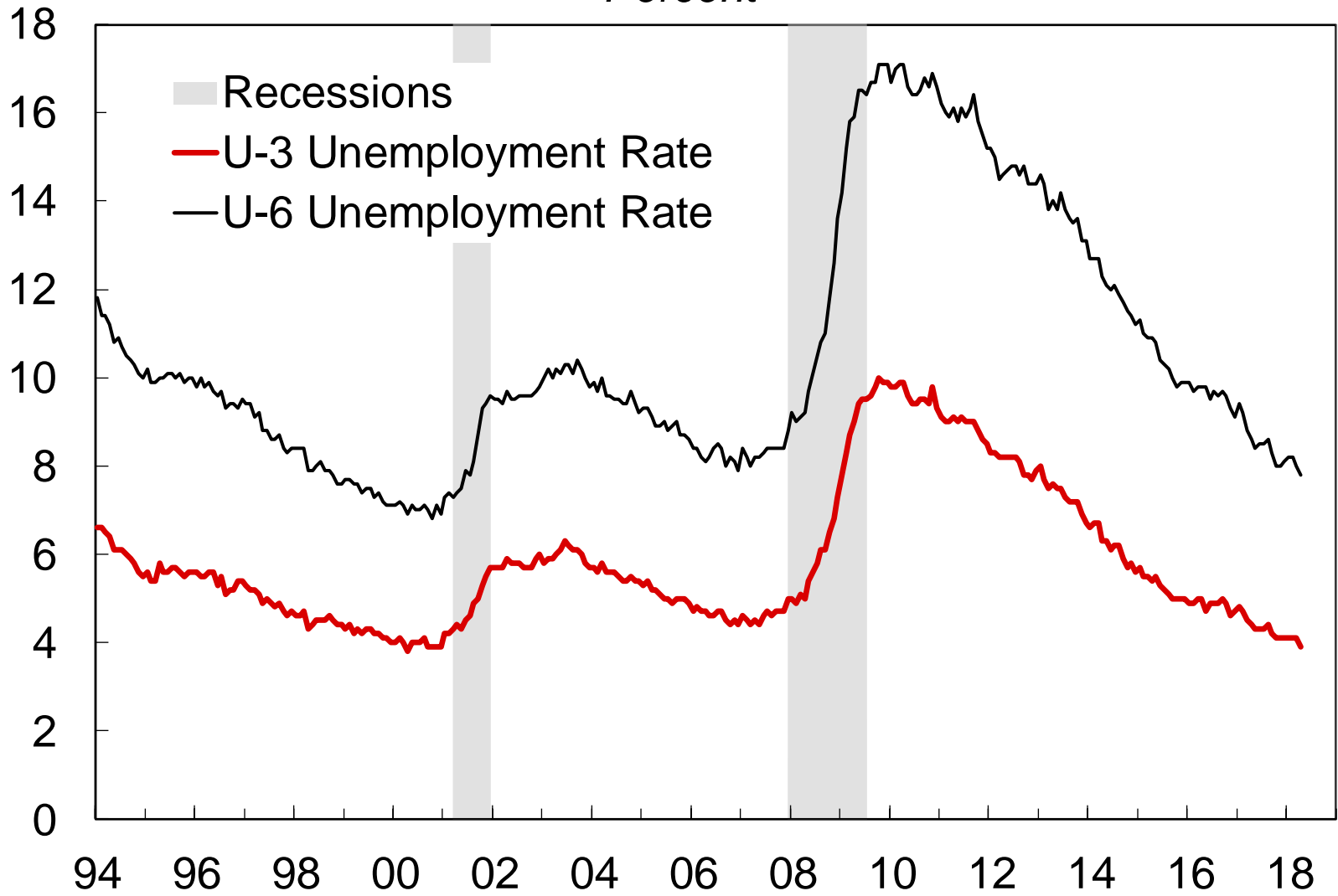
US Civilian Unemployment Rate

Percent, Quarterly Data



US Civilian Unemployment Rate

Percent





“The accuracy of an economic vision is not always commensurate with the analytical ability of those who hold it. Pessimistic visions about almost anything always strike the public as more erudite than optimistic ones.”
--Joseph Schumpeter, 1883-1950

How fast can the economy grow at “full employment”?

U-3 fell below CBO estimate of natural rate of unemployment in fourth quarter of 1987. Real GDP grew at 3.8% annual rate over next 10 quarters.

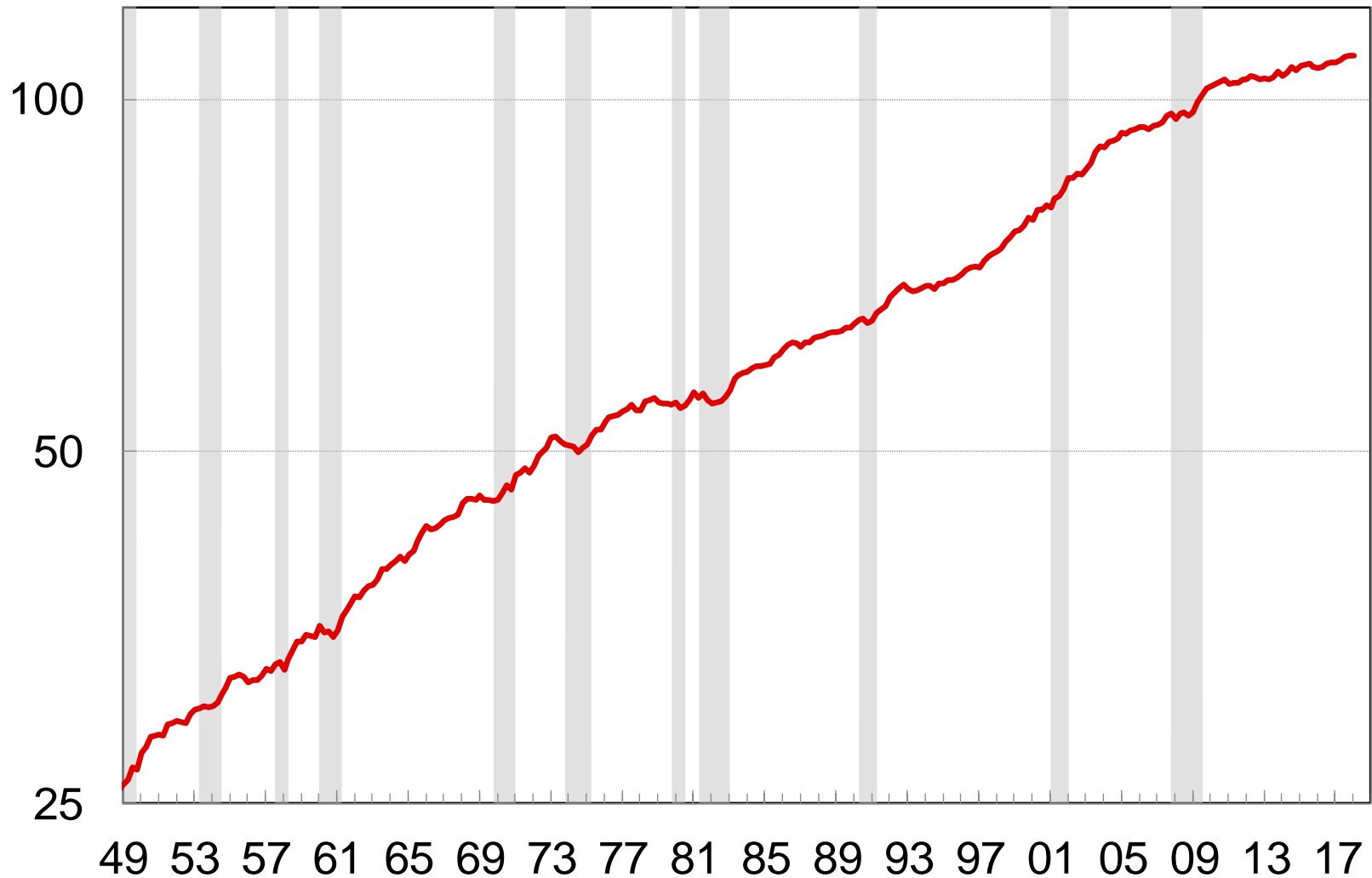
U-3 fell below natural rate in fourth quarter of 1997. (Fell to 4.6%, same as in November 2016.) Real GDP grew at 4.8% annual rate over next 10 quarters.

Economy can grow rapidly at “full employment” because:

- Hours/week can be increased. (ACA reform would help here.)
- People who have left the labor force can return.
- Productivity growth can accelerate. (More investment, lower energy prices, moving workers to higher-productivity jobs, squeezing more output out of existing workers.)

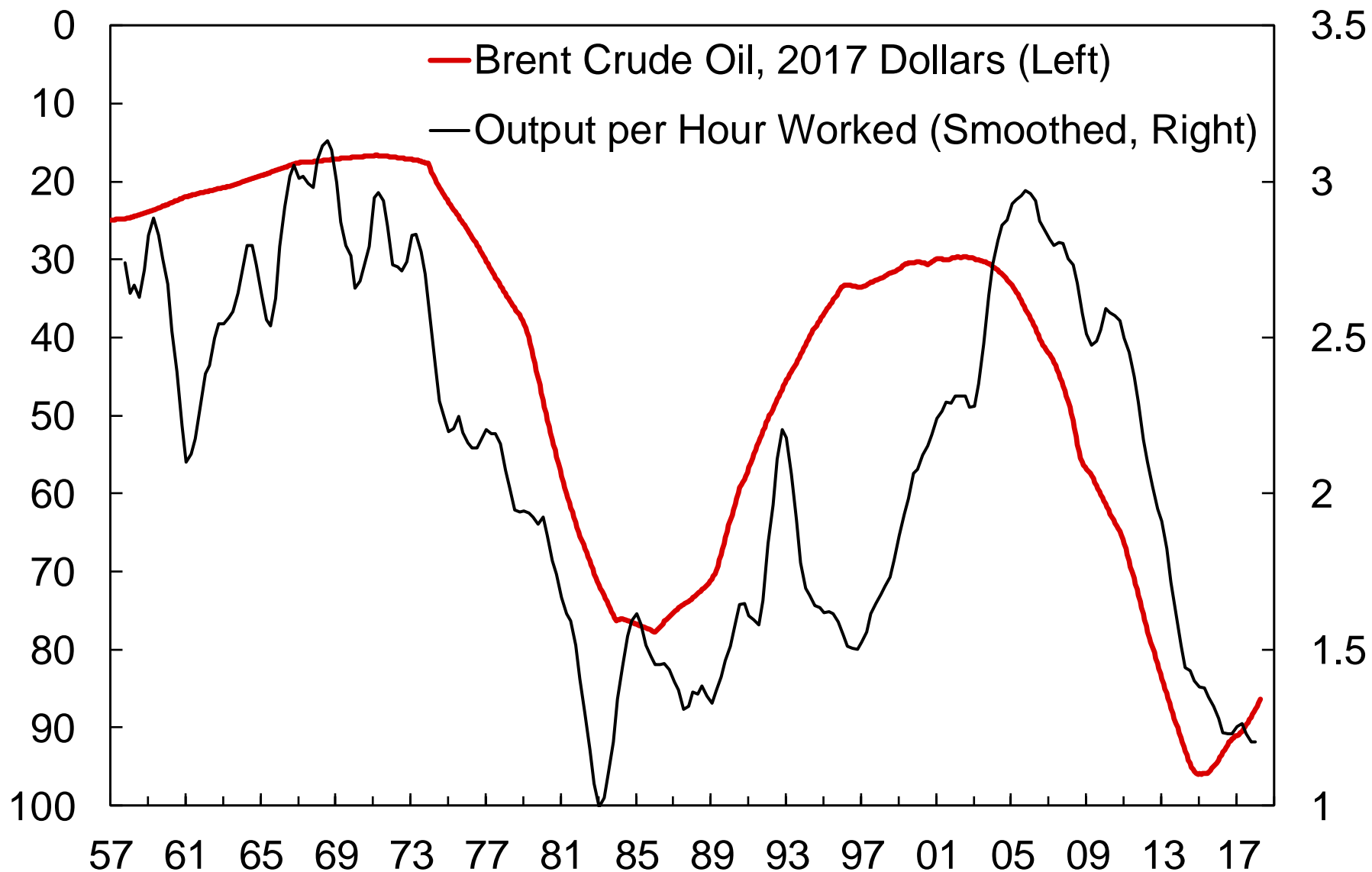
Real Output Per Hour: US Nonfarm Business Sector

2009 = 100, Logarithmic Scale



Oil Prices & US Productivity Growth

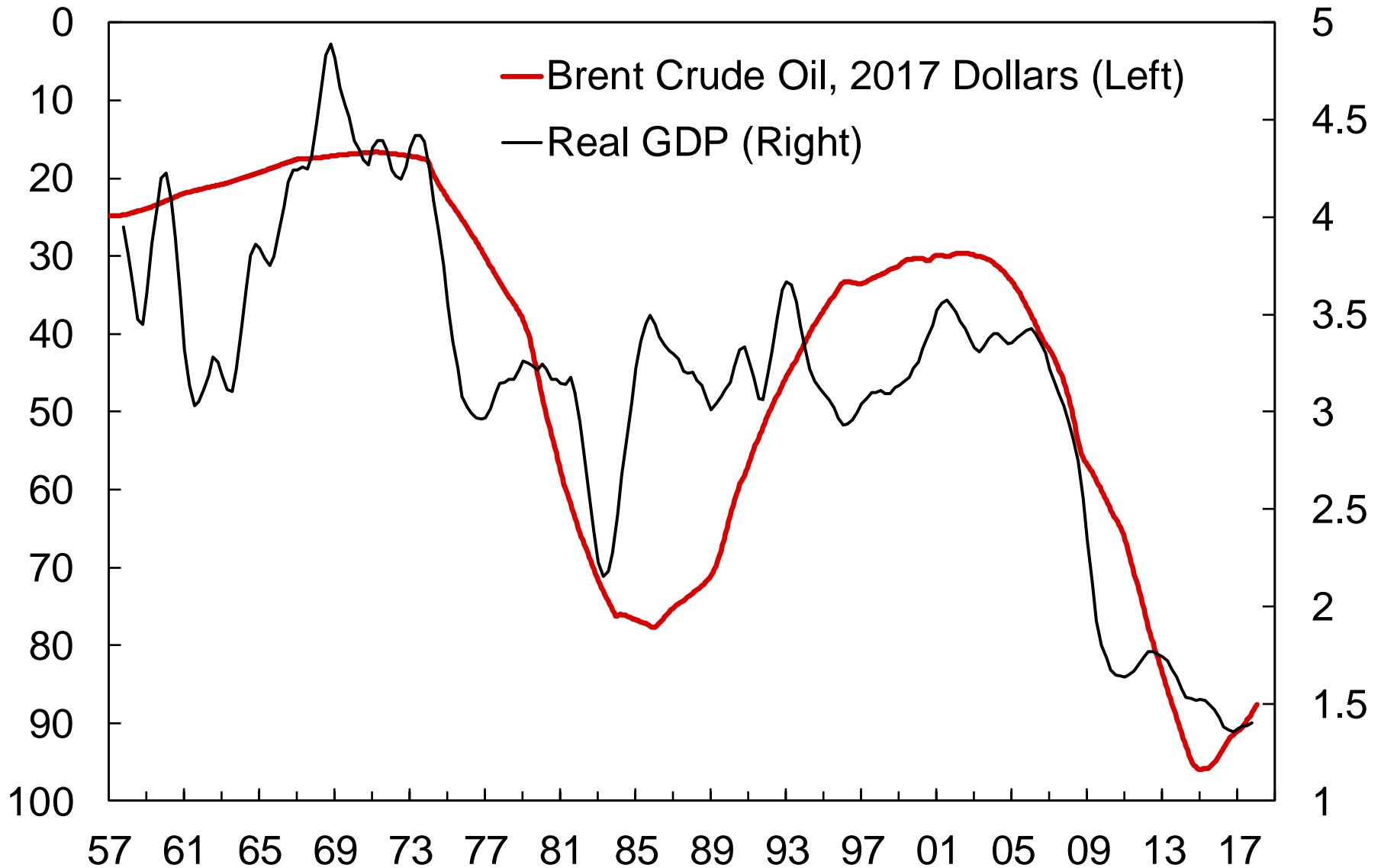
10-Year Moving Average *10-Year Annualized Growth Rate*



Oil Prices & US Economic Growth

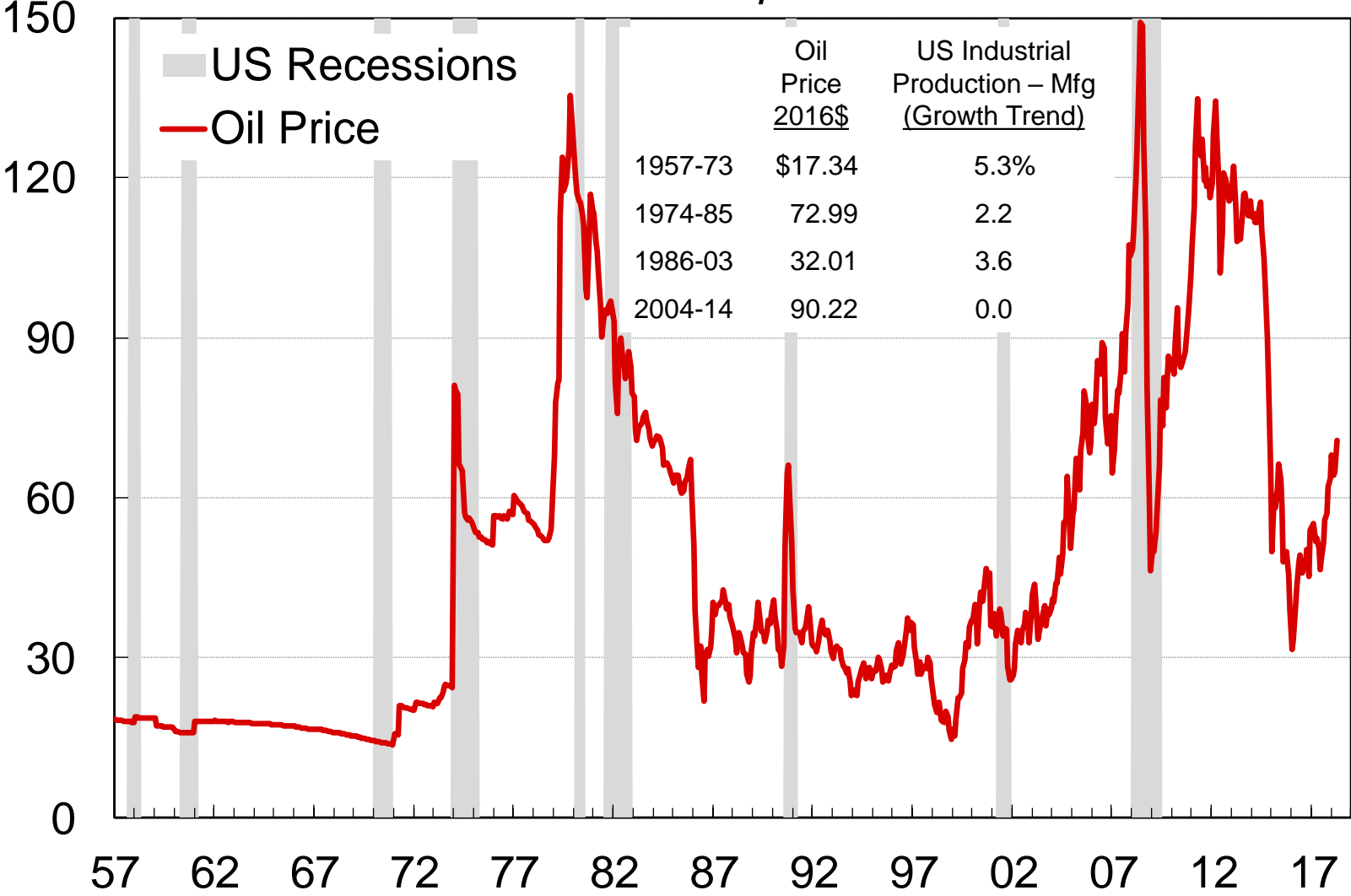
10-Year Moving Average

Rolling 10-Year Growth Rate



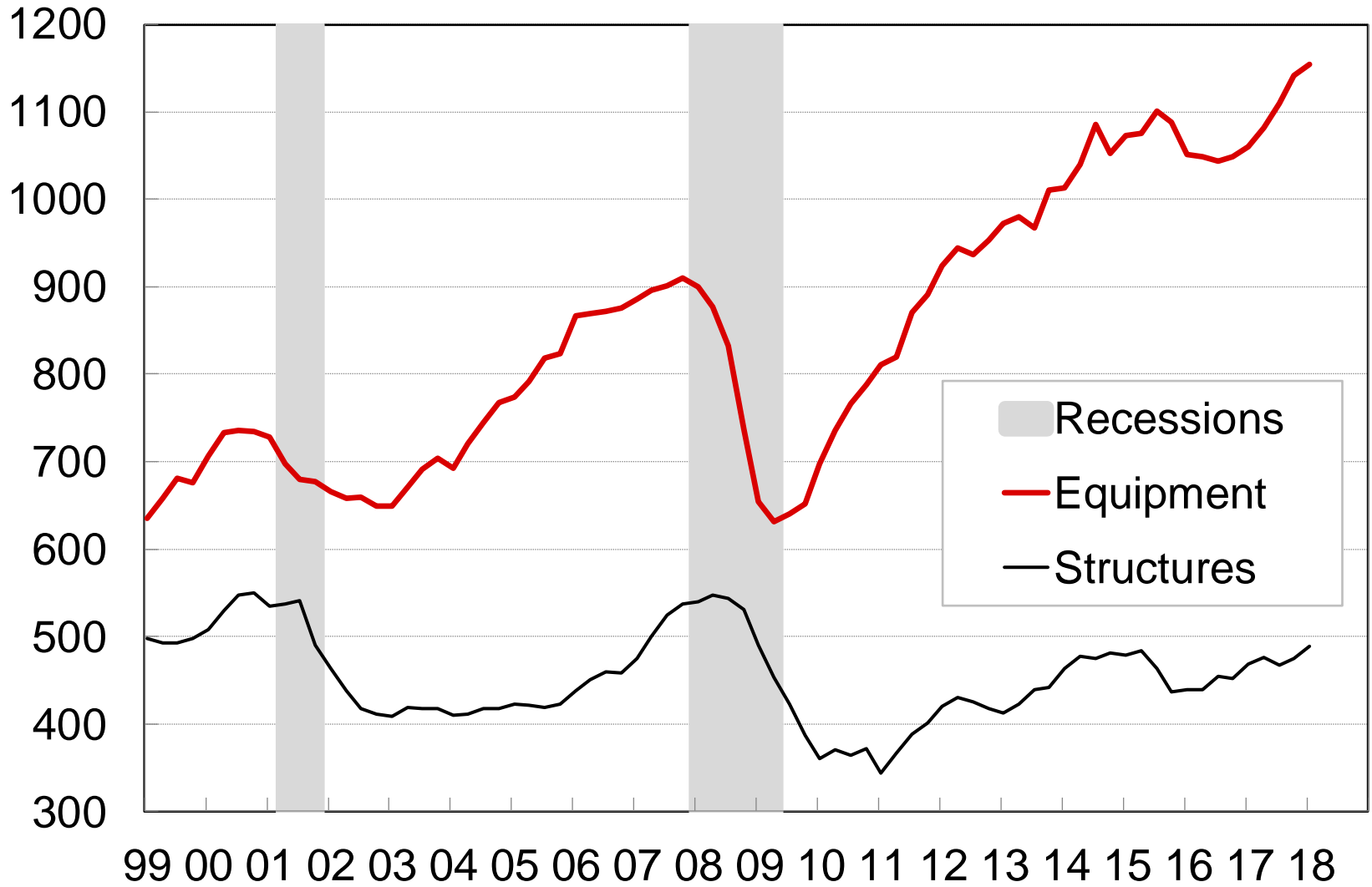
Brent Blend Oil Price

2017 US Dollars per Barrel



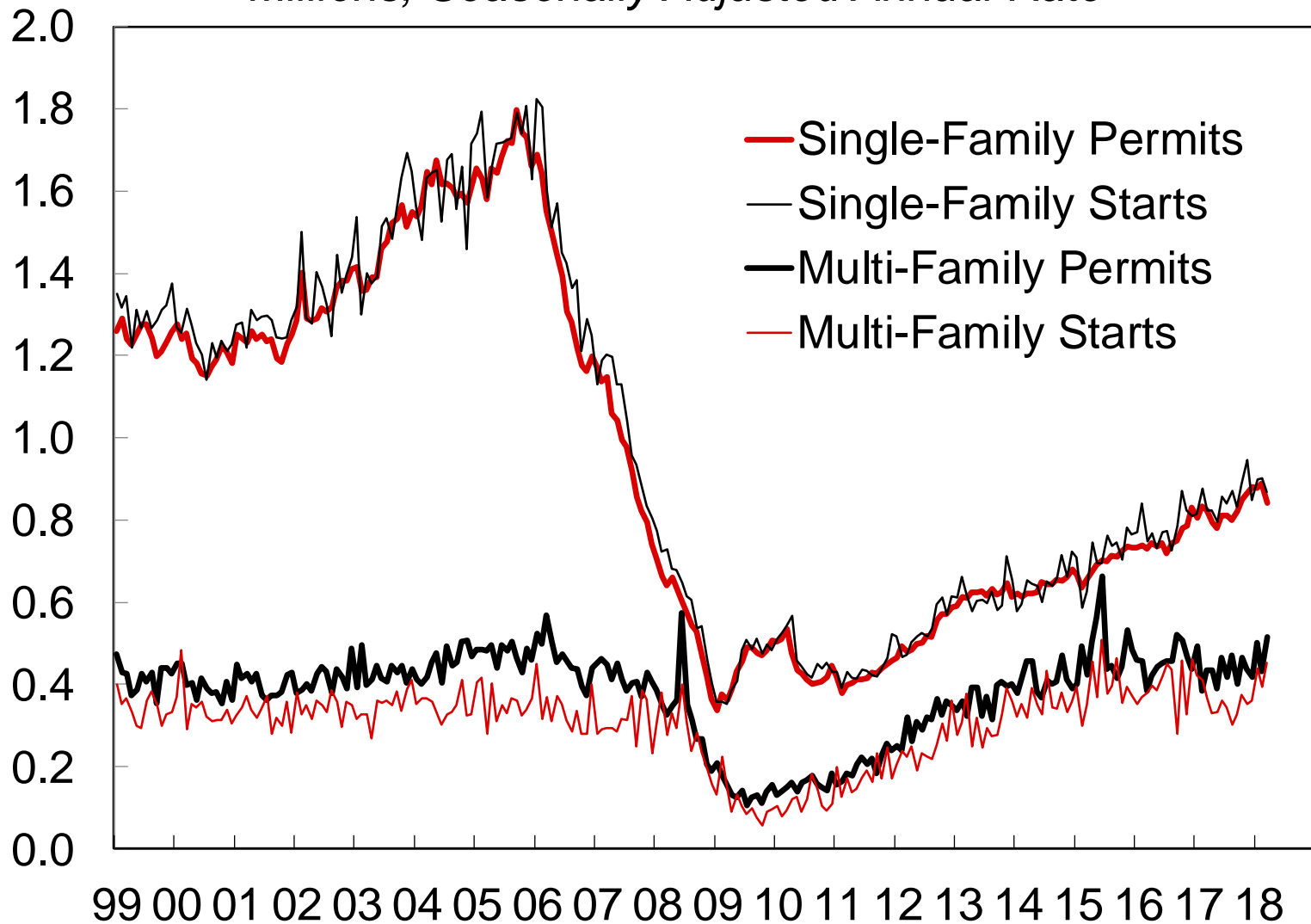
US Nonresidential Fixed Investment

Billion Chained 2009 Dollars



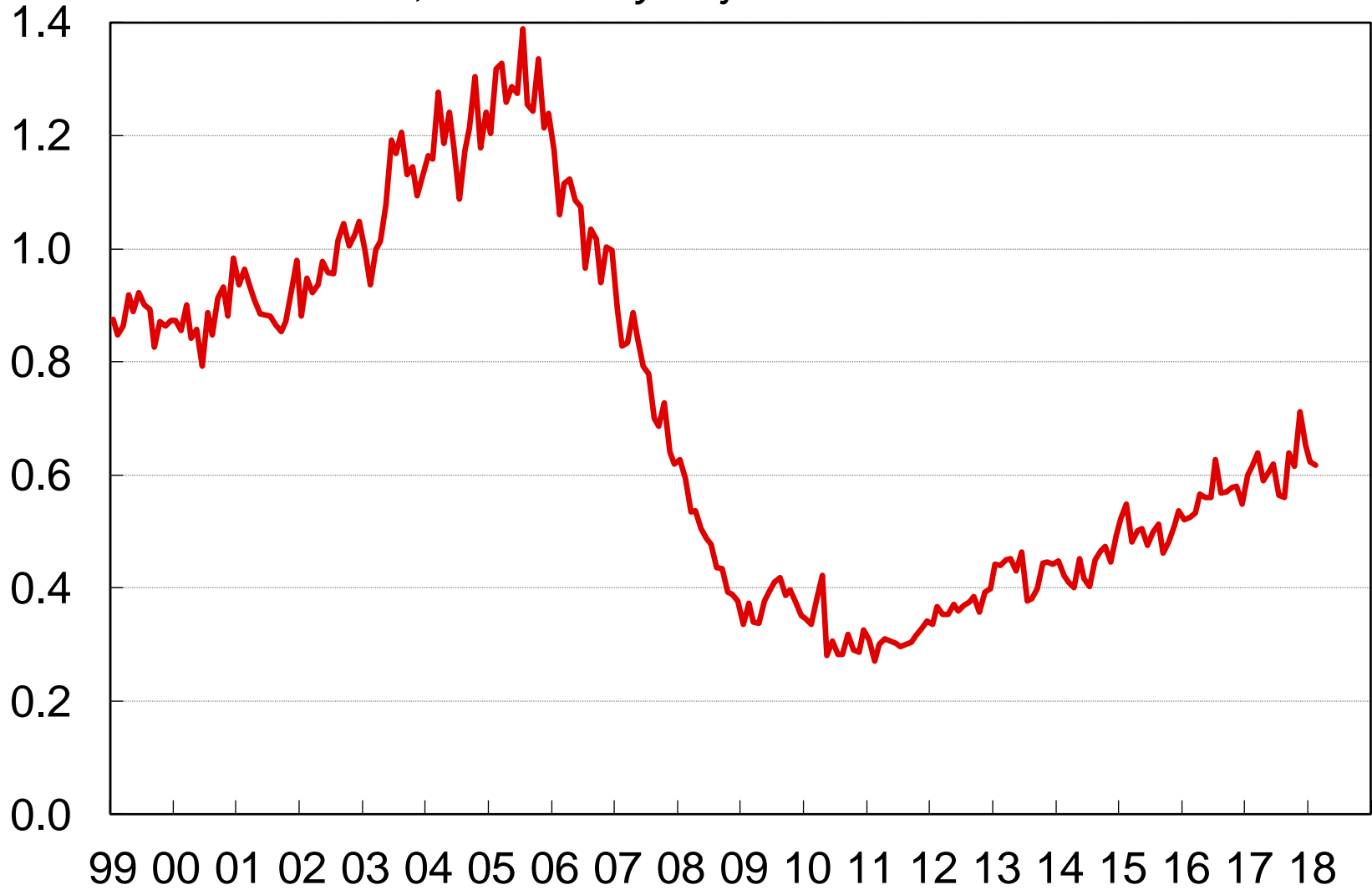
US Housing Starts & Building Permits

Millions, Seasonally Adjusted Annual Rate



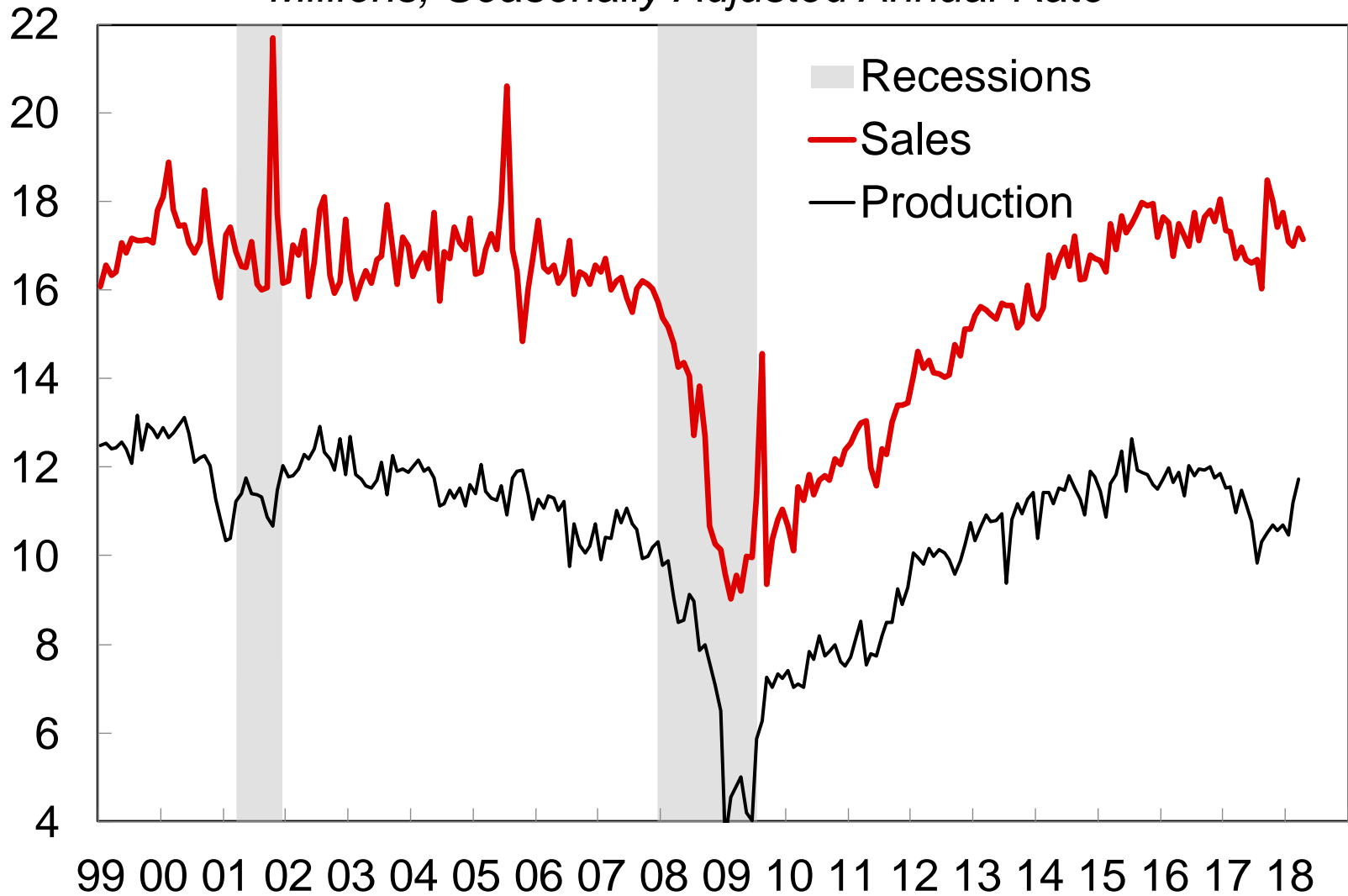
US New Home Sales

Millions, Seasonally Adjusted Annual Rate



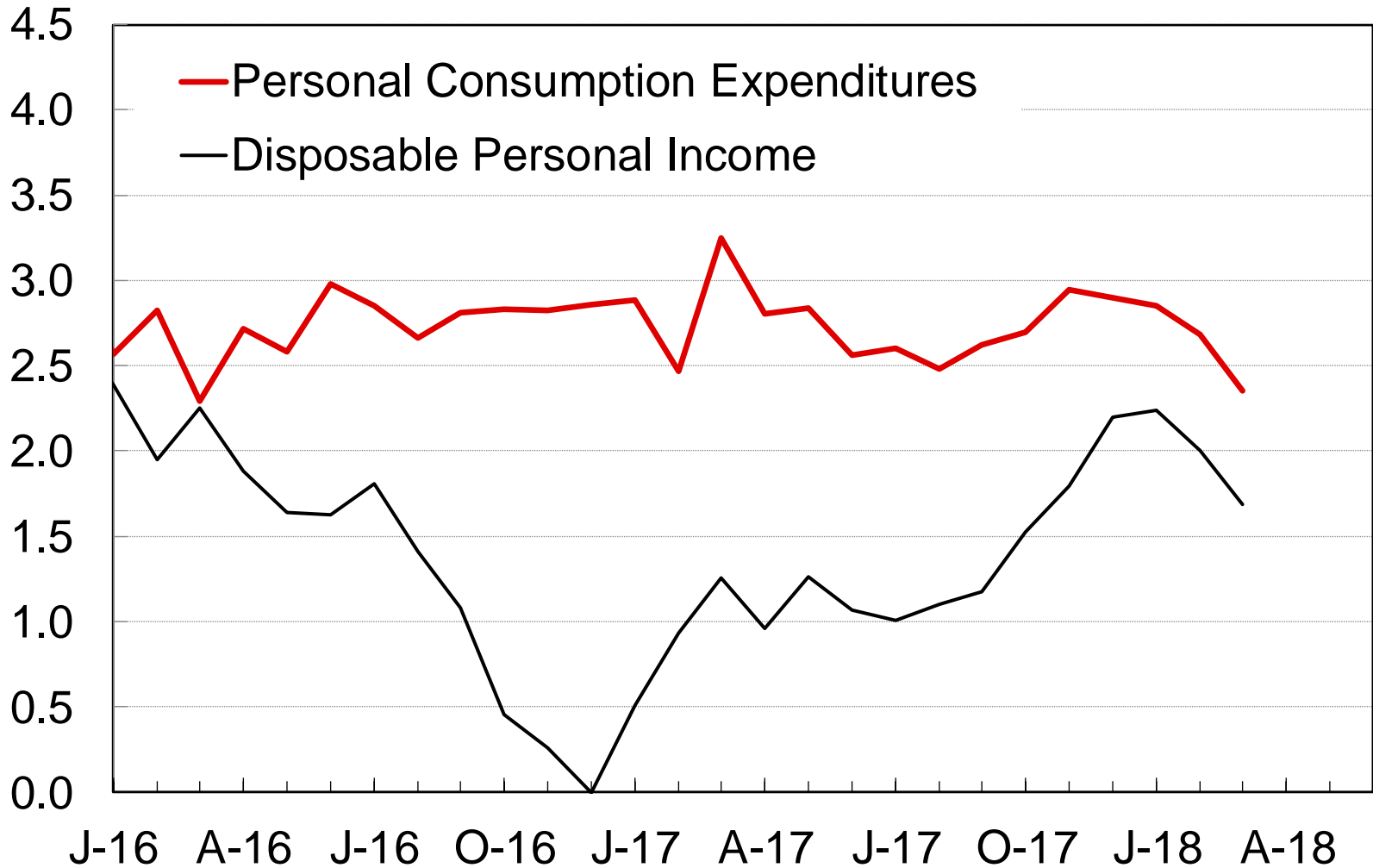
US Light Vehicle Sales & Production

Millions, Seasonally Adjusted Annual Rate



US Real Consumer Spending & Disposable Income

Percent Change from Year Ago, Chained 2009 Dollars



If growth accelerates, where does it accelerate?

Tax reform will boost business investment in plant and equipment.

- Investment boosts demand and supply; it's the economic gift that keeps on giving.

Housing recovery has much further to run.

- Construction supplies (lumber, concrete, glass) will benefit.
- Appliances, furniture, and carpeting will benefit.

Chemical output likely to rise strongly as investments come on line.

- Users of cheap ethane-based chemicals will benefit from natural gas liquids from shale.

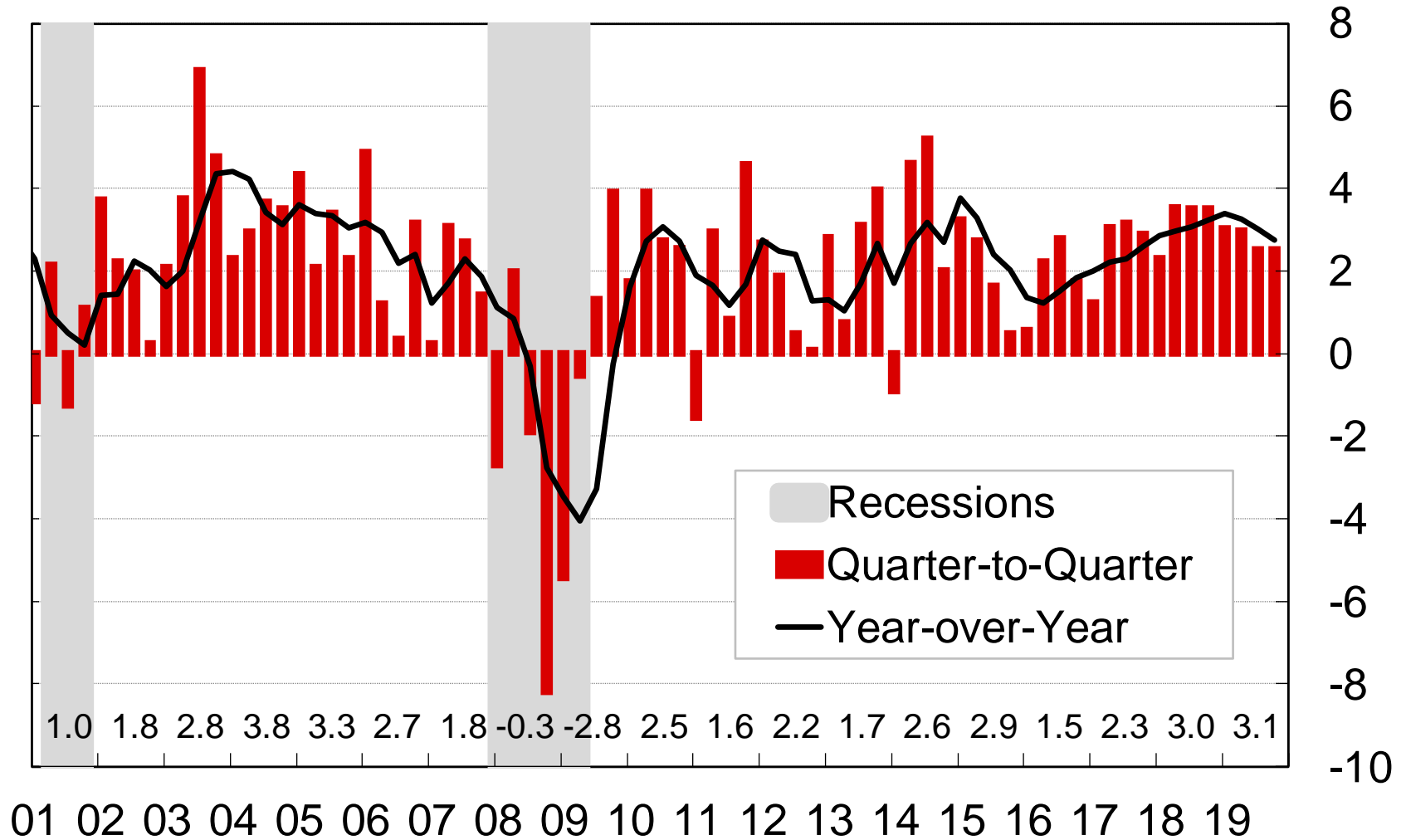
Motor vehicle sales & production will remain at high levels but have probably reached their cyclical peaks.

Consumer spending unlikely to accelerate or decelerate significantly.

- Spending didn't slow with income growth; won't accelerate with income either.

US Real Gross Domestic Product

Annualized Growth Rates



Why is US economic growth accelerating?

Global factors

Financial crises slow growth for about 10 years. (Reinhart and Rogoff)

2014 decline in oil prices finally boosting growth.

Monetary policy still very stimulative (for now).

Domestic factors

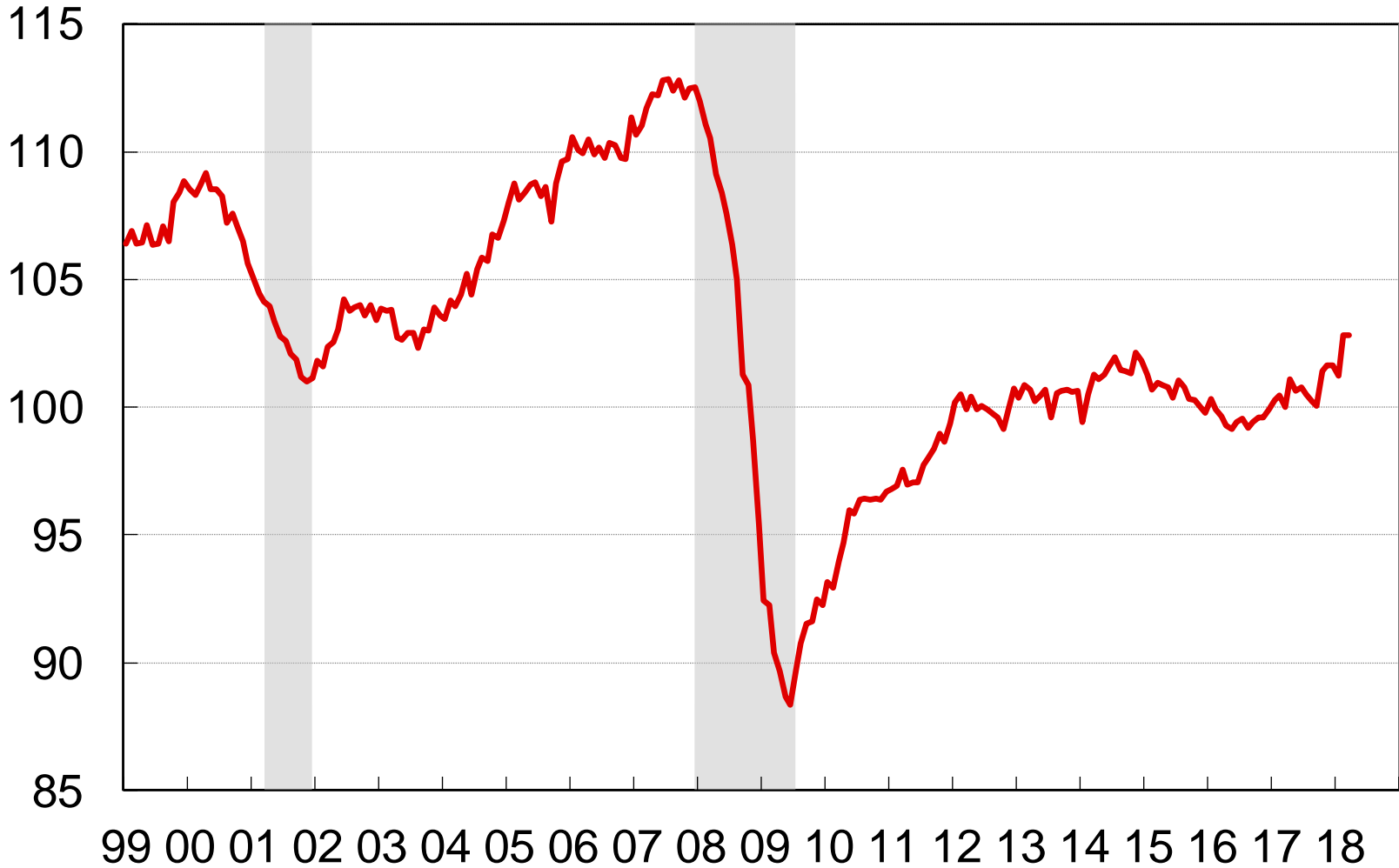
Less regulation means higher productivity growth, more hiring, etc.

Corporate tax cuts (repatriation, expensing, rate cuts) will boost investment.

Housing recovery has resumed; has years to run.

Economy can grow strongly (10 quarters) after reaching “full employment.”

US Industrial Production: Manufacturing ex high-tech *Index, 2012=100*



US manufacturing is growing again.

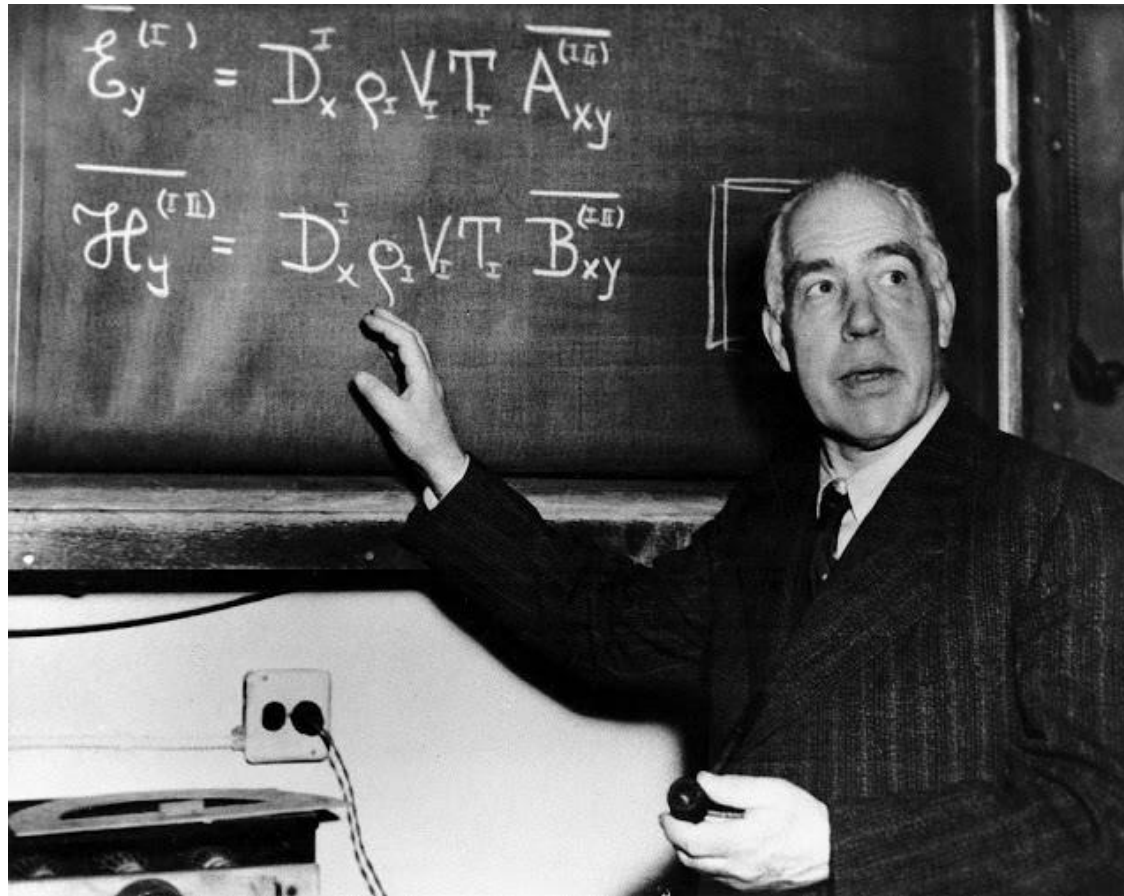
Production turned up in September 2016.

Production had been held back by:

- Strong dollar, slow growth abroad.
- Impact of low oil prices on metals and machinery.

Production up 3.9% since August 2016, 2.9% since September 2017.

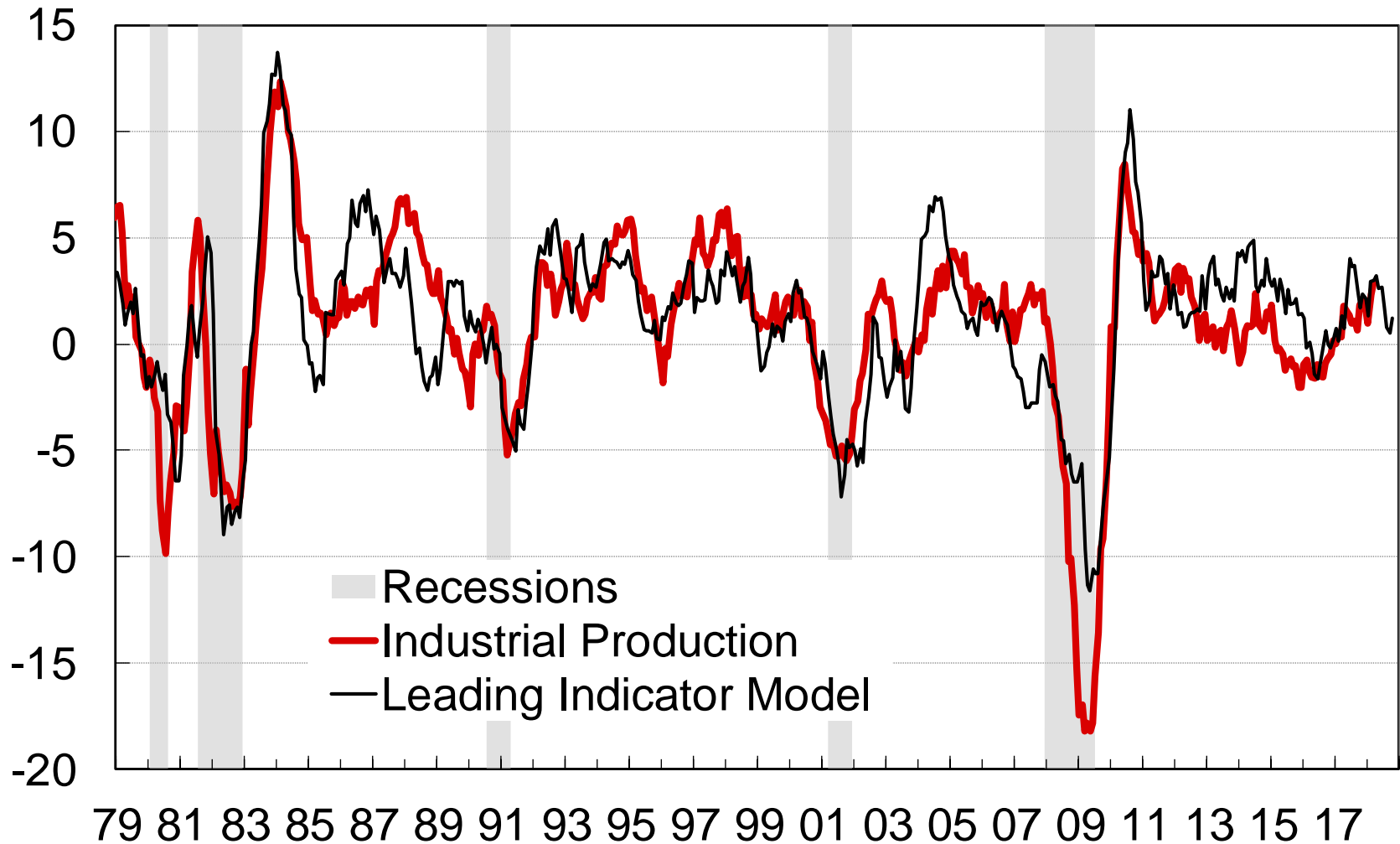
- Long-expected growth in chemical production finally materializing.
- Metals and machinery have rebounded with oil drilling.
- Building materials (lumber, nonmetallic minerals) rising with housing.
- Some industries (printing, paper, apparel) remain in long-term declines.



“Prediction is very difficult, especially about the future.”
--Niels Bohr, 1885-1962
Nobel Laureate, 1922

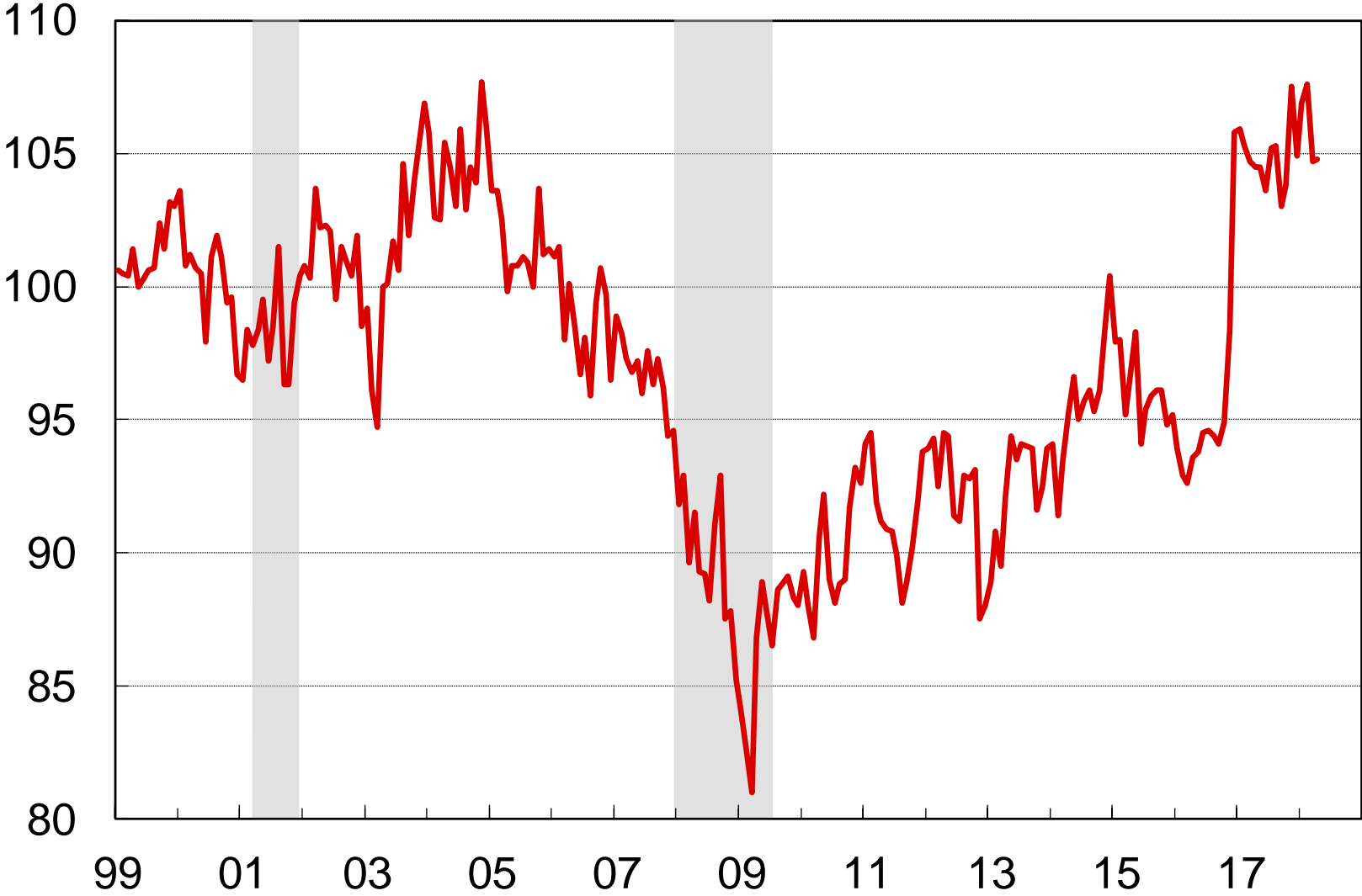
US Industrial Production: Manufacturing ex high-tech

Percent Change from Year Ago



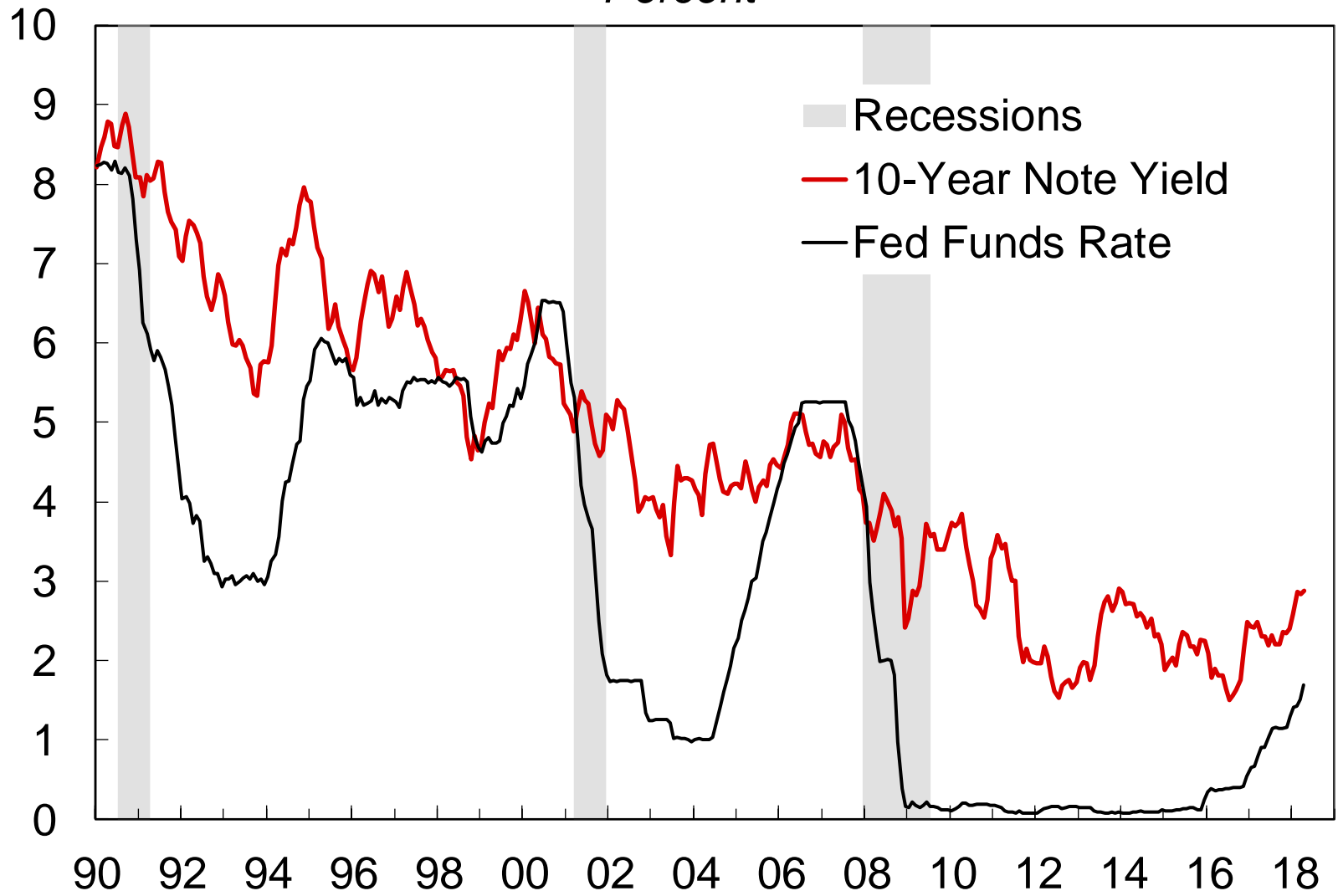
NFIB Small Business Optimism Index

1986 = 100



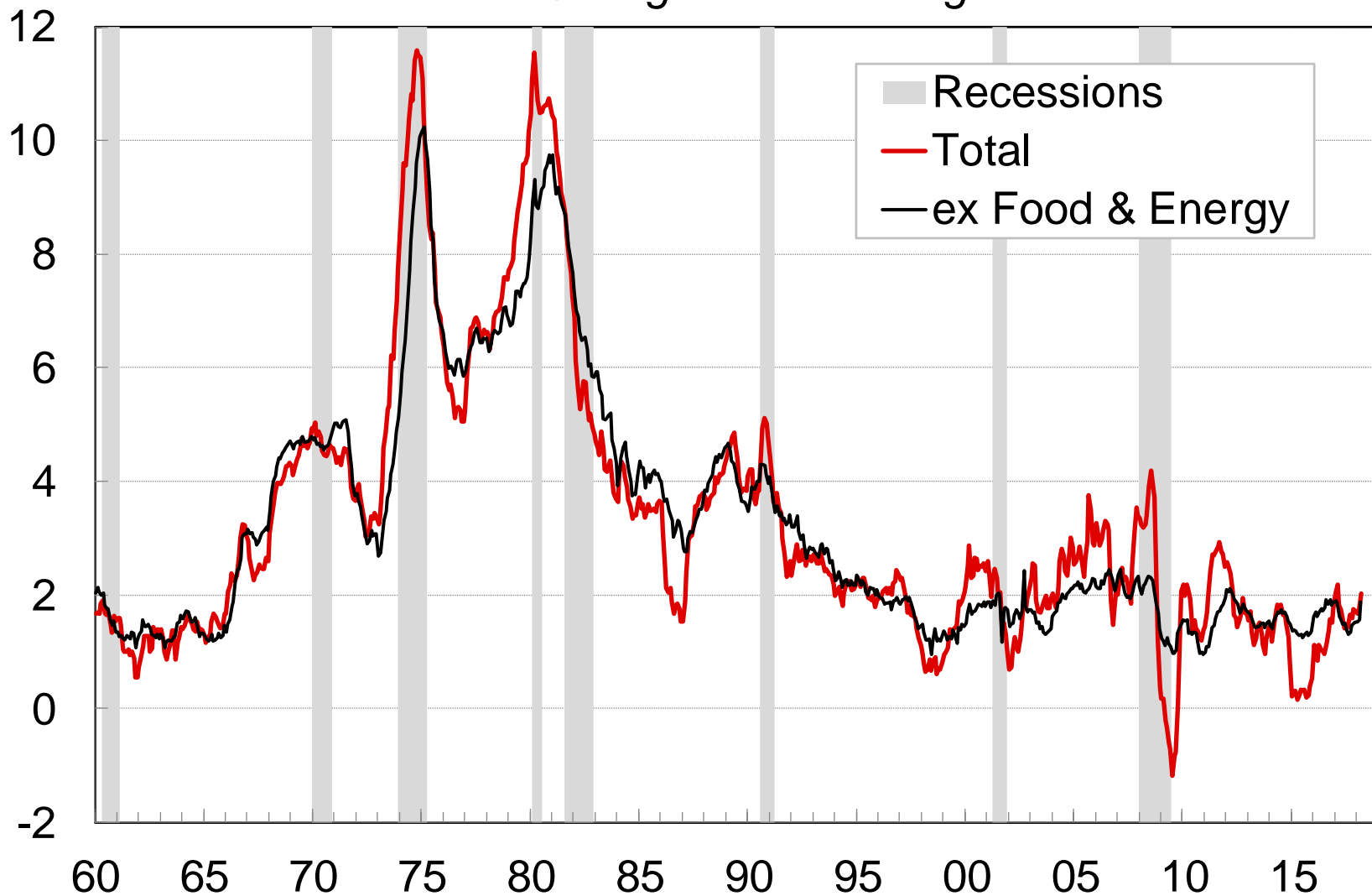
US Interest Rates

Percent

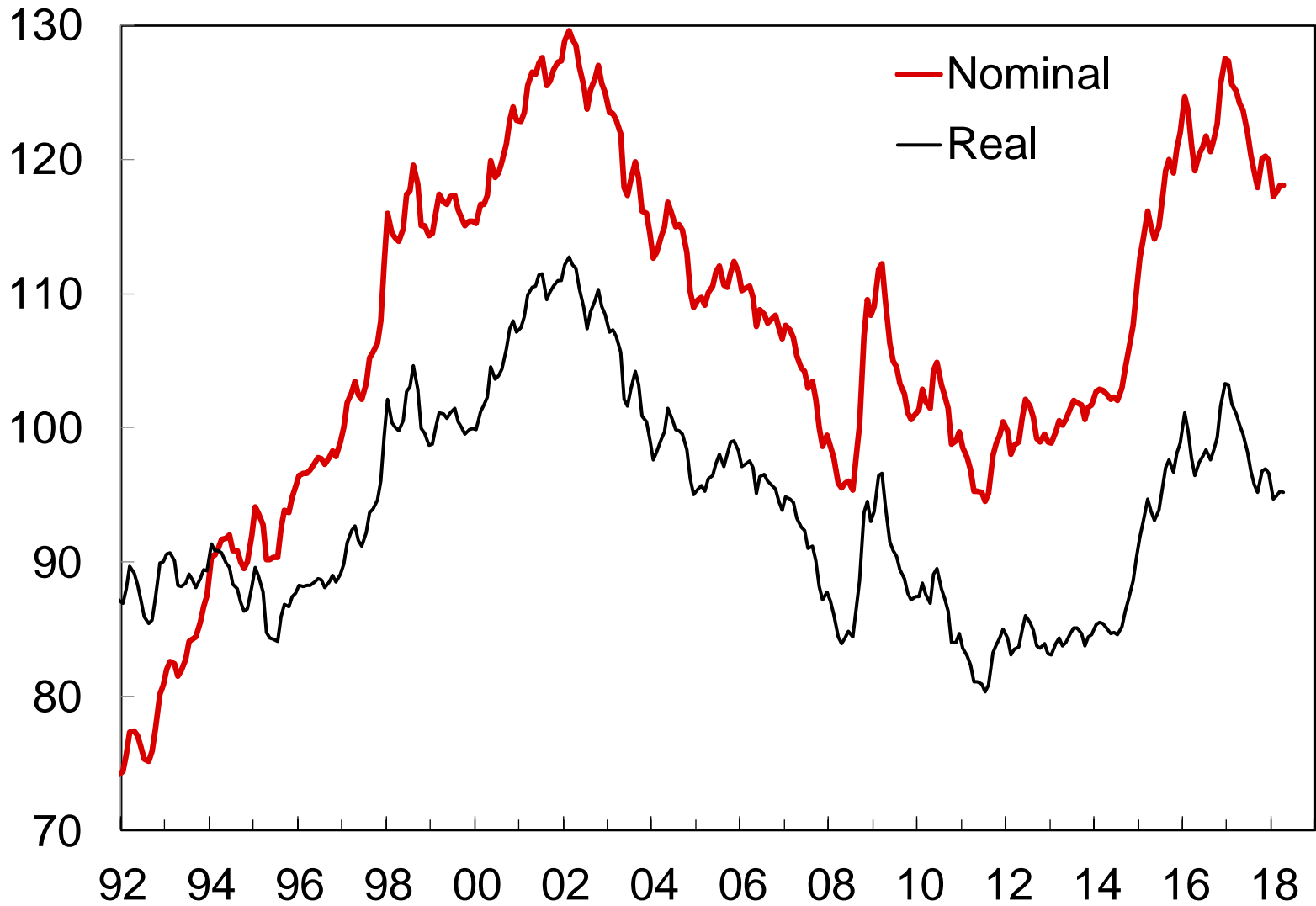


US Personal Consumption Expenditures Price Index

Percent Change from Year Ago



Federal Reserve Broad Dollar Index



Forecasting exchange rates
has a success rate no better
than that of forecasting the
outcome of a coin toss.

-- Alan Greenspan
November 19, 2004

What could end the expansion?

All US recessions since 1973 preceded by an oil shock.

- Low oil prices still a net positive for US despite higher oil production.
- Low oil prices a much bigger positive for Europe, Japan, China, India.

All US recessions since 1969 preceded by inverted yield curve.

- Inverted yield curve usually a response to high inflation.
- Inflation still below target in US, EU, Japan.

Almost all recessions preceded by BIG drop in housing starts.

Trade war could trigger price increases; misperceived as “inflation.”

- Tariffs or devaluations raise domestic prices.
- Consumers, markets, central banks could respond negatively.

Asset bubbles could burst. (Not a problem without leverage.)

If none of these happen, expansion could last a long time.

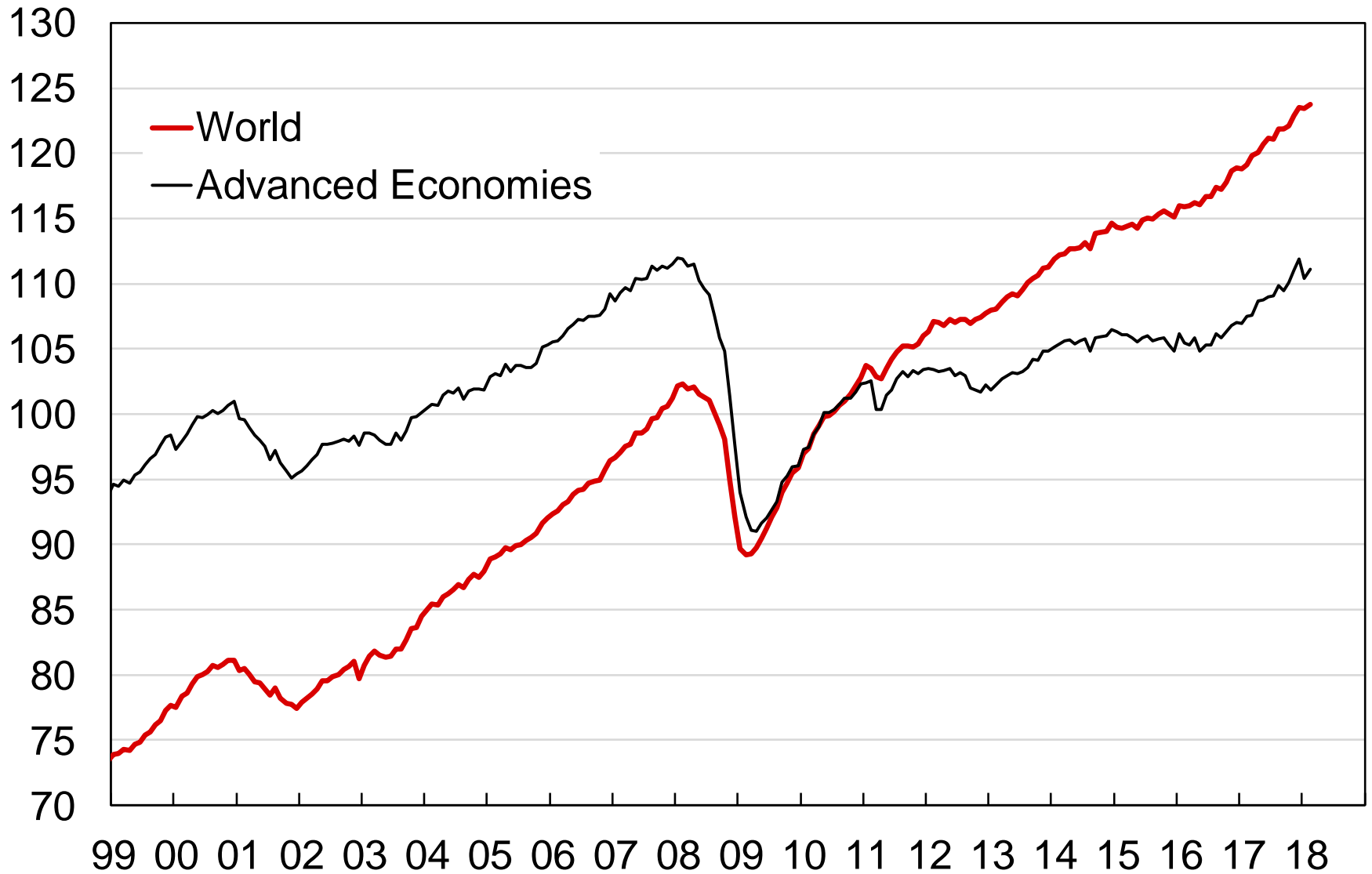


"The crisis takes a much longer time coming than you think and then it happens much faster than you would have thought."

Rudiger Dornbusch, 1942-2002

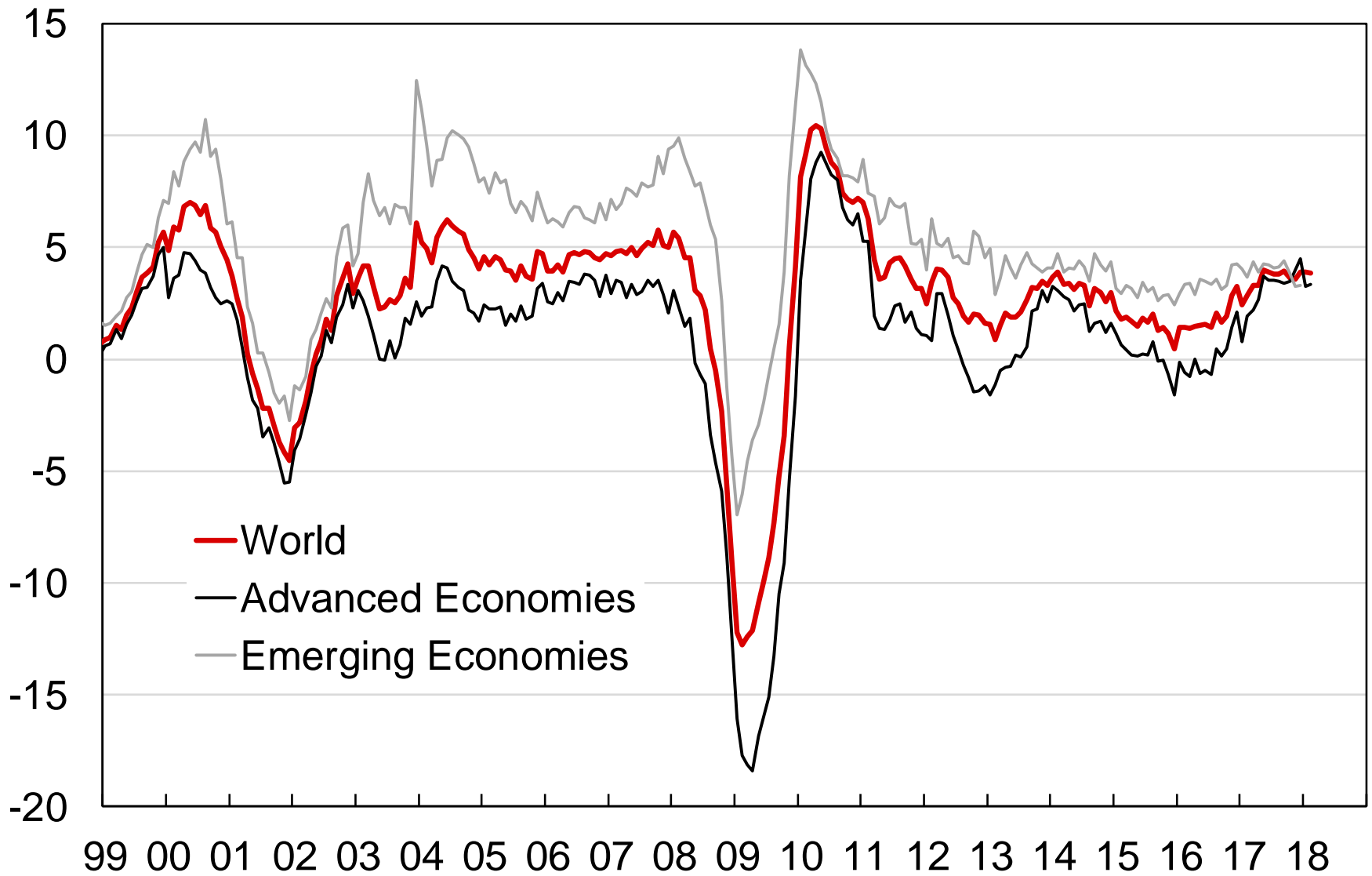
Industrial Production ex Construction

Index, 2010 = 100



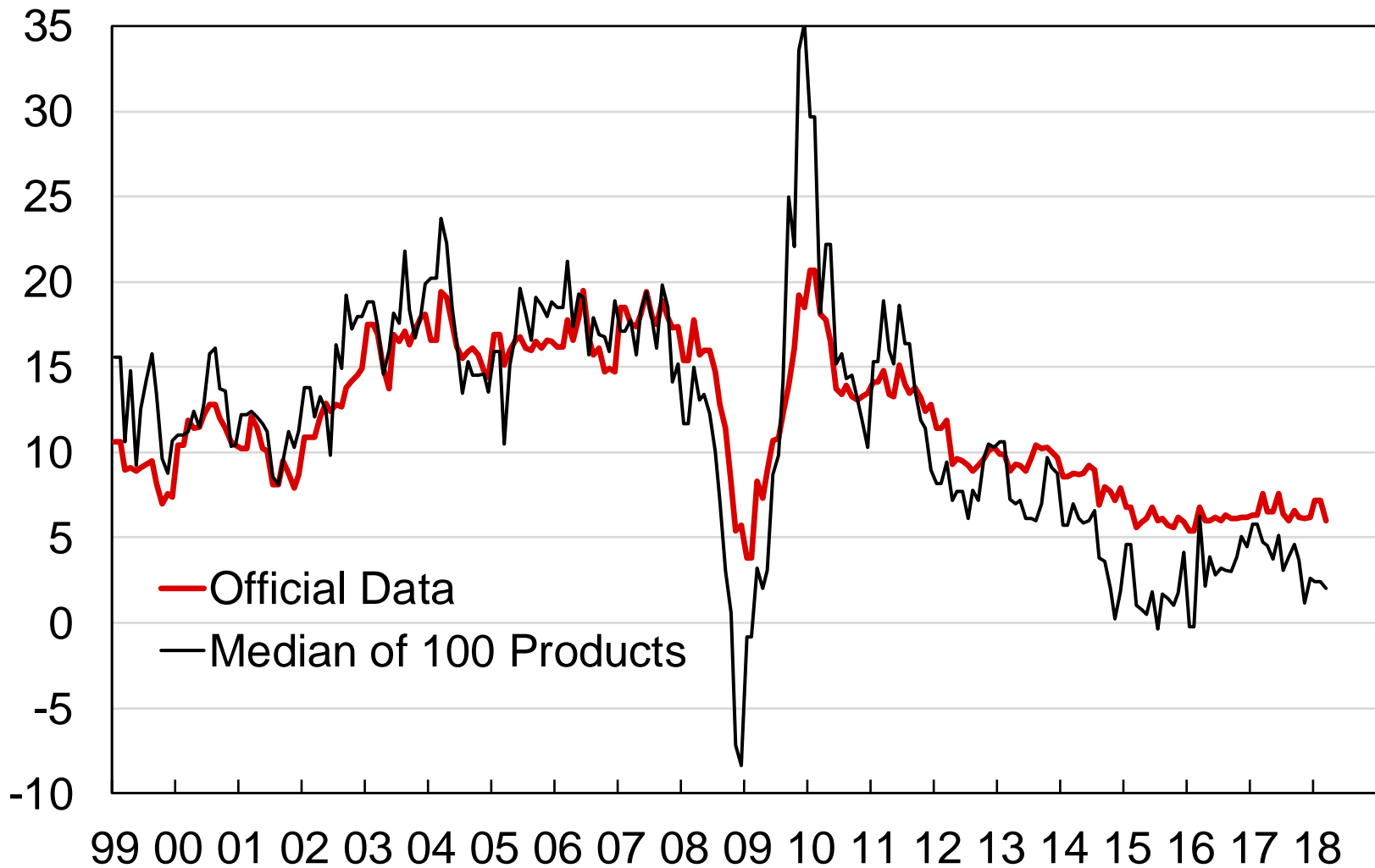
Industrial Production ex Construction

Percent Change from Year Ago



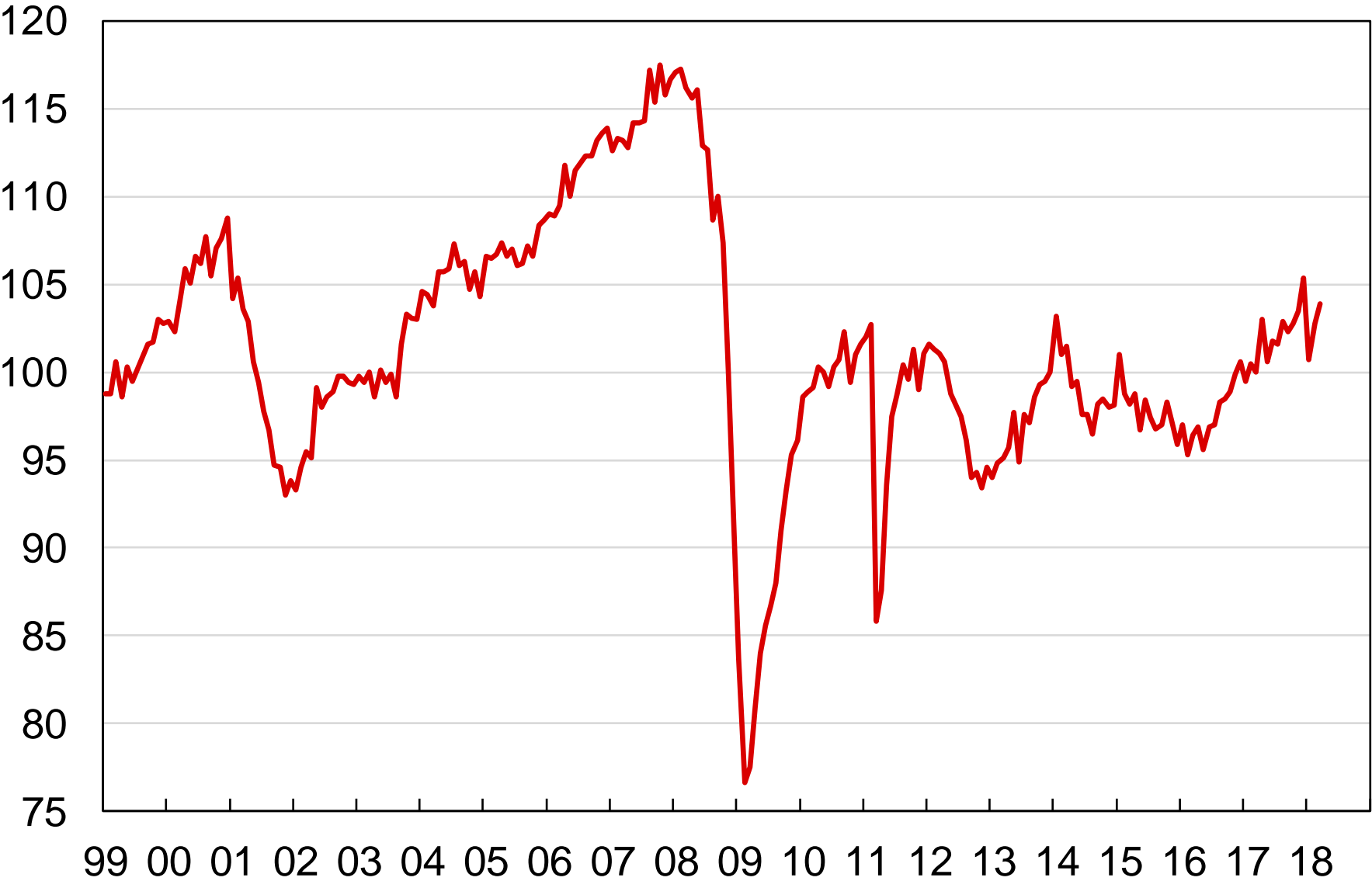
Value Added of Industry (Industrial Production): China

Percent Change from Year Ago



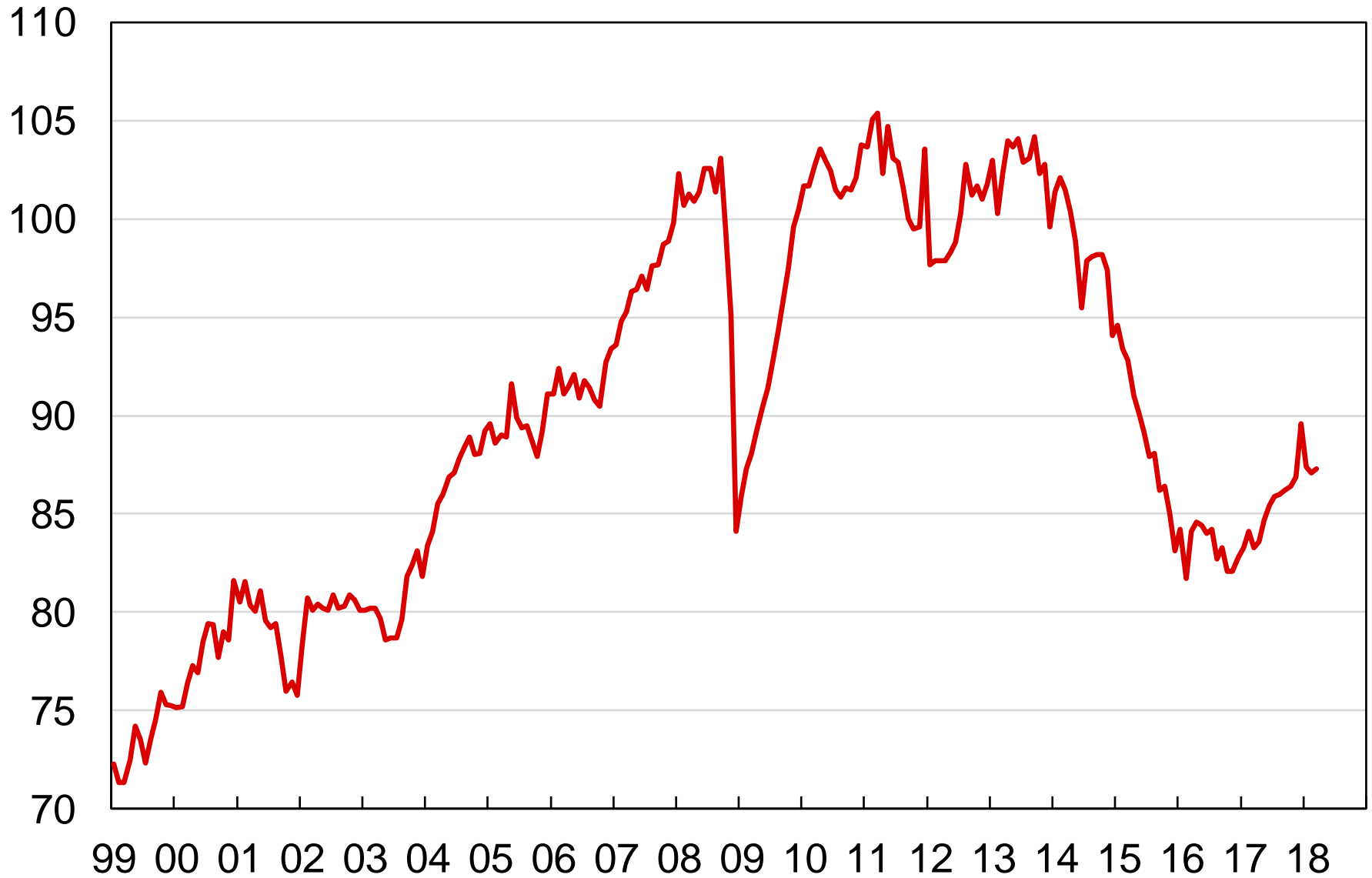
Industrial Production, Manufacturing: Japan

Index, 2010 = 100



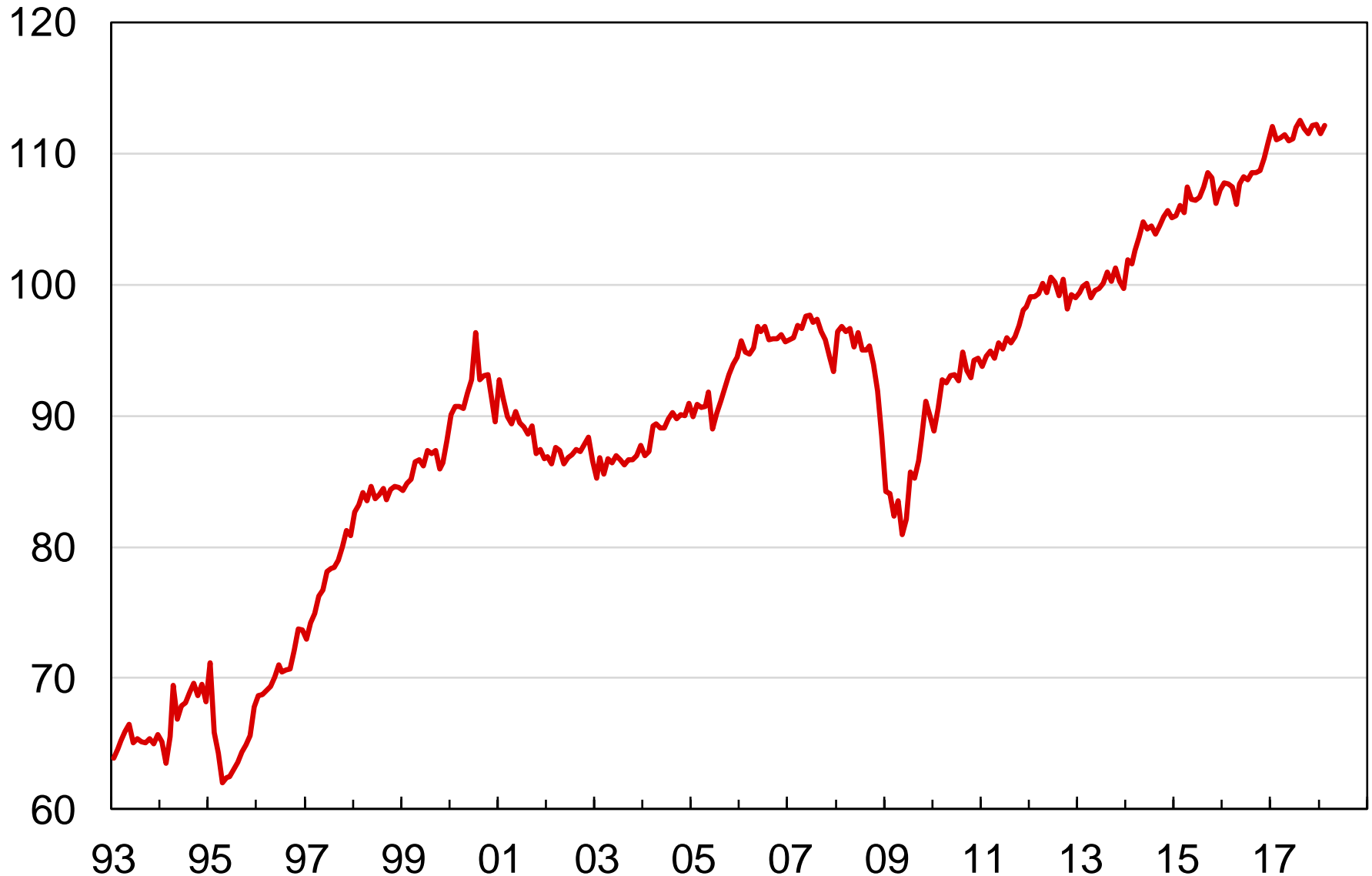
Industrial Production, Manufacturing: Brazil

Index, 2012 = 100



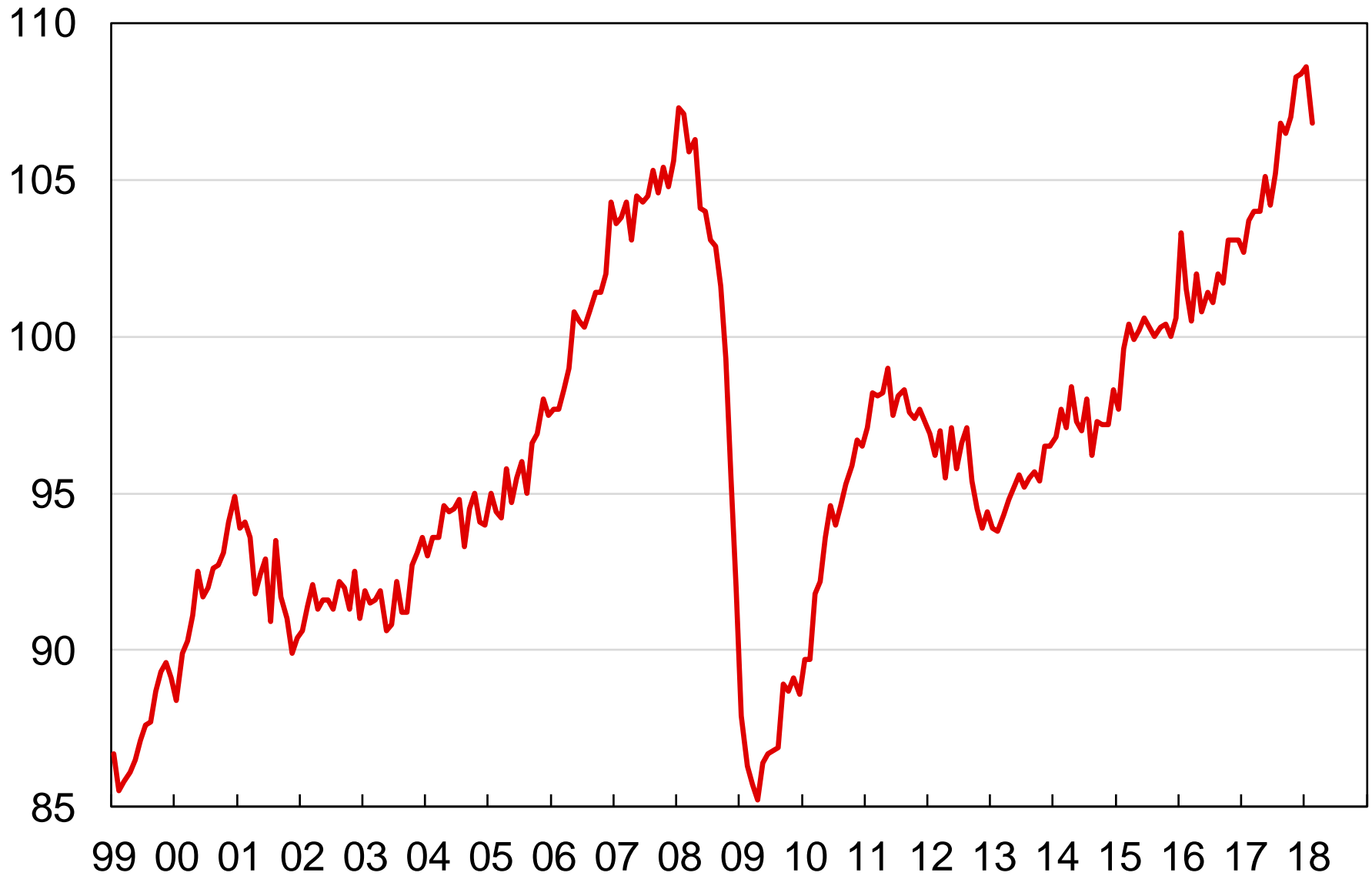
Industrial Production, Manufacturing: Mexico

Index, 2008 = 100



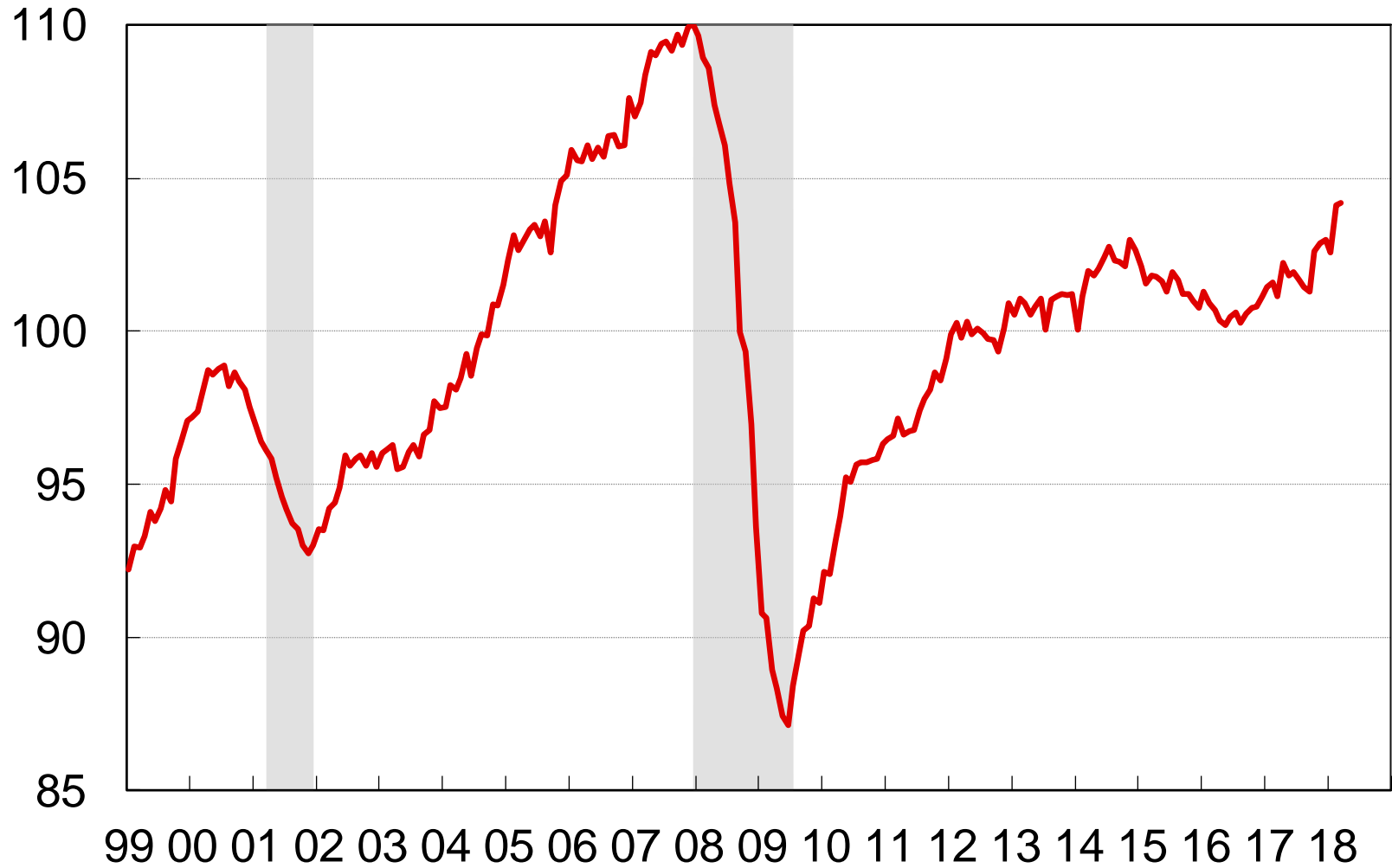
Industrial Production, Manufacturing: European Union

Index, 2015 = 100



US Industrial Production: Manufacturing

Index, 2012=100



Real GDP

(Annual % Change)

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
World	2.8	2.5	3.2	3.3	3.2
North America	2.7	1.5	2.3	2.9	3.0
Latin America (x Mex)	-1.1	-2.0	1.0	1.9	2.7
Western Europe	2.2	1.8	2.3	2.2	1.9
C & E Europe	1.4	1.8	3.9	3.3	2.9
Middle East & Africa	2.4	3.1	2.0	3.0	3.4
Asia/Pacific	4.6	4.4	4.8	4.7	4.6
China	6.9	6.7	6.9	6.6	6.3
Japan	1.4	0.9	1.7	1.4	0.9
India	8.2	7.1	6.7	7.4	7.8

Industrial Production

(Annual % Change)

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
World	1.5	1.7	3.5	3.8	3.2
Advanced economies	0.1	0.1	3.1	3.4	2.5
United States	-1.0	-1.9	1.6	3.8	2.9
Japan	-1.3	-0.4	4.5	2.5	2.0
Euro Area	1.0	1.7	3.3	3.0	2.0
Other advanced	1.6	1.5	4.2	4.0	3.0
Emerging economies	3.0	3.5	3.9	4.2	3.9
Emerging Asia	4.7	5.3	5.7	6.0	5.0
C & E Europe	-1.6	1.1	1.7	2.5	2.0
Latin America	-2.3	-3.6	-0.8	1.0	2.0
Middle East & Africa	3.0	2.9	1.6	2.5	3.0

Global economy posting fastest growth since 2011.

Acceleration in Americas offsetting slowing in China, Japan, Europe.

China slowing after 2016 reacceleration, 2017 Party Congress.

- Fiscal stimulus halted stagnation in manufacturing, decline in construction.
- Debt and demographics will curtail growth going forward.
- Reported growth likely to slow gradually; actual growth less gradually.
- Devaluation is not an option with Trump in White House.

Growth in Japan was aided by China rebound; will slow too.

Strong Euro, US tax reform starting to slow growth in Europe.

- Europe has done much better than just “muddling through” since 2013.

US tax reform and 2017 dollar decline are boosting US growth at the expense of the rest of the world.

Global growth peaks in 2018, but won't slow much in 2019.



**You can tell whether a man is clever by his answers.
You can tell whether a man is wise by his questions.
--Naguib Mahfouz
Nobel Laureate, 1988**

Robert Fry Economics LLC

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Publications by Robert Fry

Low Interest Rates Are Hurting Growth:

<https://www.forbes.com/sites/realspin/2016/10/04/low-interest-rates-are-hurting-growth/#58cff2edb605>

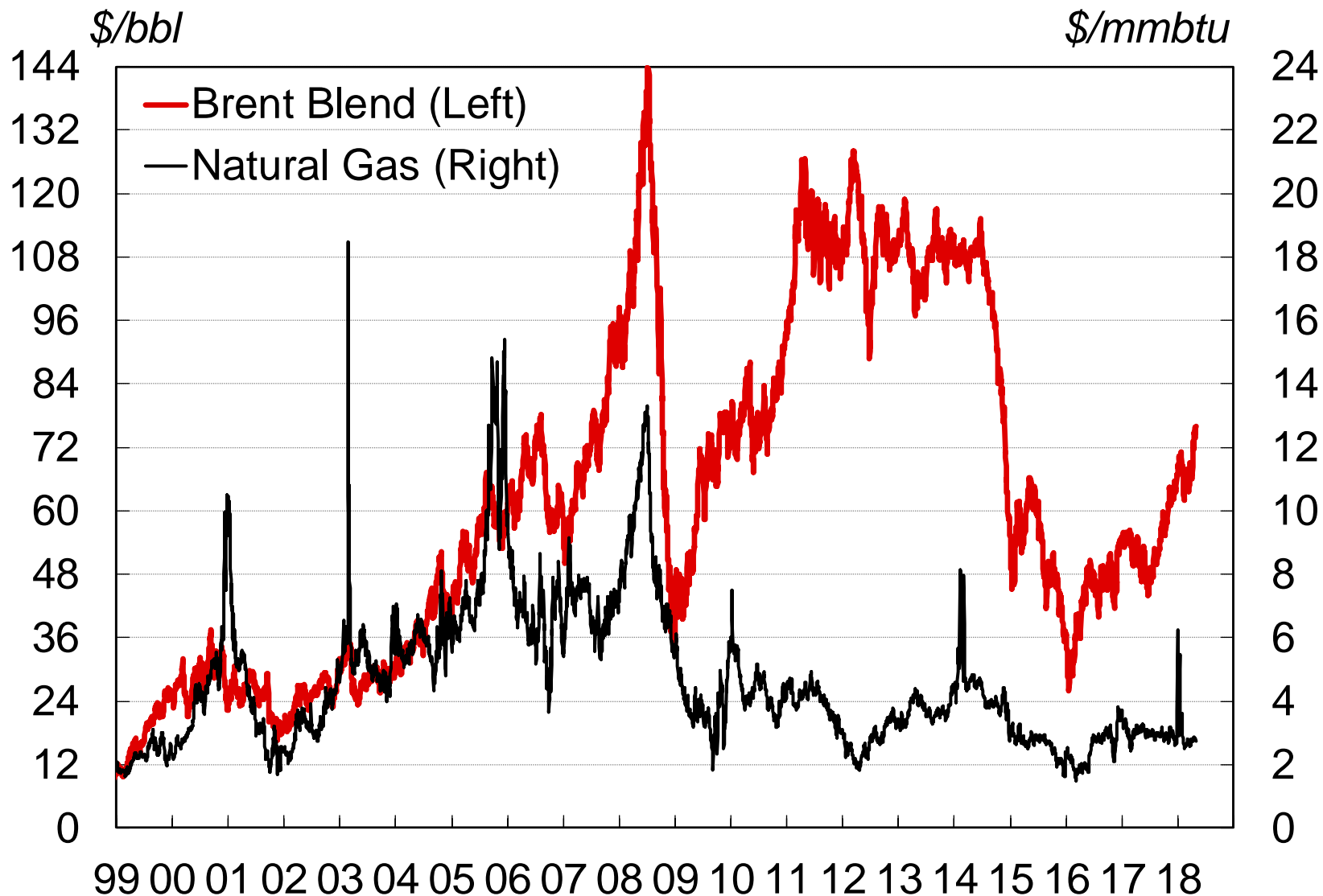
Put An Economist on Your Board:

http://media.wix.com/ugd/d2d439_73ba8ec9866a4c5c859d79effe7c60e1.pdf

10 Things To Look For In A Fed Governor:

<https://www.forbes.com/sites/realspin/2017/01/20/10-things-to-look-for-in-a-fed-governor/#17c4c41b27ee>

Global Crude Oil and US Natural Gas Prices

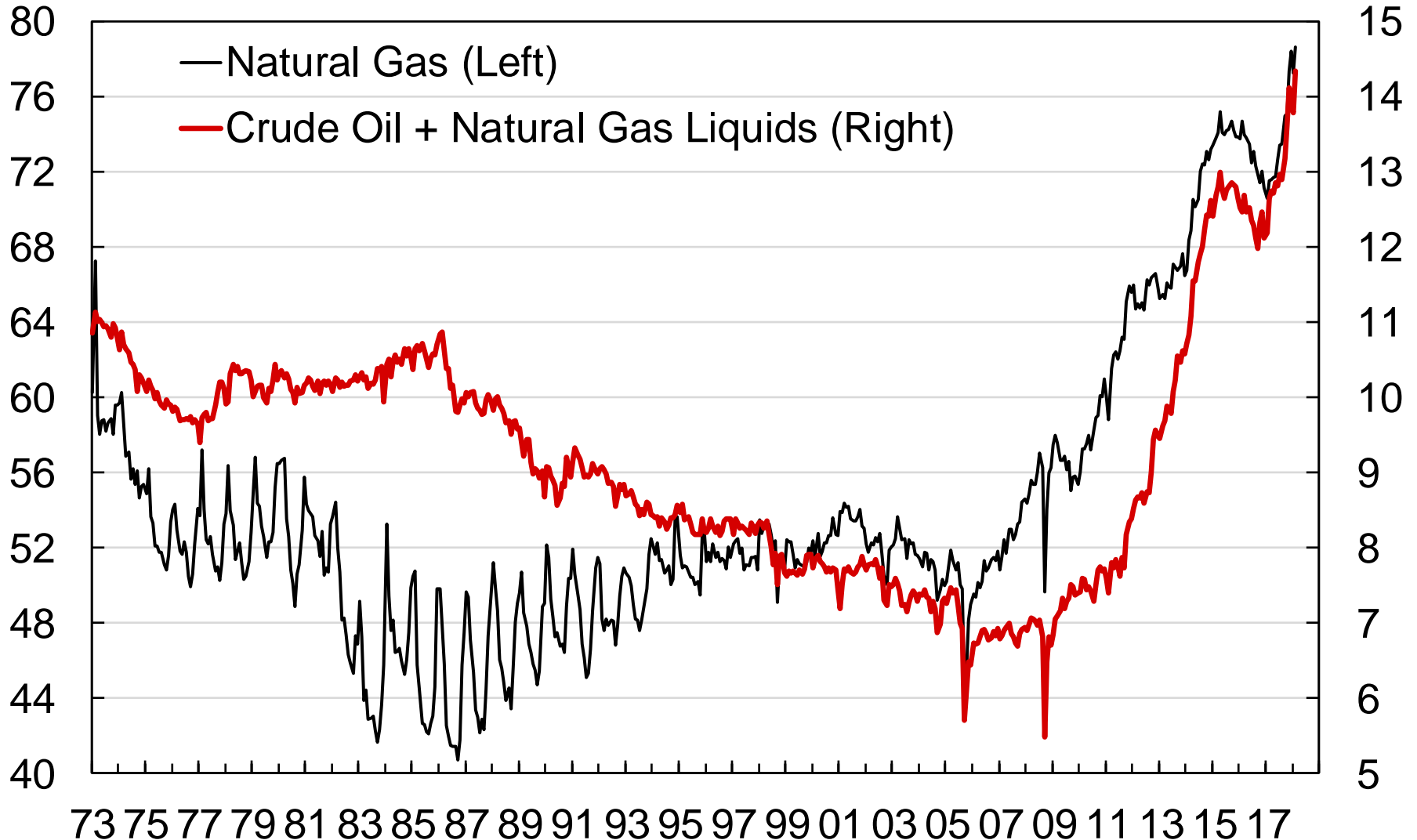


US Oil & Gas Production

Billion Cubic Feet per Day

Million Barrels per

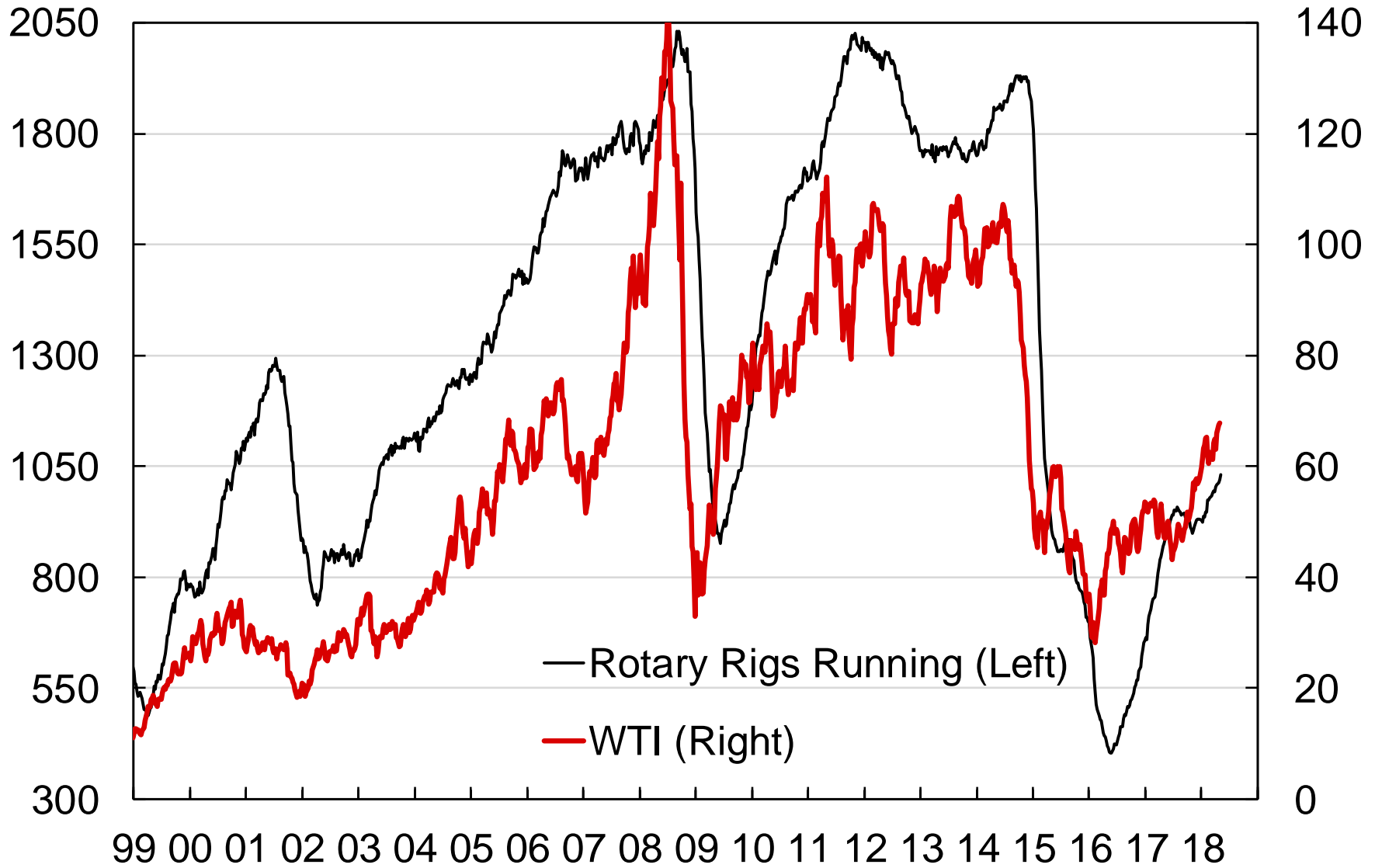
Day



US Rig Count versus West Texas Intermediate Oil Price

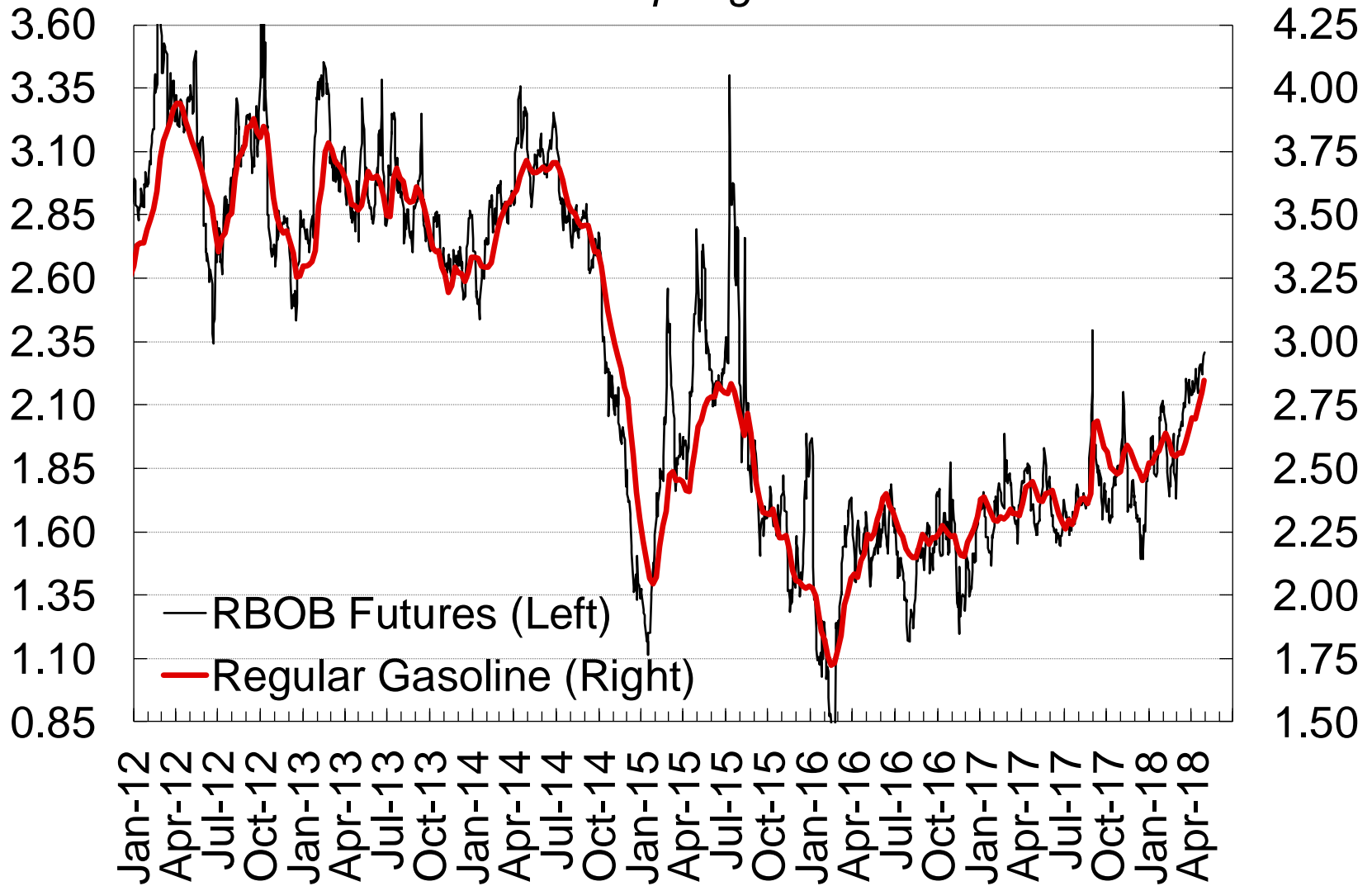
Rig Count

\$/Barrel



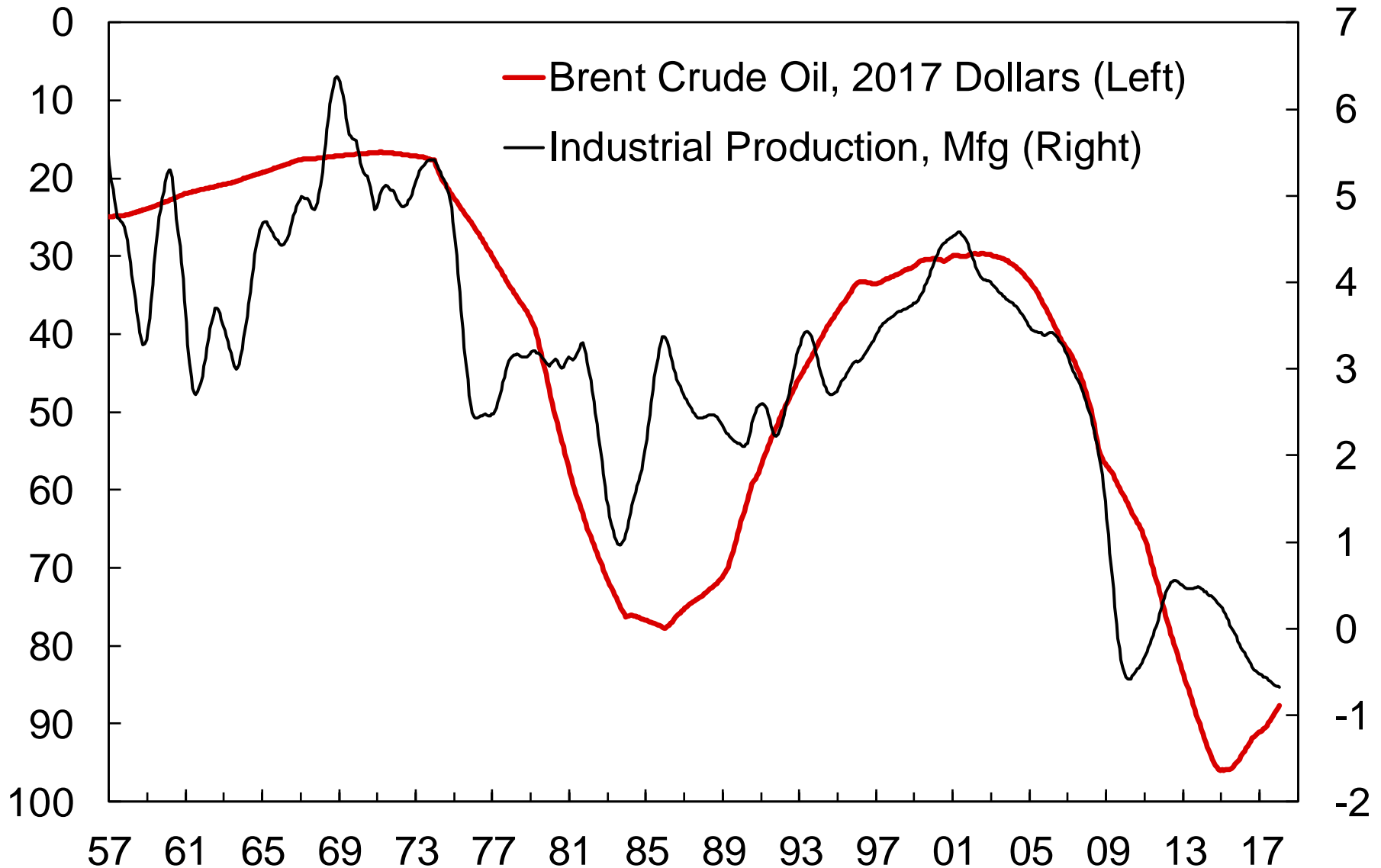
US Gasoline Prices

Dollars per gallon



Oil Prices & US Economic Growth

10-Year Moving Average 10-Year Annualized Growth Rate



I still believe cheap oil is a good thing . . . in the long run.

This is a regime shift, not a temporary blip. (Lower for longer.)

In short run, drop in drilling activity offset boost to rest of economy.

Longer-term, potential growth is boosted significantly.

Vehicle sales, travel and hospitality benefit the most.

Japan, Korea, India, Europe among biggest winners.

Russia, Iran, and Venezuela are biggest losers.

Losses are concentrated; gains are dispersed.