Economic Outlook
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Clearwater, Florida
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Excuse me. Can you tell me where I am?

You’re in a balloon.
You must be a manager. You have a great view, but don’t know where you are.

You must be a economist. Your answer is perfectly correct and totally useless.
US Real Gross Domestic Product

Annualized Growth Rates

- Recession
- Quarter-to-Quarter
- Year-over-Year
US Industrial Production

Indexes, 2012=100

Recessions

Manufacturing

Total

99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19
US Oil & Gas Production

Billion Cubic Feet per Day                  Million Barrels per Day

— Natural Gas (Left)

Crude Oil + Natural Gas Liquids (Right)
US growth accelerated in 2017 and 2018

Real GDP has grown at a 3.0% annual rate since 2017Q1. (From 2010Q4 to 2017Q1, it grew at a 2.0% rate.)

Industrial production accelerated with the election, accelerated again when tax reform started to look likely.

Oil and gas production have surged to record highs, boosting total IP.

Payroll employment has grown by 206,000 per month over the last 25 months, despite tight labor market.

Productivity growth has accelerated from the extremely slow growth of the 2010Q4-2017Q1 period.

It’s hard to deny that change in administration (deregulation and tax cuts) has not played a role in the acceleration. So have oil & gas from shale.
US Interest Rates

Percent

- Recessions
- 10-Year Note Yield
- Fed Funds Rate
US Interest Rates

Percent

Source: Board of Governors of the Federal Reserve System (US)/Federal Reserve Bank of New York/FRED

10-Year Note Yield

Federal Funds Rate
US Housing Starts & Building Permits

*Millions, Seasonally Adjusted Annual Rate*

- Single-Family Permits
- Single-Family Starts
- Multi-Family Permits
- Multi-Family Starts
US New Home Sales
Millions, Seasonally Adjusted Annual Rate
Tariff actions taken by Trump Administration

November 2017: Softwood lumber
February 2018: Washing machines
March 2018: Steel & aluminum (with exemptions)
June 2018: Steel & aluminum (without exemptions)
September 2018: 10% on $200 billion in Chinese exports
January 2019: Tariffs on Chinese exports scheduled to rise to 15% (delayed)
March 2019: Tariffs on Chinese exports NOW scheduled to rise to 15%

Tariffs have hit stock prices mostly by increasing uncertainty.
Real Investment in Equipment vs Capital Goods Orders

Percent Change from Year Ago

- Equipment (Left)
- Orders, Nondefense Capital Goods ex Aircraft
NFIB Small Business Optimism Index

1986 = 100
Industrial Production ex Construction

Percent Change from Year Ago

- World
- Advanced Economies
- Emerging Economies
Value Added of Industry (Industrial Production): China

Percent Change from Year Ago

- Official Data
- Median of 100 Products
Industrial Production, Manufacturing: Brazil

Index, 2012 = 100
Brent Blend Oil Price
2017 US Dollars per Barrel

US Recessions

Oil Price

Oil Price 2016$

US Industrial Production – Mfg (Growth Trend)

1957-73 $17.34 5.3%
1974-85 72.99 2.2
1986-03 32.01 3.6
2004-14 90.22 0.0
Why did the stock market decline?

It’s not what the Fed did; it’s what Fed Chair Jerome Powell said

- October 3: “Long way from neutral”, 2-3 rate hikes in 2019. (I hate forward guidance.)
- December 19: Shrinking of balance sheet on “auto-pilot.”
- December 24: Yield curve came close to inverting.
- Powell changed tune in January 2019.

Threat of escalating trade war caused businesses to put investment on hold.

Growth has slowed sharply in rest of world.

- 40-50% of S&P500 earnings come from abroad.
- Slowdown in China predates US tariffs, due mostly to demographics and debt.
- European growth hurt by Brexit, populist politics, reduced demand from China.
- Oil prices got high enough to hurt growth in much of world.
- US tax reform shifted activity to US, as intended.
Is expansion at risk?
How fast can the economy grow at “full employment”? 

Unemployment fell below CBO estimate of natural rate of unemployment in second quarter of 2017. It’s now at 4.0% versus natural rate of 4.6%. 
Pessimists believe that low unemployment rate means that growth must soon slow, but . . .

Unemployment fell below natural rate in third quarter of 1996. Real GDP grew at 4.7% annual rate over next 15 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. (This is happening.)
- Productivity growth can accelerate. (More investment, lower energy prices, moving workers to higher-productivity jobs, squeezing more output out of existing workers.)
- You allow economy to overheat. (1980s and 1990s expansions worth the cost.)
“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
Corporate Profits with IVA and CCAdj

Billion $

Source: U.S. Bureau of Economic Analysis/FRED

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Average Hourly Earnings, Production & Nonsupervisory

Percent Change from Year Ago

US Investment* + Consumer Durables

Percent of GDP

*Nonresidential Structures, Equipment, Intellectual Property Products, Inventories, Residential Structures

Source: U.S. Bureau of Economic Analysis/FRED
US Personal Consumption Expenditures Price Index

Percent Change from Year Ago

- Total
- ex Food & Energy

Recessions
Expansion could last a long time

Expansions end, on average, 2.5 years after cyclical peak in housing starts; starts probably aren’t even close to peaking yet.

Expansions end, on average, 2.5 years after cyclical peak in corporate profits; profits were still rising in 2018Q3.

Last three expansions didn’t end until growth in average hourly earnings reached 4.3%; just rose above 3% in October.

Expansions don’t end until cyclical share of GDP exceeds 28%; it’s currently around 25%.

Except for the low unemployment rate, there is little evidence that we are late in the economic expansion.
"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
How fast will the US economy grow? It depends on:

Resolution of trade dispute – 3 Scenarios:

• Special tariffs on Chinese goods go up to 25% => Risk (not certainty) of recession
• Special tariffs on Chinese goods stay at 10% => Growth stays near old 2% trend
• Trade deal eliminates special tariffs => Growth near 2.5% after stronger surge.

This assumes USMCA is approved.

The distortion caused by a tax is proportional to the square of the tax rate.

Response of business investment to tax reform

• Without more investment, productivity growth remains in doldrums.

Immigration policy

• Without more immigration, employment growth will slow to about 0.5%/year.
“Prediction is very difficult, especially about the future.”

--Niels Bohr, 1885-1962

Nobel Laureate, 1922
US Real Gross Domestic Product
Annualized Growth Rates

<table>
<thead>
<tr>
<th>Year</th>
<th>Quarter-to-Quarter</th>
<th>Year-over-Year</th>
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</thead>
<tbody>
<tr>
<td>2001</td>
<td>1.8</td>
<td>3.8</td>
</tr>
<tr>
<td>2002</td>
<td>3.3</td>
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<td>2003</td>
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<td>2004</td>
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<td>2006</td>
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<td>2016</td>
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<td>2018</td>
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<td>2019</td>
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<td>2.7</td>
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<tr>
<td>2020</td>
<td>2.7</td>
<td>2.9</td>
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## Real GDP
(Annual % Change)

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<thead>
<tr>
<th>Region</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
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<tr>
<td>World</td>
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<td>3.2</td>
<td>3.0</td>
<td>2.8</td>
<td>3.0</td>
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<tr>
<td>North America</td>
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<td>2.3</td>
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<tr>
<td>Latin America (x Mex)</td>
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<td>Western Europe</td>
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<td>2.3</td>
<td>1.8</td>
<td>1.3</td>
<td>1.5</td>
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<tr>
<td>C &amp; E Europe</td>
<td>1.8</td>
<td>4.0</td>
<td>3.1</td>
<td>2.0</td>
<td>2.6</td>
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<tr>
<td>Middle East &amp; Africa</td>
<td>3.2</td>
<td>1.7</td>
<td>2.3</td>
<td>2.8</td>
<td>3.2</td>
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<tr>
<td>Asia/Pacific</td>
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<td>4.6</td>
<td>4.4</td>
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<td>6.6</td>
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<td>Japan</td>
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<td>0.8</td>
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<td>India</td>
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<td>6.7</td>
<td>7.3</td>
<td>7.4</td>
<td>7.7</td>
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</table>
## Industrial Production

(Annual % Change)

<table>
<thead>
<tr>
<th>Region</th>
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<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
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<td>3.4</td>
<td>2.7</td>
<td>2.4</td>
<td>3.0</td>
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<td>2.1</td>
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<td>United States</td>
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<td>1.6</td>
<td>4.0</td>
<td>3.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Japan</td>
<td>-0.4</td>
<td>4.3</td>
<td>1.2</td>
<td>1.0</td>
<td>1.0</td>
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<tr>
<td>Euro Area</td>
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<td>3.1</td>
<td>1.4</td>
<td>1.0</td>
<td>1.5</td>
</tr>
<tr>
<td>Other advanced</td>
<td>1.5</td>
<td>4.2</td>
<td>2.6</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Emerging economies</td>
<td>3.6</td>
<td>3.9</td>
<td>3.0</td>
<td>3.0</td>
<td>3.9</td>
</tr>
<tr>
<td>Emerging Asia</td>
<td>5.4</td>
<td>5.6</td>
<td>5.3</td>
<td>4.5</td>
<td>5.0</td>
</tr>
<tr>
<td>C &amp; E Europe</td>
<td>1.9</td>
<td>2.9</td>
<td>2.8</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Latin America</td>
<td>-3.5</td>
<td>-0.8</td>
<td>-2.5</td>
<td>0.0</td>
<td>2.0</td>
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<tr>
<td>Middle East &amp; Africa</td>
<td>3.6</td>
<td>0.7</td>
<td>1.3</td>
<td>1.5</td>
<td>3.0</td>
</tr>
</tbody>
</table>
“Economists put decimal points in their forecast to show they have a sense of humor.”
William Gilmore Simms, 1806-1870
US Industrial Production: Spring and wire product

2012 = 100

Source: Board of Governors of the Federal Reserve System (US)/FRED
US Industrial Production & Employment: Manufacturing

Index, 2012=100

Millions

- Industrial Production (Left)
- Employment (Right)

NAFTA Enacted
January 1, 1994

US House approves normal trade relations for China
May 24, 2000
US Producer Price Indexes

June 1982 = 100

Key takeaways

US economic growth accelerated in 2018 in response to deregulation, tax reform, and moderate oil prices, but trade policy concerns will suppress growth in first half of 2019.

Growth slowed sharply in the rest of the world, more than offsetting the US acceleration.

With Fed on hold, US growth reaccelerates if trade concerns ease.

US expansion could last a long time.

- Slow expansions are long expansions.
- Can’t have a housing bust without first having a housing boom.
- Increased investment in response to tax reform would ease inflationary pressures & extend the recovery. It is necessary for stronger trend growth.
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Extra slides (for Q&A only)
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
US Industrial Production & Employment: Manufacturing
INDEX, 2012=100

- Industrial Production (Left)
- Employment (Right)

NAFTA Enacted
January 1, 1994

US House approves
normal trade
relations for China
May 24, 2000
Federal Reserve Broad Dollar Index

- Nominal
- Real
Free trade, one of the greatest blessings that a government can confer on a people, is unfortunately in every country unpopular.

-- Thomas McCauley, 1824
Global Crude Oil and US Natural Gas Prices

- Brent Blend (Left)
- Natural Gas (Right)

$/bbl
$/mmbtu

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US Real Consumer Spending & Disposable Income
Percent Change from Year Ago, Chained 2012 Dollars

- Personal Consumption Expenditures
- Disposable Personal Income
US Nonresidential Fixed Investment

*Billion Chained 2012 Dollars*
US Nonresidential Fixed Investment

*Billion Chained 2012 Dollars*

- Equipment
- Intellectual Property
- Structures
- Recessions
Industrial Production ex Construction

Index, 2010 = 100

World

Advanced Economies
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: