

WELLS
FARGO

SECURITIES

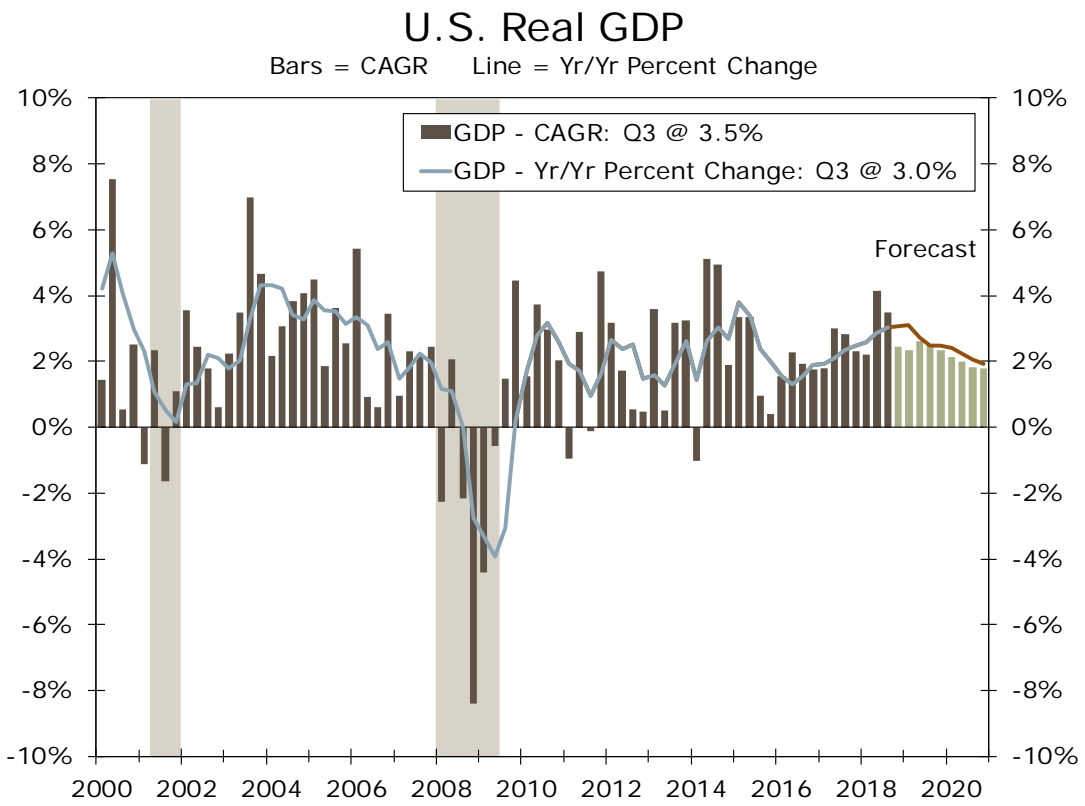
The Global Economic Outlook

Jay H. Bryson, Managing Director and Global Economist
November 13, 2018

Together we'll go far

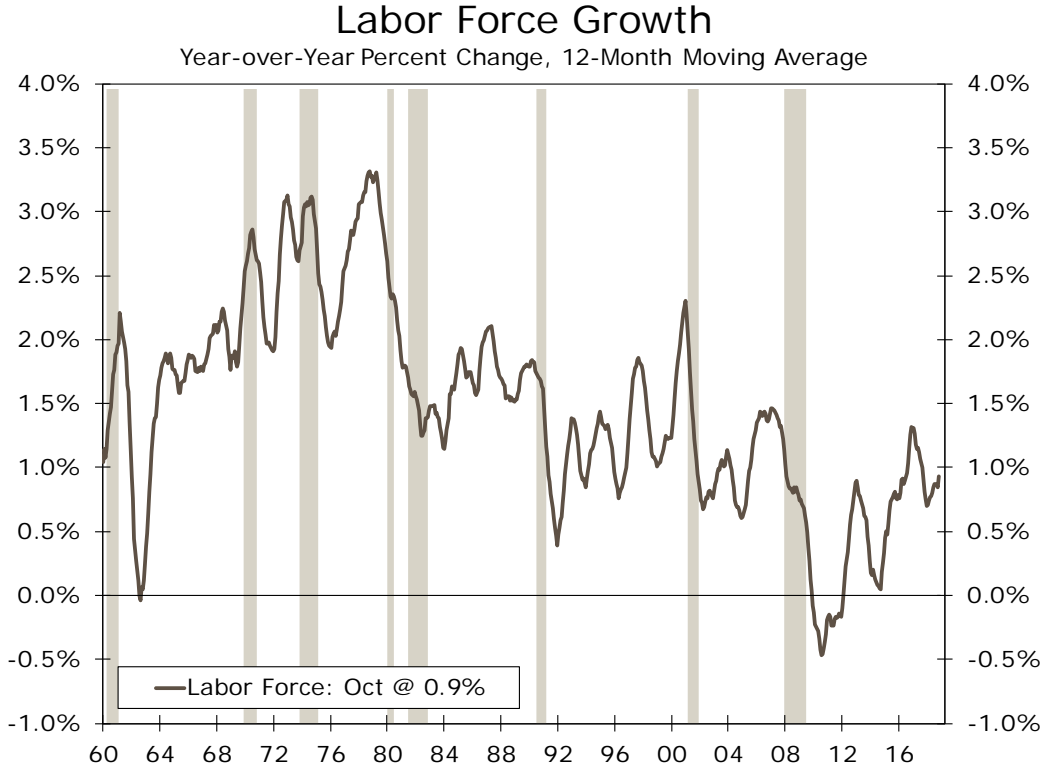


Our forecast looks for the economic expansion to continue in coming quarters, albeit with some deceleration



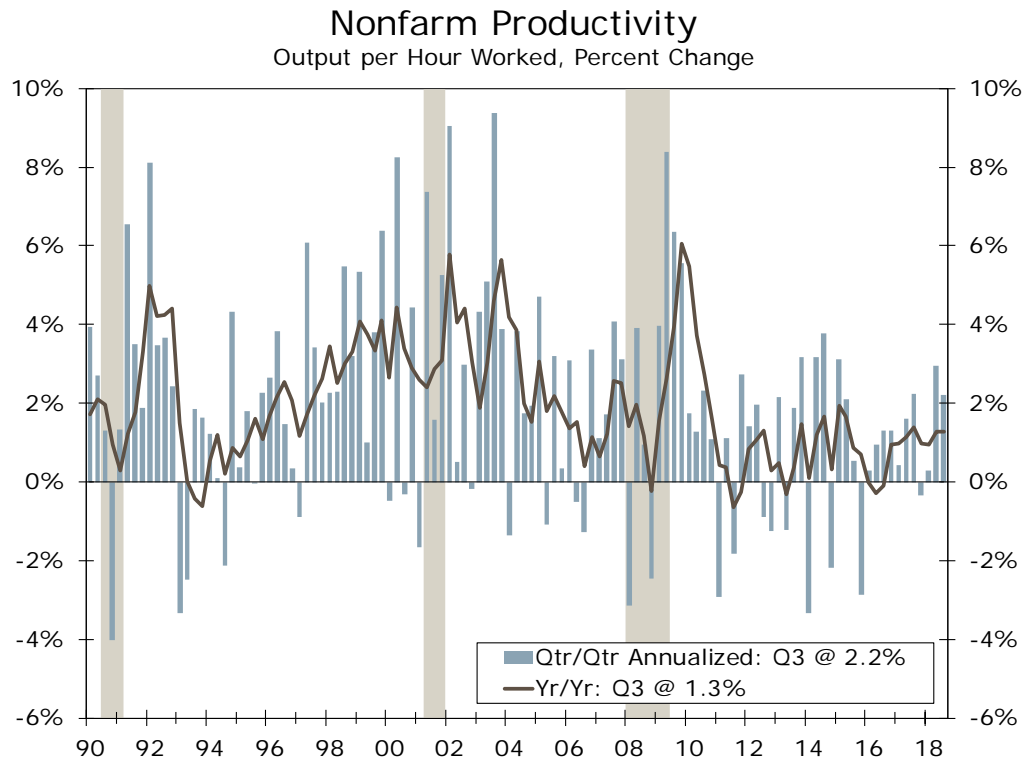
Source: U.S. Department of Commerce and Wells Fargo Securities, November 2018

The labor force is growing slowly



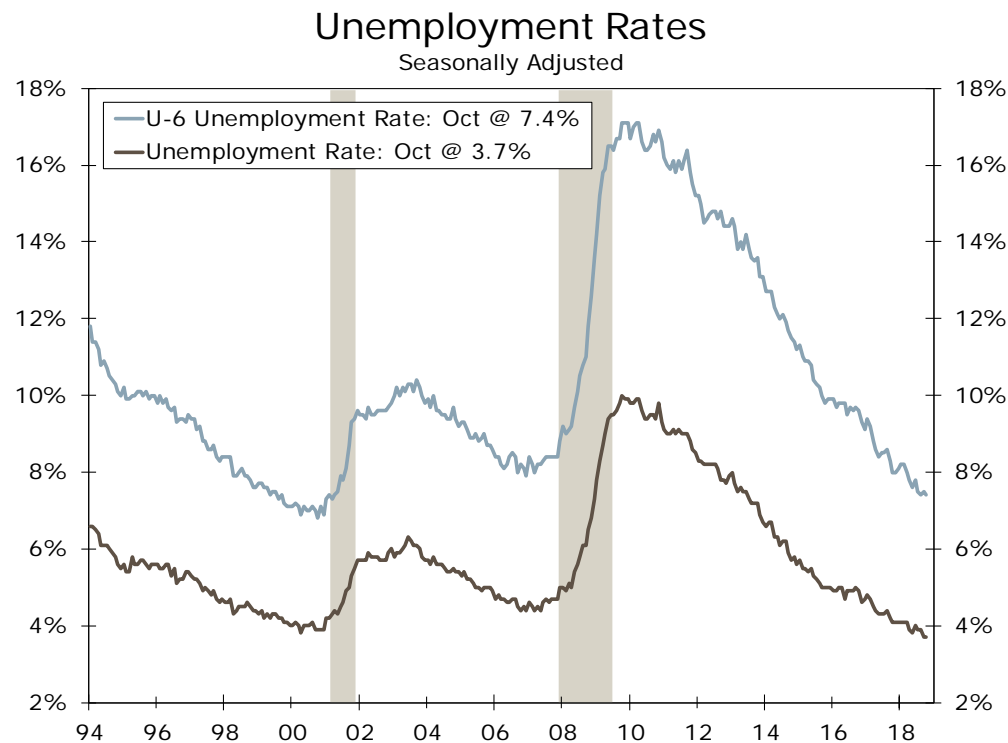
Source: U.S. Department of Labor and Wells Fargo Securities, November 2018

Productivity growth has been anemic in this cycle



Source: U.S. Department of Labor and Wells Fargo Securities, November 2018

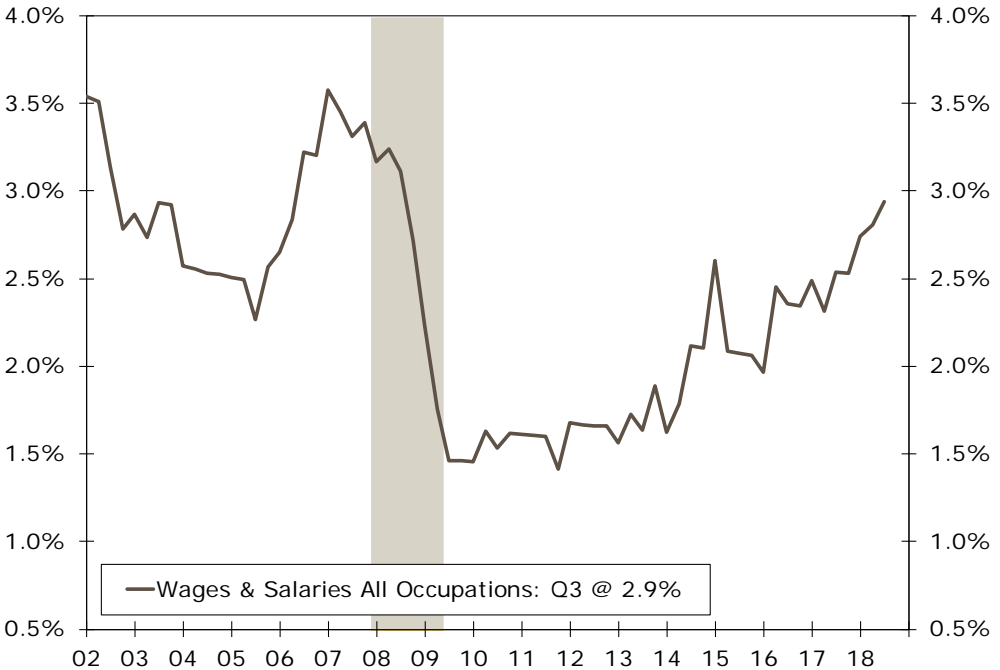
There is not much slack left in the labor market



Source: U.S. Department of Labor and Wells Fargo Securities, November 2018

Wage inflation has trended higher over the past few years

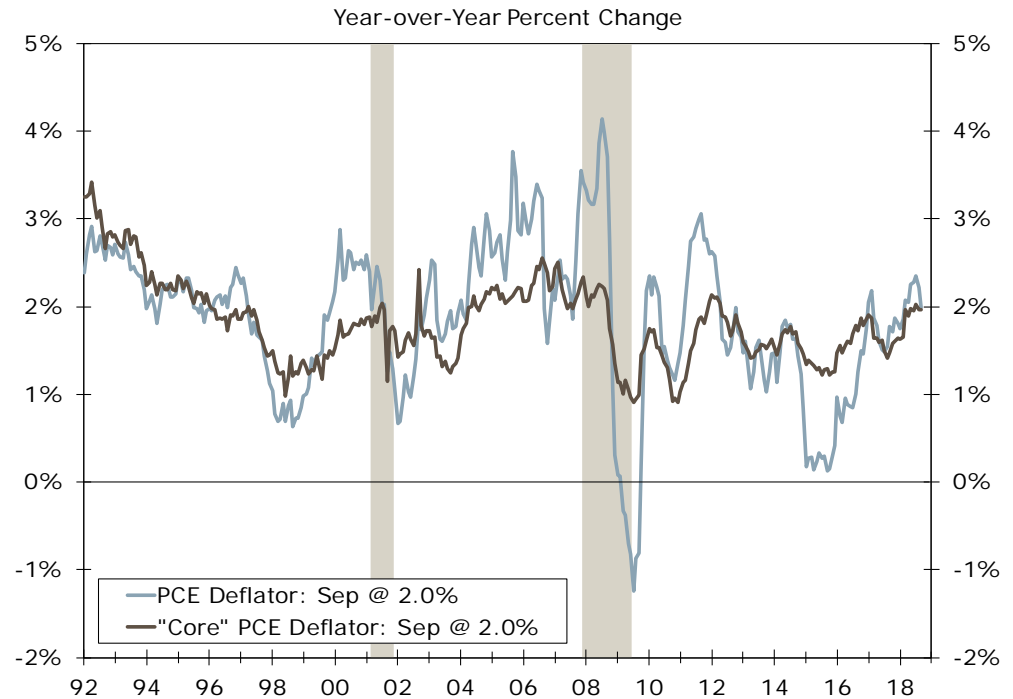
ECI Wages & Salaries Year-over-Year Percent Change



Source: U.S. Department of Labor and Wells Fargo Securities, November 2018

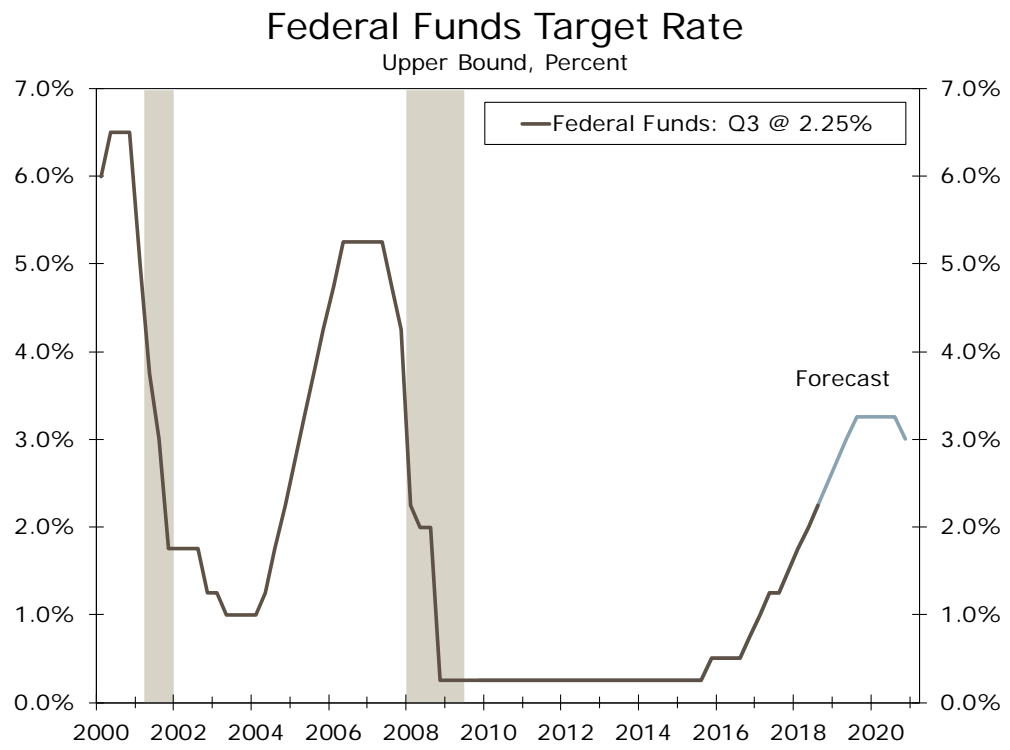
We look for consumer price inflation to move gradually higher

PCE Deflator vs. Core PCE Deflator



Source: U.S. Department of Commerce and Wells Fargo Securities, November 2018

We look for the Fed to hike rates once more this year and three times in 2019

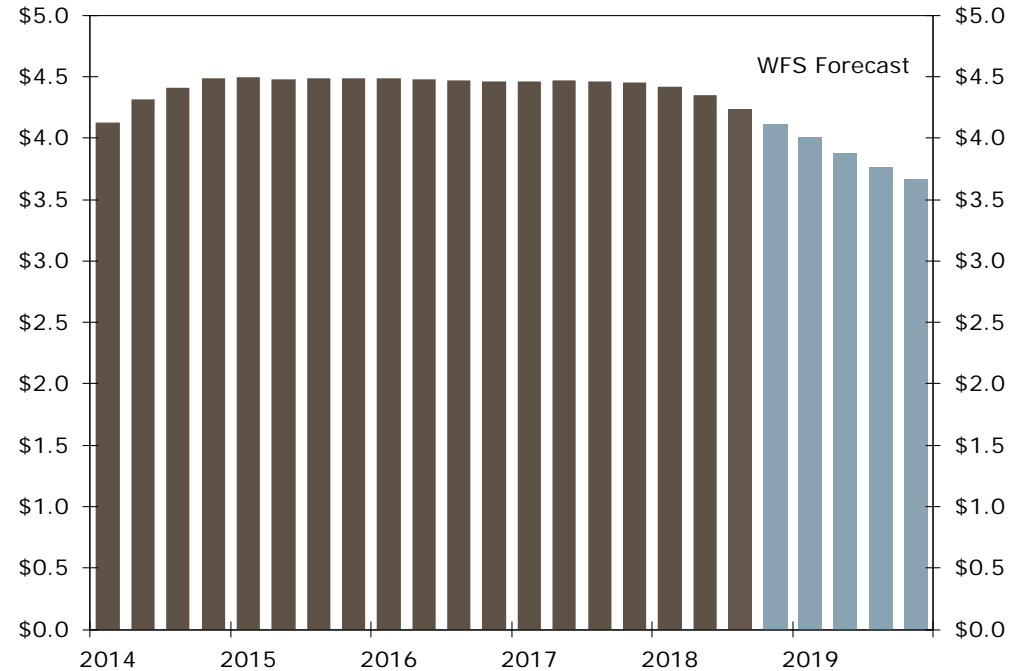


Source: Federal Reserve Board and Wells Fargo Securities, November 2018

We estimate that the Fed's balance sheet will shrink to only \$3.7 trillion by the end of 2019 before it starts to grow again

Federal Reserve Balance Sheet

Total Assets, Trillions of Dollars

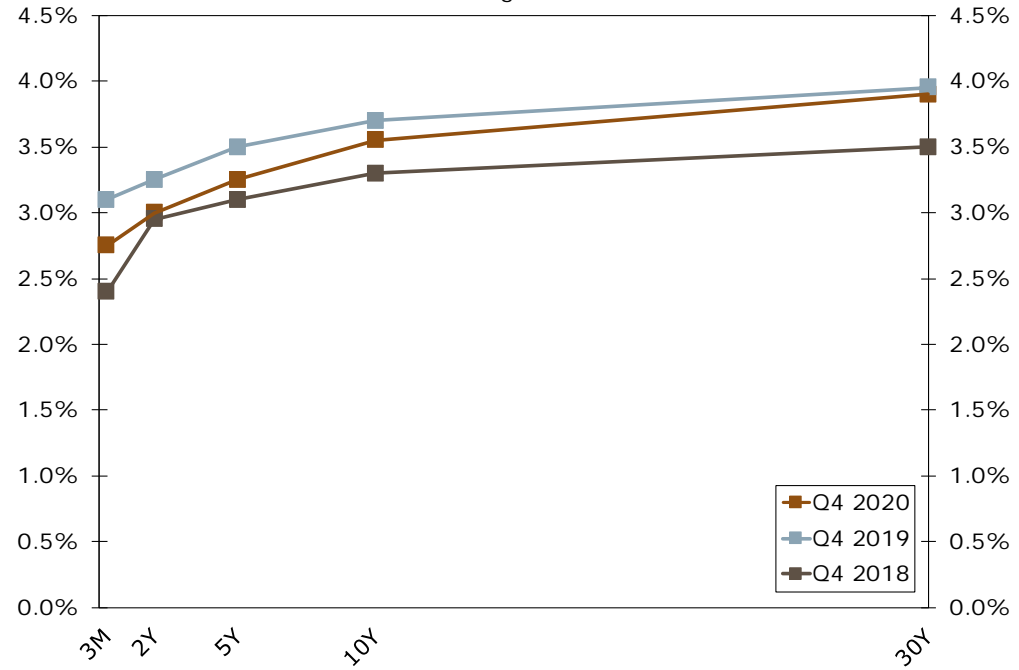


Source: Federal Reserve System and Wells Fargo Securities, November 2018

Treasury yields should back up further in coming quarters, but they generally should remain low

Wells Fargo Rates Forecast

Through 2020



Source: Bloomberg LP and Wells Fargo Securities, November 2018

U.S. Economic Forecast

Wells Fargo U.S. Economic Forecast

	Actual				Forecast												Actual	Forecast			
	2017		2018		2019				2020				2017	2018	2019	2020					
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	2017	2018	2019	2020	
Real Gross Domestic Product ¹	1.8	3.0	2.8	2.3	2.2	4.2	3.5	2.5	2.3	2.6	2.5	2.3	2.1	2.0	1.8	1.8	2.2	2.9	2.7	2.2	
Personal Consumption	1.8	2.9	2.2	3.9	0.5	3.8	4.0	2.8	2.2	2.9	2.6	2.5	2.1	2.2	1.8	1.7	2.5	2.7	2.8	2.2	
Business Fixed Investment	9.6	7.3	3.4	4.8	11.5	8.7	0.8	6.6	4.7	4.9	4.4	4.0	3.7	3.6	2.9	2.8	5.3	6.8	4.8	3.7	
Equipment	9.1	9.7	9.8	9.9	8.5	4.6	0.4	7.7	3.8	4.2	3.7	3.1	2.7	2.6	2.1	2.0	6.1	7.1	4.1	2.8	
Intellectual Property Products	8.0	6.6	1.7	0.7	14.1	10.5	7.9	7.4	4.8	5.3	4.7	4.6	4.7	4.6	3.7	3.6	4.6	7.6	6.1	4.5	
Structures	12.8	3.8	-5.7	1.3	13.9	14.5	-7.9	3.0	6.5	6.0	5.5	5.0	4.5	4.0	3.5	3.5	4.6	4.8	4.1	4.5	
Residential Construction	11.1	-5.5	-0.5	11.1	-3.4	-1.3	-4.0	0.0	1.5	2.0	2.5	2.5	2.5	2.5	2.0	2.0	3.3	-0.1	0.6	2.4	
Government Purchases	-0.8	0.0	-1.0	2.4	1.5	2.5	3.3	3.2	2.7	2.2	1.6	0.8	0.7	0.5	0.3	0.1	-0.1	1.8	2.5	0.8	
Net Exports ²	-0.1	0.1	0.0	-0.9	0.0	1.2	-1.8	-0.6	-0.3	-0.5	-0.3	-0.2	0.0	-0.2	0.0	0.1	-0.4	-0.3	-0.5	-0.1	
Inventories ²	-0.8	0.2	1.0	-0.9	0.3	-1.2	2.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	
Nonfarm Payroll Change ³	177	190	142	221	218	217	190	203	170	170	160	160	150	140	100	90	182	207	165	120	
Unemployment Rate	4.7	4.3	4.3	4.1	4.1	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.3	4.4	3.9	3.6	3.3	
Consumer Price Index ⁴	2.6	1.9	2.0	2.1	2.3	2.6	2.6	2.4	2.4	2.6	2.9	2.9	2.7	2.7	2.5	2.5	2.1	2.5	2.7	2.6	
Quarter-End Interest Rates ⁵																					
Federal Funds Target Rate	1.00	1.25	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.25	3.25	3.25	3.25	3.00	1.13	2.13	3.06	3.19	
Conventional Mortgage Rate	4.20	3.90	3.81	3.94	4.44	4.57	4.63	4.90	5.05	5.15	5.25	5.30	5.30	5.25	5.20	5.15	3.99	4.63	5.19	5.23	
2 Year Note	1.27	1.38	1.47	1.89	2.27	2.52	2.81	2.95	3.10	3.15	3.25	3.25	3.20	3.15	3.10	3.00	1.40	2.64	3.19	3.11	
10 Year Note	2.40	2.31	2.33	2.40	2.74	2.85	3.05	3.30	3.45	3.55	3.65	3.70	3.70	3.65	3.60	3.55	2.33	2.99	3.59	3.63	

Forecast as of: November 7, 2018

¹ Compound Annual Growth Rate Quarter-over-Quarter

² Percentage Point Contribution to GDP

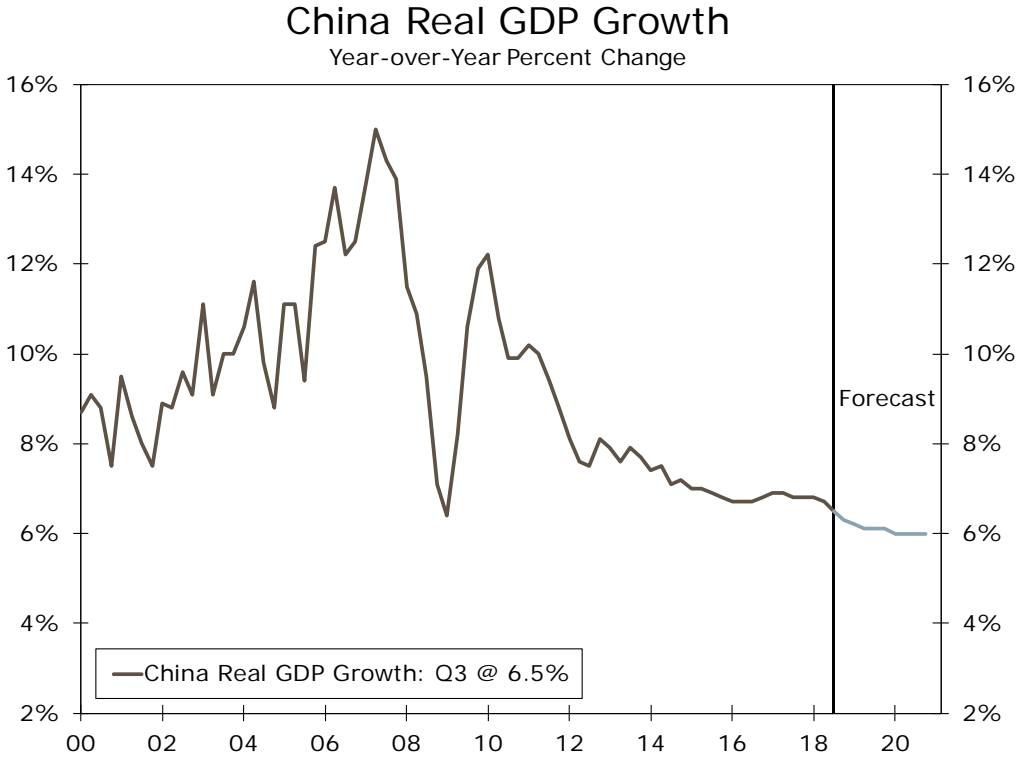
³ Average Monthly Change

⁴ Year-over-Year Percentage Change

⁵ Annual Numbers Represent Averages

Source: IHS Markit and Wells Fargo Securities, November 2018

We look for further gradual deceleration in the Chinese economy

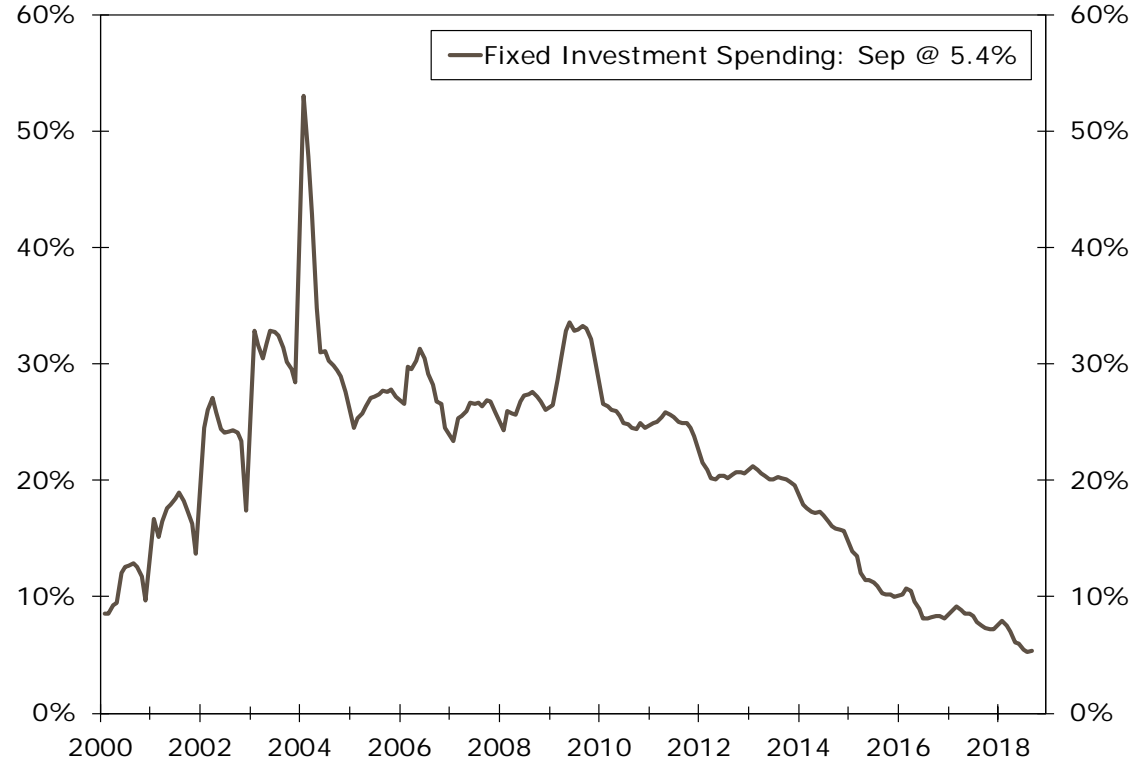


Source: IHS Markit and Wells Fargo Securities, November 2018

Chinese investment has slowed as they continue to transition to a more consumer based economy

Chinese Fixed Investment Spending

Year-to-Date Percent Change

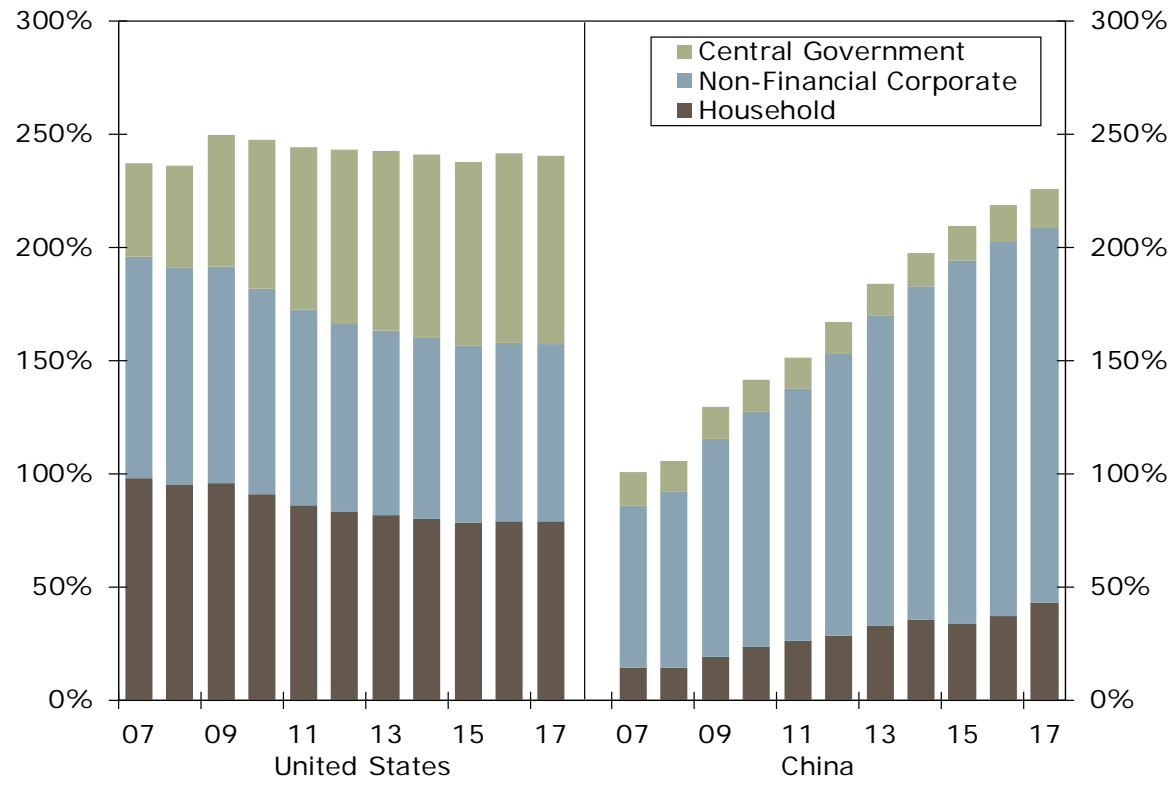


Source: IHS Markit and Wells Fargo Securities, November 2018

Debt problems in China are concentrated in the business sector

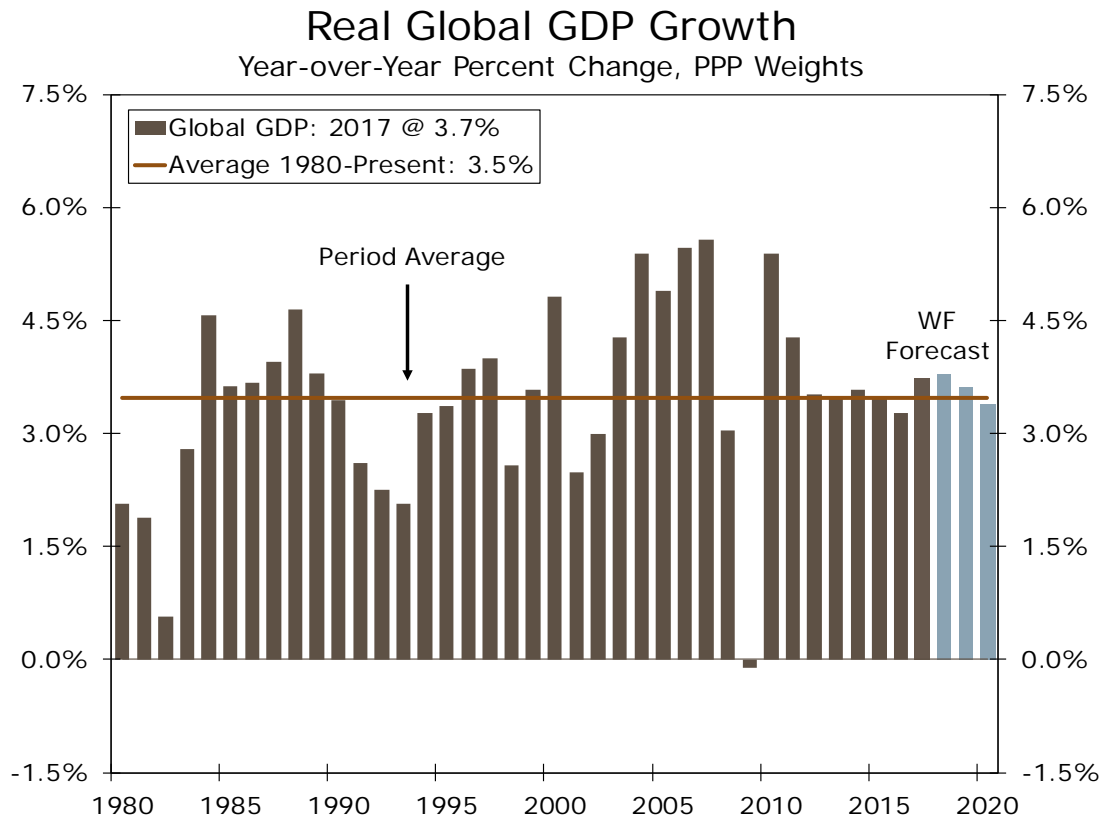
U.S. vs. China Debt Outstanding by Sector

Percent of GDP



Source: IHS Markit and Wells Fargo Securities, November 2018

We forecast that global GDP should continue to grow near its long-run average through 2020



Source: International Monetary Fund and Wells Fargo Securities, November 2018

Significant run-ups in commodity prices coincided with periods of robust global growth

CRB Commodity Index

USD Based Overall Commodity Index

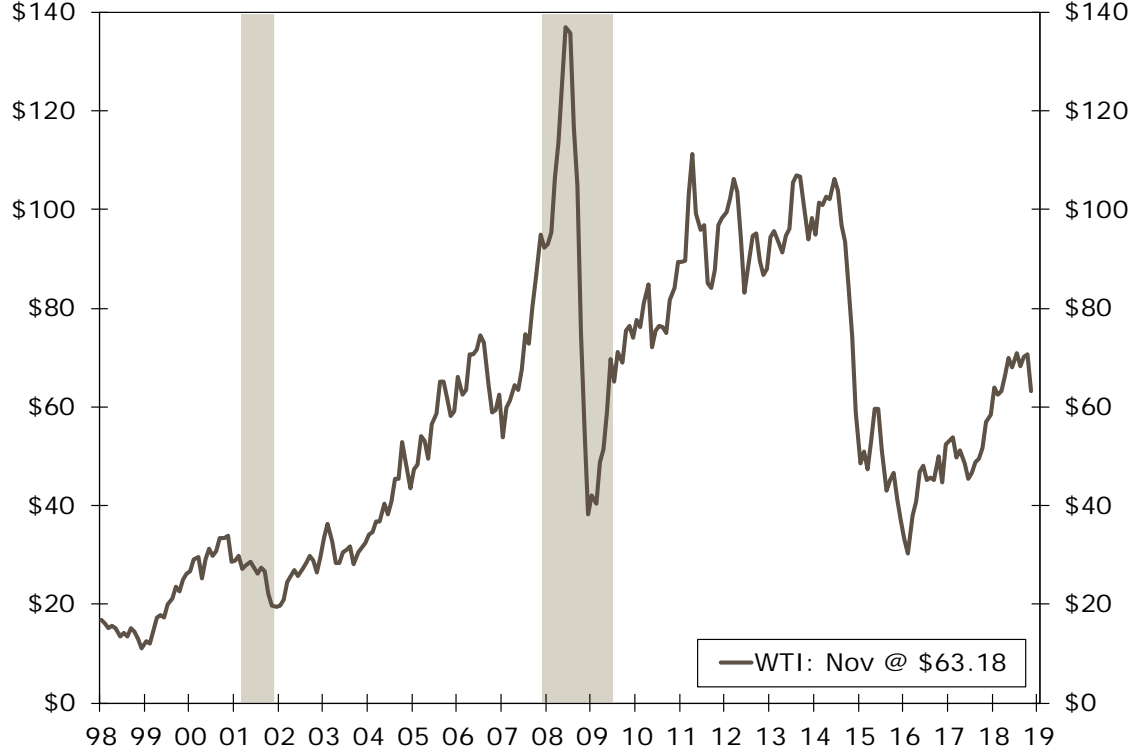


Source: IHS Markit and Wells Fargo Securities, November 2018

Oil prices likely will not return to previous highs anytime soon

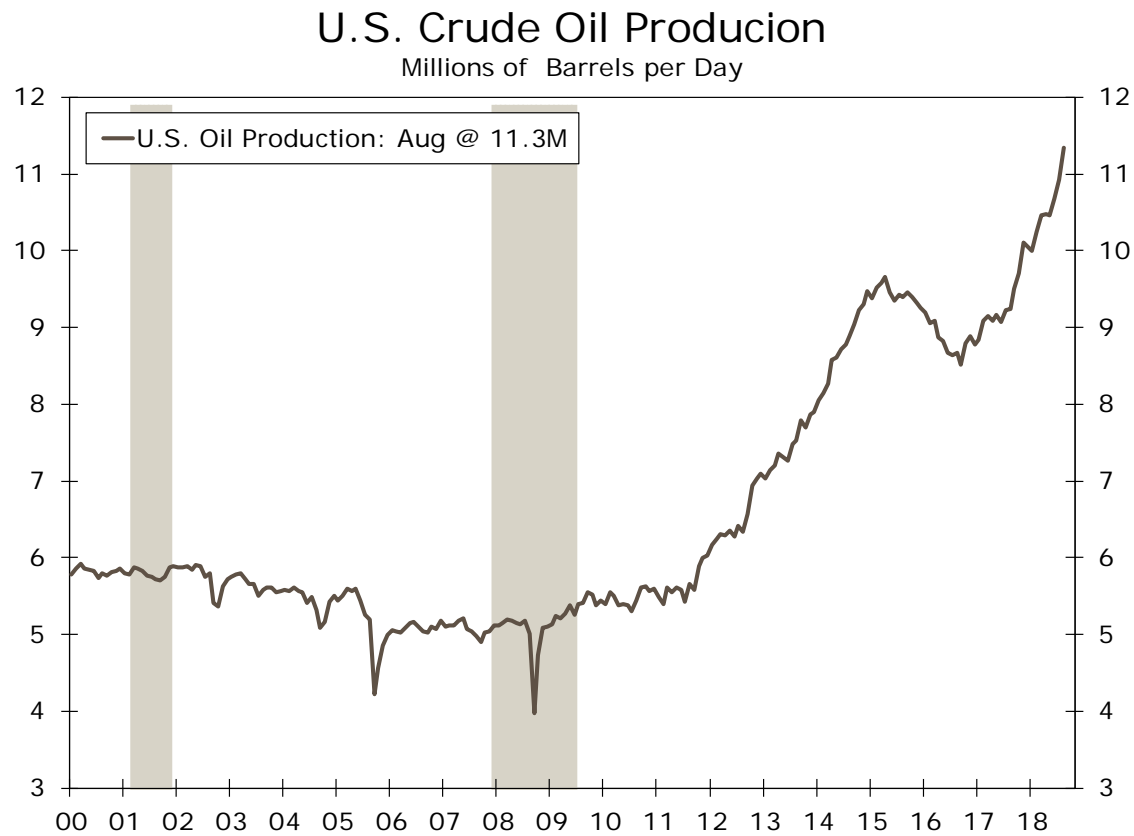
West Texas Intermediate Spot Price

Monthly Average Cash Spot Prices, Dollars per Barrel



Source: IHS Markit and Wells Fargo Securities, November 2018

U.S. oil production continues to surge

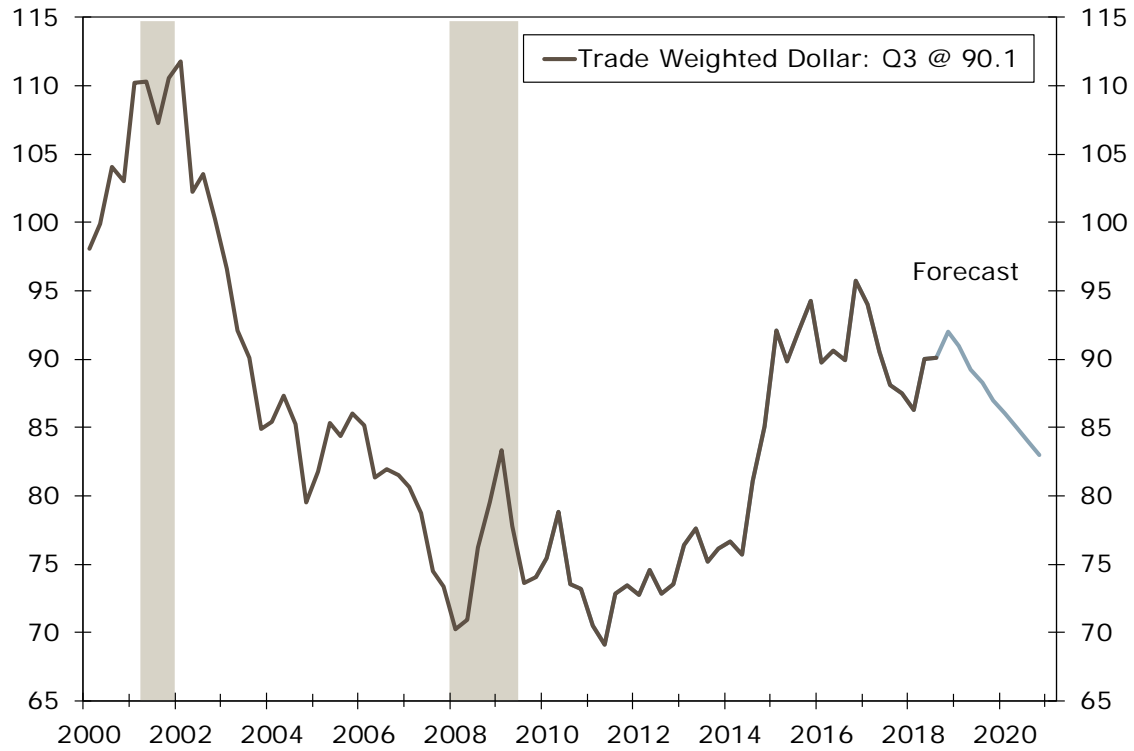


Source: IHS Markit and Wells Fargo Securities, November 2018

We look for the dollar to resume its downward trend in 2019

Trade Weighted Dollar

Major Currency Index, 1973 = 100



Source: Federal Reserve Board and Wells Fargo Securities, November 2018

We forecast that global GDP should continue to grow near its long-run average through 2020

Wells Fargo International Economic Forecast

(Year-over-Year Percent Change)

	GDP			CPI		
	2018	2019	2020	2018	2019	2020
Global (PPP Weights)	3.8%	3.6%	3.4%	3.6%	3.8%	3.7%
Advanced Economies ¹	2.5%	2.4%	2.0%	2.2%	2.3%	2.3%
United States	2.9%	2.7%	2.2%	2.5%	2.7%	2.6%
Eurozone	1.9%	1.9%	1.7%	1.8%	1.8%	1.8%
United Kingdom	1.2%	1.6%	1.6%	2.4%	2.1%	2.0%
Japan	1.2%	1.1%	0.4%	1.0%	1.1%	1.9%
Canada	2.2%	2.2%	1.7%	2.4%	2.2%	2.0%
Developing Economies ¹	4.7%	4.5%	4.4%	4.5%	4.8%	4.6%
China	6.6%	6.1%	6.0%	2.1%	2.3%	2.2%
India	7.7%	7.5%	7.3%	4.6%	5.1%	4.8%
Mexico	2.2%	2.4%	2.3%	4.9%	4.1%	3.7%

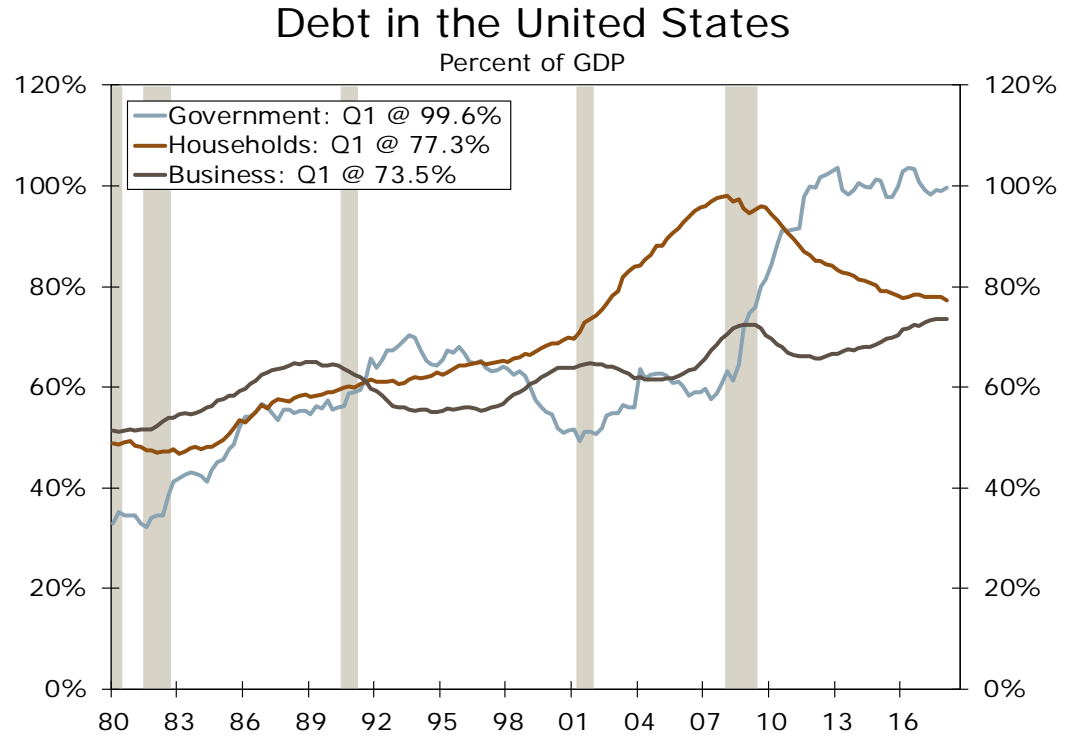
Forecast as of: November 7, 2018

¹Aggregated Using PPP Weights

Source: International Monetary Fund and Wells Fargo Securities, November 2018

- **What Could Go Wrong?**
 - **Monetary Policy Mistake?**
 - **U.S. Government and/or Business Debt?**
 - **Stock Market Crash?**
 - **Brexit/Europe?**
 - **Debt crisis in China?**
 - **Geopolitical Shocks, including potential trade war?**

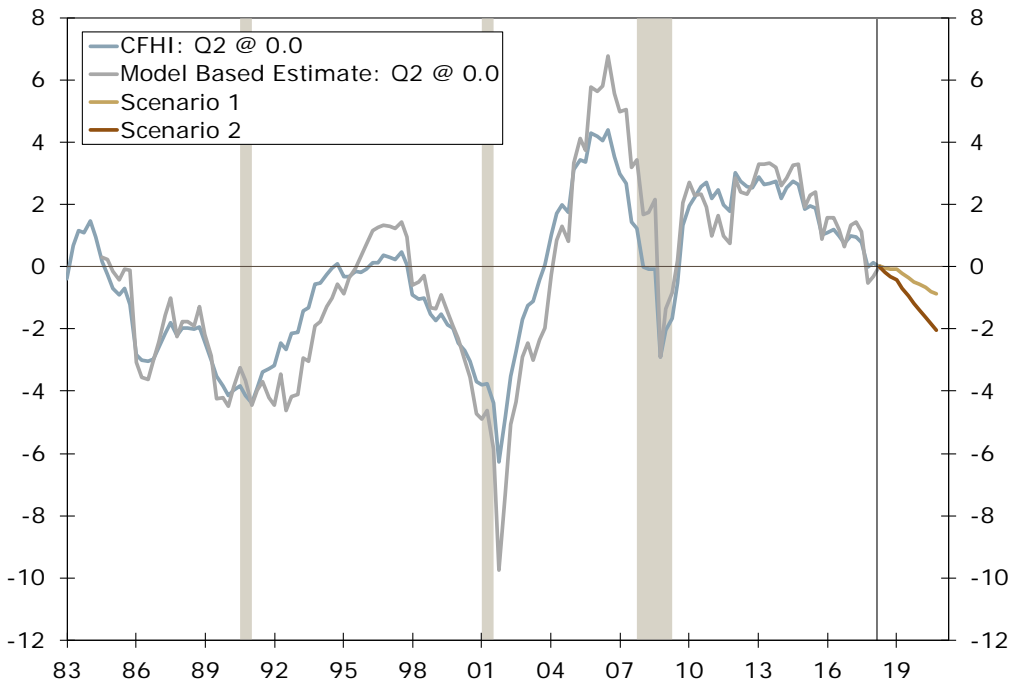
The government debt ratio has stabilized, albeit at a high level, but the debt ratio in the business sector is trending higher



Source: Bank for International Settlements and Wells Fargo Securities, November 2018

The financial health of the corporate sector is deteriorating. Our forecasts imply modest deterioration in financial health over the next two years.

Adjusted Corporate Financial Health Index

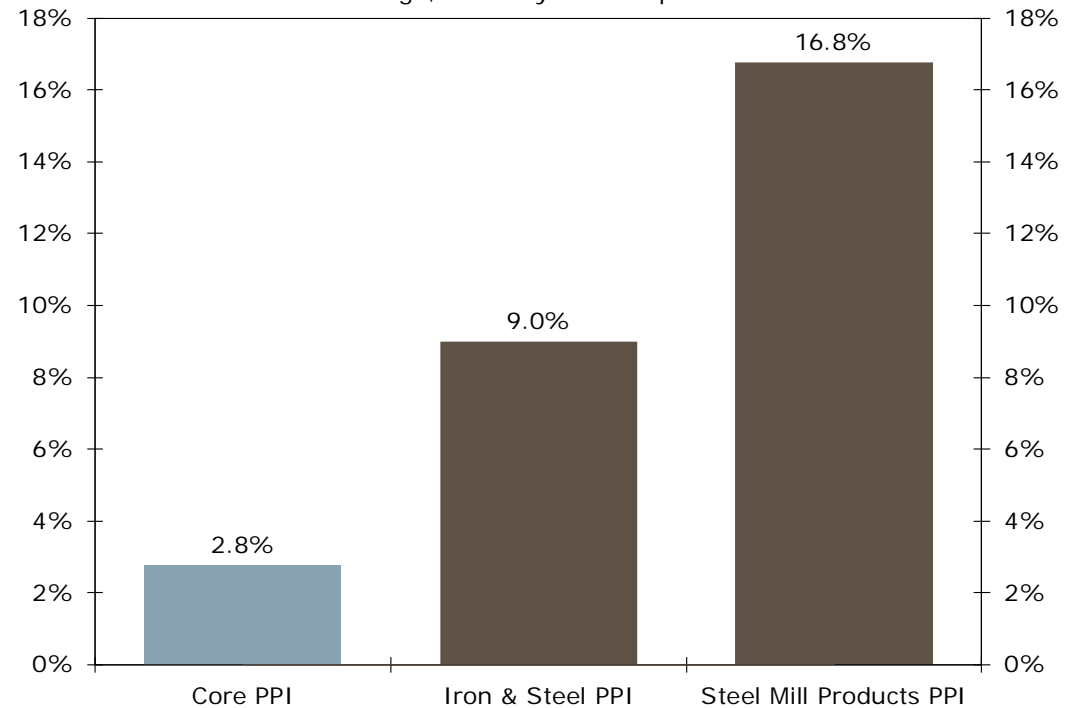


Source: Federal Reserve Board and Wells Fargo Securities, November 2018

Iron & steel prices have surged since tariffs went into effect

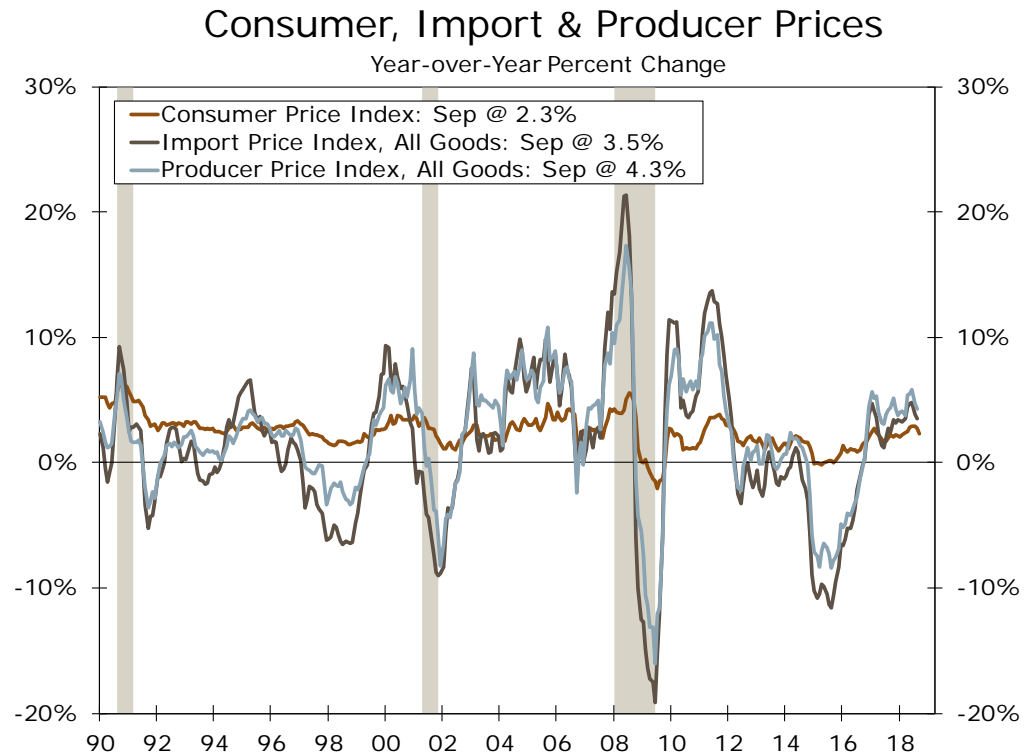
Producer Price Index

Percent Change, February 2018-September 2018



Source: U.S. Department of Labor and Wells Fargo Securities, November 2018

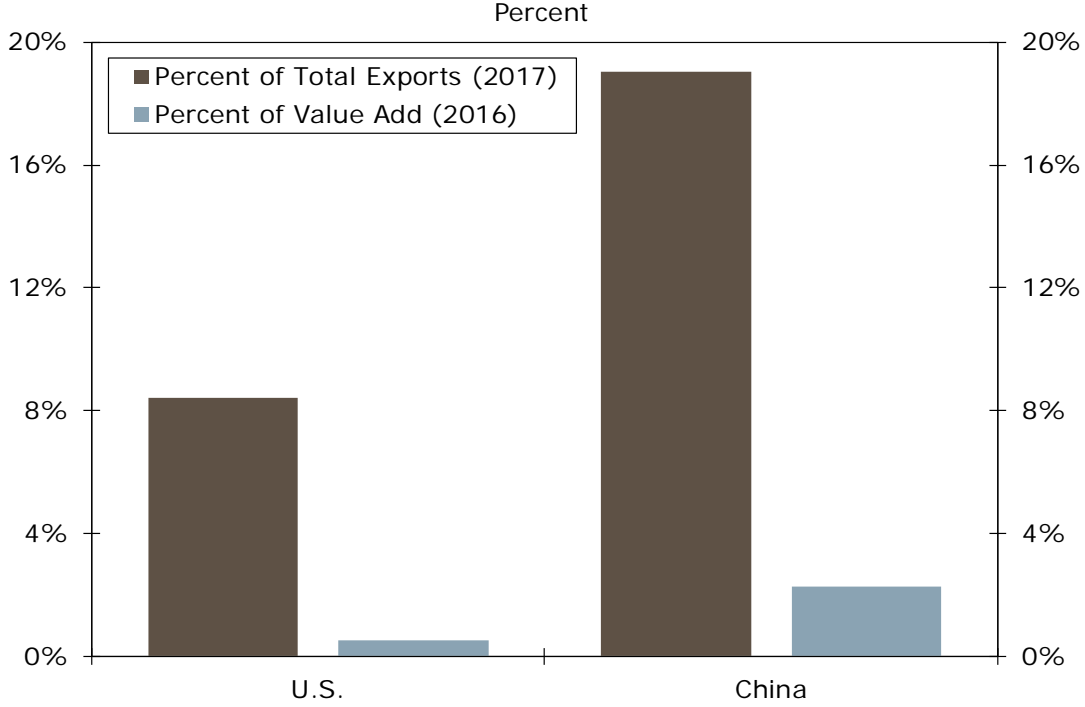
It takes a significant move in import prices to have a noticeable effect on CPI inflation



Source: U.S. Department of Labor and Wells Fargo Securities, November 2018

The “first order” effects of a potential trade war should be manageable, but “second order” effects could be more problematic

Bilateral Export Exposure



Source: IMF, OECD, United Nations and Wells Fargo Securities, November 2018

Global Head of Research, Economics & Strategy

Diane Schumaker-Krieg diane.schumaker@wellsfargo.com
Global Head of Research, Economics & Strategy

Senior Economists

Jay H. Bryson, Global Economist jay.bryson@wellsfargo.com
 Mark Vitner, Senior Economist mark.vitner@wellsfargo.com
 Sam Bullard, Senior Economist sam.bullard@wellsfargo.com
 Nick Bennenbroek, Macro Strategist nicholas.bennenbroek@wellsfargo.com
 Azhar Iqbal, Econometrician azhar.iqbal@wellsfargo.com
 Tim Quinlan, Senior Economist tim.quinlan@wellsfargo.com
 Sarah House, Senior Economist sarah.house@wellsfargo.com

Economists

Charlie Dougherty, Economist charles.dougherty@wellsfargo.com
 Erik Nelson, Macro Strategist erik.f.nelson@wellsfargo.com
 Michael Pugliese, Economist michael.d.pugliese@wellsfargo.com
 Brendan McKenna, Macro Strategist brendan.mckenna@wellsfargo.com

Economic Analysts

Abigail Kinnaman, Economic Analyst abigail.kinnaman@wellsfargo.com
 Shannon Seery, Economic Analyst shannon.seery@wellsfargo.com
 Matthew Honnold, Economic Analyst matthew.honnold@wellsfargo.com

Administrative Assistants

Donna LaFleur, Executive Assistant donna.lafleur@wellsfargo.com
 Dawne Howes, Administrative Assistant dawne.howes@wellsfargo.com

Wells Fargo Securities Economics Group publications are produced by Wells Fargo Securities, LLC, a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission, the Financial Industry Regulatory Authority, and the Securities Investor Protection Corp. Wells Fargo Securities, LLC, distributes these publications directly and through subsidiaries including, but not limited to, Wells Fargo & Company, Wells Fargo Bank N.A., Wells Fargo Clearing Services, LLC, Wells Fargo Securities International Limited, Wells Fargo Securities Canada, Ltd., Wells Fargo Securities Asia Limited and Wells Fargo Securities (Japan) Co. Limited. Wells Fargo Securities, LLC, is registered with the Commodities Futures Trading Commission as a futures commission merchant and is a member in good standing of the National Futures Association. Wells Fargo Bank, N.A. is registered with the Commodities Futures Trading Commission as a swap dealer and is a member in good standing of the National Futures Association. Wells Fargo Securities, LLC and Wells Fargo Bank, N.A. are generally engaged in the trading of futures and derivative products, any of which may be discussed within this publication. Wells Fargo Securities, LLC does not compensate its research analysts based on specific investment banking transactions. Wells Fargo Securities, LLC's research analysts receive compensation that is based upon and impacted by the overall profitability and revenue of the firm which includes, but is not limited to investment banking revenue. The information and opinions herein are for general information use only. Wells Fargo Securities, LLC does not guarantee their accuracy or completeness, nor does Wells Fargo Securities, LLC assume any liability for any loss that may result from the reliance by any person upon any such information or opinions. Such information and opinions are subject to change without notice, are for general information only and are not intended as an offer or solicitation with respect to the purchase or sales of any security or as personalized investment advice. Wells Fargo Securities, LLC is a separate legal entity and distinct from affiliated banks and is a wholly owned subsidiary of Wells Fargo & Company © 2018 Wells Fargo Securities, LLC.

Important Information for Non-U.S. Recipients

For recipients in the EEA, this report is distributed by Wells Fargo Securities International Limited ("WFSIL"). WFSIL is a U.K. incorporated investment firm authorized and regulated by the Financial Conduct Authority. For the purposes of Section 21 of the UK Financial Services and Markets Act 2000 ("the Act"), the content of this report has been approved by WFSIL, an authorized person under the Act. WFSIL does not deal with retail clients as defined in the Directive 2014/65/EU ("MiFID2"). The FCA rules made under the Financial Services and Markets Act 2000 for the protection of retail clients will therefore not apply, nor will the Financial Services Compensation Scheme be available. This report is not intended for, and should not be relied upon by, retail clients.

SECURITIES: NOT FDIC-INSURED/NOT BANK-GUARANTEED/MAY LOSE VALUE