

WELLS
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SECURITIES

Wells Fargo Economics *Monthly Macro Manual*

Your guide to the data and events that will shape the economic outlook and drive financial markets in the month ahead

October 10, 2018

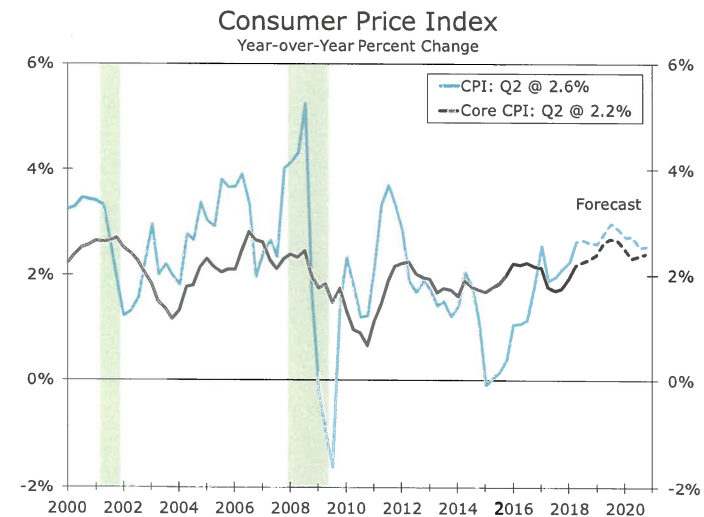
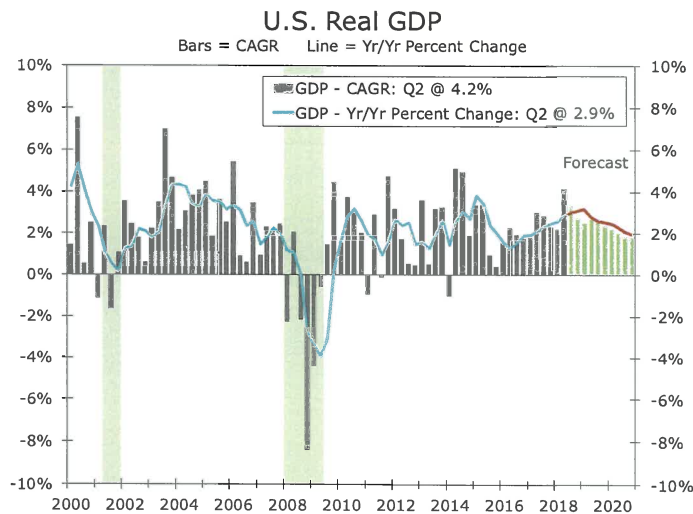
Together we'll go far



Key Takeaways

Developments since our September Monthly Economic Outlook

- **Our updated forecast for Q3-2018 U.S. real GDP growth is 3.3%, up from 3.1% in our last monthly.** Real personal consumption appears to be growing in excess of a 3% annualized rate, while both federal and state & local government spending are likely to boost growth in the quarter.
- **Our fed funds forecast is unchanged: one more hike this year, then three in 2019 occurring in Q1, Q2 and Q3.** As next year comes into view, we think economic conditions will remain strong enough for the Fed to continue hiking each quarter through Q3-2019, eventually pushing the fed funds rate a bit above neutral. Slowing economic growth by late next year will put the Fed on hold after Q3-2019, in our view.
- **We have upwardly revised our inflation forecast as a result of enacted tariffs and oil prices rising faster than expected.** We look for the headline CPI to reach 3% year-over-year in the second half of next year.
- The U.S. Treasury yield curve has steepened over the past month, in-line with our expectations. **Our updated forecast for the 10-year yield is 3.35% at the end of 2018 and 3.70% at the end of 2019.**



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

Monthly Macro Calendar: October 8-November 2

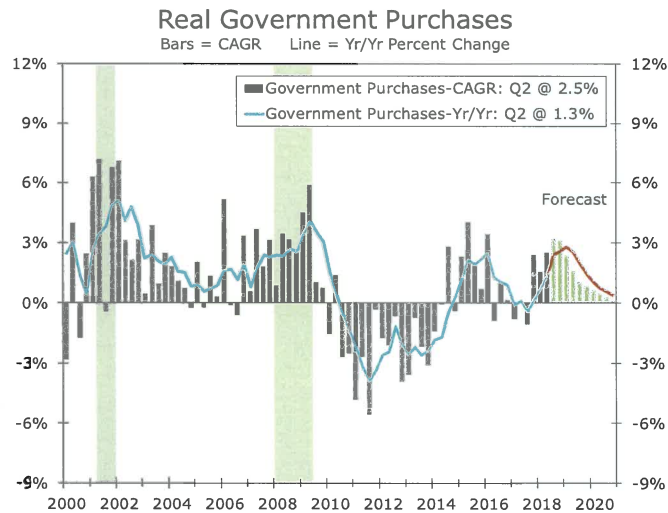
Monday	Tuesday	Wednesday	Thursday	Friday
8	9	10	11	12
Bullard (St. Louis Fed) Speaking in Singapore	Kaplan (Dallas Fed) Speaks to Economic Club of New York Harker (Philadelphia Fed) Speaks on Importance of Education Williams* (New York Fed) Speaks on Monetary Policy Developments	Evans (Chicago Fed) Speaks on Economy and Monetary Policy Bostic* (Atlanta Fed) Speaks on Economic Outlook PPI Final Demand (MoM) August -0.1%; September 0.2% (W)	Bostic* (Atlanta Fed) Discusses Recruitment, Economics & Policy Consumer Price Index (MoM) August 0.2%; September 0.2% (W) Monthly Budget Statement August \$7.9B; September \$116.0B (W)	Import Price Index (MoM) August -0.6%; September 0.3% (W)
15	16	17	18	19
Retail Sales (MoM) August 0.1%; September 0.7% (C)	Industrial Production (MoM) August 0.4%; September 0.2% (C) JOLTS July 6.9M	Housing Starts (MoM) August 9.2%; September -5.2% (C) United Kingdom CPI (YoY) August 2.7%; September 2.5% FOMC Meeting Minutes	Bullard (St. Louis Fed) Speaks to Economic Club of Memphis China Q3 GDP (YoY) Q2 6.7% Asia-Europe Meeting (ASEM) Summit	Kaplan (Dallas Fed) Speaks in New York Bostic* (Atlanta Fed) Speaks on Economic Outlook Existing Home Sales (MoM) August 0.0%; September -0.5% (C)
22	23	24	25	26
Bostic* (Atlanta Fed) Speaks on Atlanta		Bostic* (Atlanta Fed) Speaks at Energy Summit in Baton Rouge Bank of Canada Rate Decision Previous 1.50% Federal Reserve Releases Beige Book	Durable Goods Orders (MoM) August 4.4% European Central Bank Rate Decision Previous 0.25%	U.S. Q3 GDP (Annualized QoQ) Q2 4.2%; Q3 3.3% (W)
29	30	31	1	2
Personal Income (MoM) August 0.3%	Consumer Confidence September 138.4 Eurozone Q3 GDP (YoY) Q2 2.1% Bank of Japan Rate Decision Previous -0.10%	Central Bank of Brazil Rate Decision Previous 6.50% Eurozone CPI (YoY) September 2.1% U.S. Treasury Quarterly Refunding	Nonfarm Productivity Q2 2.9% ISM Manufacturing Index September 59.8 Bank of England Rate Decision Previous 0.75%	Nonfarm Payrolls September 134K Trade Balance August -\$53.2B

Note: (W) = Wells Fargo Estimate, (C) = Consensus Estimate, * = voting FOMC member in 2018

Source: Bloomberg LP and Wells Fargo Securities

U.S. Growth Outlook

- Most recent real GDP growth forecast for Q3-2018: 3.3% (seasonally adjusted annual rate)
 - **Change since last *Monthly Economic Outlook*: +0.2 percentage points**
 - Commentary: Real GDP growth looks solid again in Q3. Personal consumption growth looks likely to post another strong quarter and, unlike the past few years, both federal and state & local governments are providing a direct contribution to growth. Inventories and trade could be bigger swing factors than usual amid the noise created by the recently-enacted tariffs. Higher interest rates appear to be weighing on the housing sector, which has been one of the few sector laggards of late.
- Real GDP growth forecast for full-year 2019: 2.8%
 - **Change since last *Monthly Economic Outlook*: no change**
 - Commentary: Our forecast for 2019 economic growth largely remained unchanged. We still expect stronger growth in H1-2019 to give way to a gradual softening starting in the second half of the year as government spending, corporate profits and disposable income begin to decelerate.



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

Key Themes and Upside/Downside Scenarios

- Fiscal policy has swung from a neutral to an expansionary stance, helping to propel economic growth above potential.
- *Upside scenario*: After a solid H1-2018, consumption and investment gather steam and fiscal stimulus helps push full-year growth above 3.0%, with momentum headed into 2019.
- *Downside scenario*: Higher interest rates pressure consumers and businesses, while a trade war adds to uncertainty and inflation pressures, leading economic growth to start slowing earlier than we currently expect.

Federal Reserve Watch

Inflation Forecast

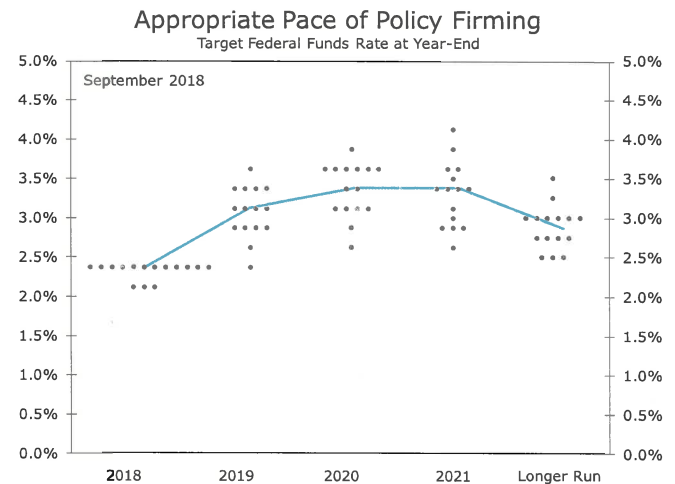
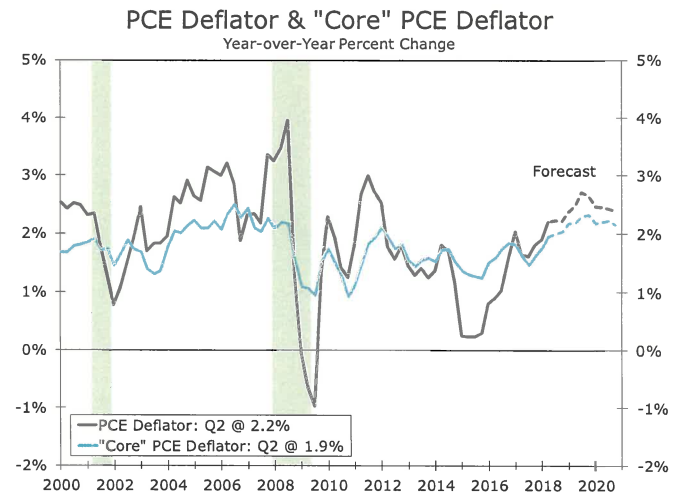
- We have upwardly revised our 2019 and 2020 inflation forecasts to reflect pressure from enacted tariffs as well as oil prices rising faster than previously expected.
- The upward revisions to our inflation forecast are relatively modest, especially for core inflation, and **not materially large enough to alter our outlook for monetary policy.**

Labor Market Forecast

- As before, we expect the unemployment rate to steadily decline throughout our forecast horizon as employers continue to add jobs, albeit at a slightly slower rate over time as it becomes harder to fill positions. We forecast the unemployment rate will fall to 3.3% in 2020.

Fed Funds Outlook

- Fed funds forecast for 2018
 - One more 25 bps hike in Q4
- Fed funds forecast for 2019
 - Three 25 bps hikes in Q1, Q2 and Q3
 - Rational: With growth and inflation still solid heading into 2019, we think the Fed will continue hiking until monetary policy is mildly restrictive.
- Fed funds forecast for 2020
 - One 25 bps cut in Q4 as quarterly economic growth eventually falls to slightly below 2% in H2-2020.



Source: Federal Reserve Board, U.S. Department of Commerce and Wells Fargo Securities

U.S. Interest Rate Outlook

Wells Fargo U.S. Interest Rate Forecast

	Actual				Forecast								
	2018				2019				2020				
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	
Quarter End Interest Rates													
Federal Funds Target Rate	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.25	3.25	3.25	3.25	3.00	3.00
3 Month LIBOR	2.31	2.34	2.40	2.70	2.95	3.15	3.40	3.40	3.40	3.40	3.40	3.15	3.15
Prime Rate	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.25	6.25	6.25	6.25	6.00	6.00
Conventional Mortgage Rate	4.44	4.57	4.63	4.95	5.05	5.15	5.25	5.30	5.30	5.25	5.20	5.15	5.15
3 Month Bill	1.73	1.93	2.19	2.40	2.65	2.90	3.05	3.10	3.05	3.00	2.95	2.75	2.75
6 Month Bill	1.93	2.11	2.36	2.60	2.80	2.95	3.10	3.15	3.10	3.05	3.00	2.80	2.80
1 Year Bill	2.09	2.33	2.59	2.80	3.00	3.05	3.15	3.20	3.15	3.10	3.05	2.90	2.90
2 Year Note	2.27	2.52	2.81	3.00	3.10	3.15	3.25	3.25	3.20	3.15	3.10	3.00	3.00
5 Year Note	2.56	2.73	2.94	3.15	3.25	3.35	3.45	3.50	3.45	3.40	3.35	3.25	3.25
10 Year Note	2.74	2.85	3.05	3.35	3.45	3.55	3.65	3.70	3.70	3.65	3.60	3.55	3.55
30 Year Bond	2.97	2.98	3.19	3.55	3.65	3.80	3.90	3.95	4.00	4.00	3.95	3.90	3.90

Forecast as of: October 10, 2018

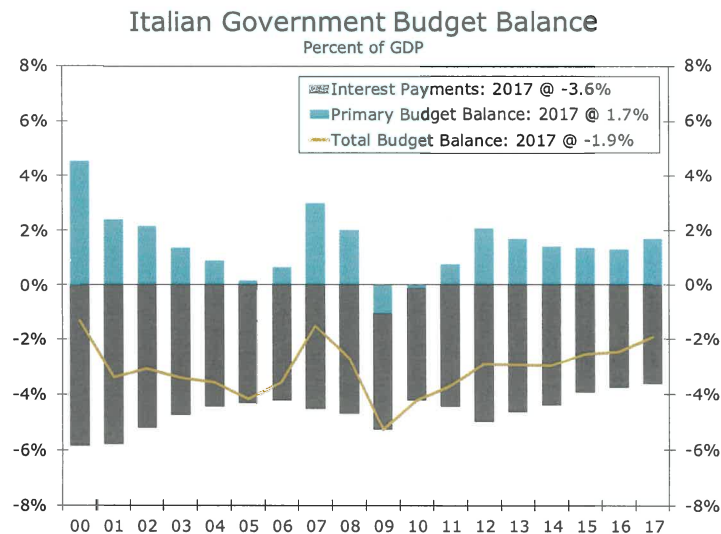
Source: Federal Reserve Board and Wells Fargo Securities

What Are We Watching in the Month Ahead?

- FOMC: Where is balance sheet normalization headed in 2019?
 - Will the Fed minutes released on October 17 offer any new insight on the future of the Fed's balance sheet?
- Treasury curve steepening, but inflation still relatively in check?
 - Though our inflation forecast has moved somewhat higher, we expect it to remain within a range that is still fairly comfortable for the Fed.
 - However, with other factors pressuring yields at the long-end of the Treasury curve, such as higher deficits, a surprise to the upside in inflation could cause another sharp adjustment in longer-dated Treasuries.
- Quarterly Refunding Statement – Where along the curve will Treasury finance its funding needs?
 - The next Quarterly Refunding Statement from the U.S. Treasury will be released on 10/31. With more Treasury auction size increases likely coming, any signals from Treasury that it is looking to further term out new debt issuance could induce some additional steepening pressure.

Fiscal Stimulus in Italy Inches Closer

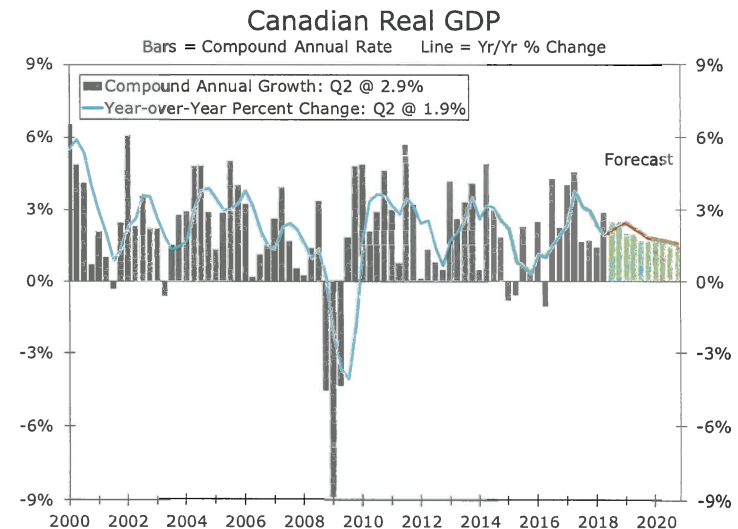
- Another big step in the Italian budget process occurred on Sept. 27, when policymakers set their top-line budget figures. The key number was a deficit target of 2.4% of GDP for 2019, above the 0.8% target set by the previous government. Italian bond yields have remained elevated, and interest costs already consume a large chunk of the budget (bottom left chart). With concrete policy proposals set to come in the coming weeks, the turbulence is likely to continue in the near-term.
- For further reading, see our recent report [“Italy Takes Another Step Towards Fiscal Easing.”](#)



Source: International Monetary Fund, IHS Markit and Wells Fargo Securities

Canadian Outlook Brightening

- We have modestly revised up our forecast for Canadian economic growth over the next couple years after the major breakthrough that occurred on NAFTA renegotiation. Thus, with the extra boost to the economy and falling levels of uncertainty, we now anticipate one more rate hike from the Bank of Canada in 2018 and three hikes in 2019 (up from our previous forecast of two hikes).
- For further reading, see our recent report [“Assessing Canada’s Economy and Markets as Trade Clouds Lift.”](#)



Global Central Bank Watch

Wells Fargo Central Bank Policy Forecasts

Central Bank	Current Policy Rate	Last Major Policy Change	WF Next Forecasted Policy Change
United States (FOMC)	2.25	September 2018 <i>25 bps hike</i>	Next Rate Hike: Q4-2018
Eurozone (ECB)	-0.40 (Deposit Rate)	September 2018 <i>Confirmed taper of asset purchases to €15 billion/month in Oct. 2018</i>	End QE Program at end of 2018 Next Rate Hike: Q3-2019 (Deposit Rate)
United Kingdom (BOE)	0.75	August 2018 <i>25 bps hike</i>	Maintain size of balance sheet through Q4-2019 Next Rate Hike: Q3-2019
Japan (BOJ)	-0.10	July 2018 <i>QQE and a greater degree of variation in 10-year govt. bond yield target</i>	Maintain annual asset purchases of ¥80 trillion Change 10-year govt. bond yield tolerance band in Q2-2019
Canada (BOC)	1.50	July 2018 <i>25 bps hike</i>	Next Rate Hike: Q4-2018

Forecast as of: October 10, 2018

Source: Bloomberg LP and Wells Fargo Securities

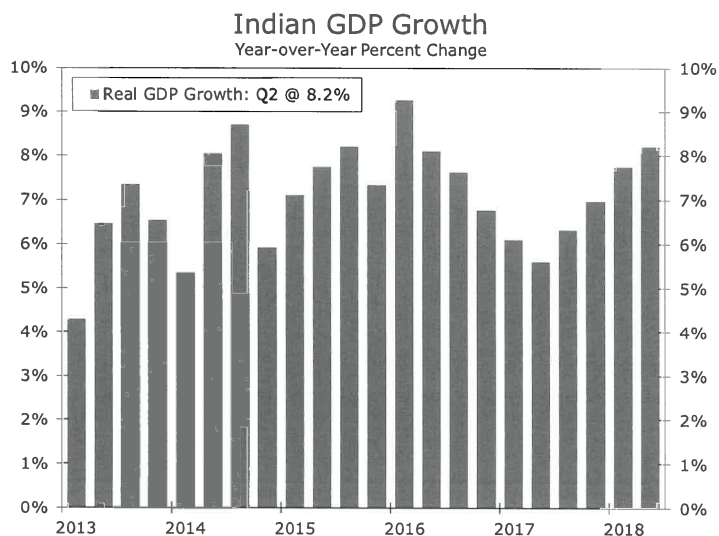
What Are We Watching in the Month Ahead?

- European Central Bank
 - It would likely take a material increase in core inflation to spark a more hawkish tone from the ECB; core inflation, which started the year at 1.0%, remains stagnant at 0.9% year over year.
 - How will the ECB's reaction function/communication change, if at all, in response to Italian budget drama?
- Bank of Japan
 - We expect the BoJ to raise its main policy rate to 0.00% and increase the band of its 10-year yield target to 25 bps in Q2-2019.
- Bank of England
 - We look for the BoE to remain on hold for the remainder of the year in the face of Brexit uncertainty.
- Bank of Canada
 - We expect the BoC to hike rates once more this year, given on-target inflation and growing supply constraints.

Global Economic Outlook: Developing Economies

Indian Economic Growth a Bright Spot...

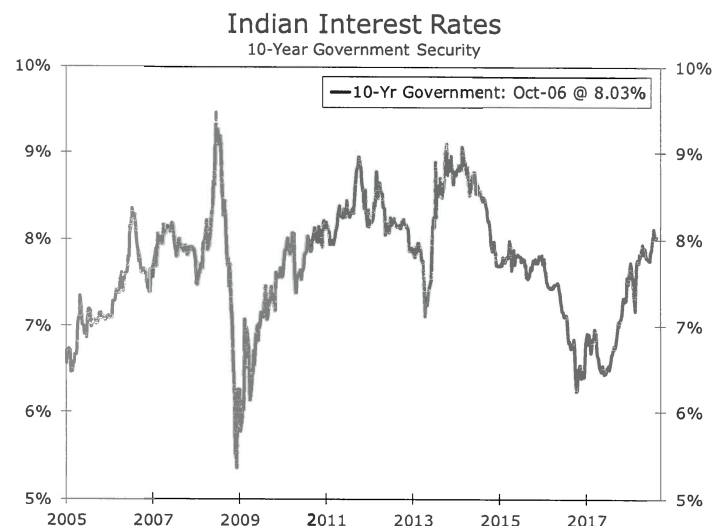
- Economic growth in India has been a bright spot in the global economy of late. Real GDP in India has accelerated for four consecutive quarters, reaching a robust 8.2 percent year-over-year pace in Q2-2018.
- Indian policymakers undertook a series of structural economic reforms over the past few years that, in part, led to the slowdown in growth exhibited in the chart below. The near-term drag to growth from these disruptions is clearly fading, however, and the long-term benefits combined with India's favorable demographics suggest a positive outlook for both the near-term and for potential growth in the country.



Source: CEIC, IHS Markit and Wells Fargo Securities

...But Like Most of EM There Are Challenges

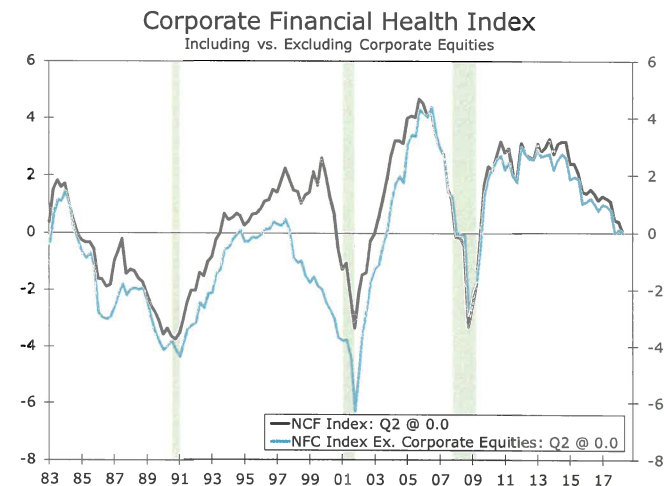
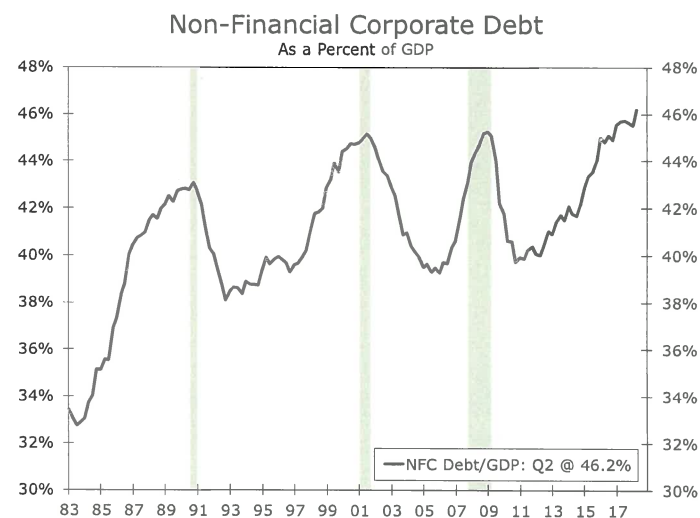
- That said, the Indian economy is not without its challenges. Despite stronger growth and rising real interest rates, the rupee has depreciated against the dollar this year. Budget deficit concerns continue to linger in the background. At present, consumer price inflation is 3.7%, just below the Reserve Bank of India's target band of 4-6%. While higher oil prices could be a catalyst for higher inflation, it could also worsen the external deficit, as India is a net energy importer. More broadly, the generally negative sentiment surrounding emerging markets of late has likely caught Indian assets up in the tide.



Topic of the Month

U.S. Corporate Sector Health: Should We Worry?

- Corporate debt as a share of GDP is at an all-time high (top chart), while margins are coming under pressure and interest rates are rising. Consequently, **one area where an imbalance may be developing in the U.S. economy is in the non-financial corporate (NFC) sector**, which accounts for nearly two-thirds of the debt of all non-financial businesses.
- To gauge the health of the American business sector, we have developed a **Corporate Financial Health Index which succinctly captures eight metrics** that have been identified as important determinants of corporate financial health (bottom chart).
- Our index suggests that **the financial health of the NFC sector has deteriorated in recent years**, and currently stands below the level that preceded the 2001 recession. Should we worry?
- The stock market bubble in the late 1990s pushed up the value of equities that corporations held. When we remove equities from the asset side of the affected financial metrics, **our adjusted Corporate Financial Health Index is in a much better position today relative to the late 1990s** (revisit bottom chart).
- However, more than nine years into the current cycle, the financial health of the NFC sector has weakened. While we are not saying that the financial health of the NFC sector is “bad” at present, **we foresee further deterioration in the financial health of the U.S. corporate sector** in coming quarters.
- For further reading, see our recent report [“U.S. Corporate Sector Health: Should We Worry?”](#)



Source: Federal Reserve Board, U.S. Department of Commerce and Wells Fargo Securities

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				
Real Gross Domestic Product (a)	1.8	3.0	2.8	2.3	2.2	4.2	3.3	2.7	2.5	2.7	2.6	2.4	2.2	2.0	1.9	1.8	2.2	2.9	2.8	2.2
Personal Consumption	1.8	2.9	2.2	3.9	0.5	3.8	3.4	2.8	2.2	2.9	2.6	2.5	2.1	2.2	1.8	1.7	2.5	2.6	2.8	2.2
Business Fixed Investment	9.6	7.3	3.4	4.8	11.5	8.7	5.5	5.4	4.7	4.9	4.4	4.0	3.7	3.6	2.9	2.8	5.3	7.3	5.1	3.7
Equipment	9.1	9.7	9.8	9.9	8.5	4.6	4.1	4.8	3.8	4.2	3.7	3.1	2.7	2.6	2.1	2.0	6.1	7.4	4.1	2.8
Intellectual Property Products	8.0	6.6	1.7	0.7	14.1	10.5	7.1	5.2	4.8	5.3	4.7	4.6	4.7	4.6	3.7	3.6	4.6	7.4	5.6	4.5
Structures	12.8	3.8	-5.7	1.3	13.9	14.5	7.0	7.0	6.5	6.0	5.5	5.0	4.5	4.0	3.5	3.5	4.6	7.1	6.8	4.5
Residential Construction	11.1	-5.5	-0.5	11.1	-3.4	-1.3	0.5	2.5	4.5	5.0	4.5	4.0	3.5	3.0	2.5	2.0	3.3	0.7	3.3	3.5
Government Purchases	-0.8	0.0	-1.0	2.4	1.5	2.5	3.2	3.1	2.4	1.6	1.0	0.8	0.7	0.5	0.3	0.1	-0.1	1.8	2.2	0.7
Net Exports	-845.5	-844.1	-845.9	-899.2	-902.4	-841.0	-916.6	-945.8	-960.3	-982.8	-997.6	-1008.1	-1009.6	-1019.1	-1016.5	-1010.6	-858.7	-901.4	-987.2	-1013.9
Pct. Point Contribution to GDP	-0.1	0.1	0.0	-0.9	0.0	1.2	-1.6	-0.6	-0.3	-0.5	-0.3	-0.2	0.0	-0.2	0.1	0.1	-0.4	-0.2	-0.5	-0.1
Inventory Change	-2.4	11.9	64.4	16.1	30.3	-36.8	48.0	50.0	51.0	52.0	57.0	56.0	56.0	55.0	55.0	55.0	22.5	22.9	54.0	55.3
Pct. Point Contribution to GDP	-0.8	0.2	1.0	-0.9	0.3	-1.2	1.8	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Nominal GDP (a)	3.9	4.2	4.8	5.1	4.3	7.6	4.7	5.5	5.7	5.2	5.3	4.9	4.6	4.4	4.4	4.2	4.2	5.2	5.4	4.7
Real Final Sales	2.6	2.8	1.8	3.2	1.9	5.4	2.2	2.7	2.5	2.7	2.5	2.4	2.2	2.0	1.9	1.8	2.2	2.9	2.7	2.2
Retail Sales (b)	4.9	4.1	4.2	5.6	4.5	5.7	6.1	4.9	5.4	4.8	4.4	4.5	4.5	4.4	4.4	3.7	4.7	5.3	4.8	4.2
Inflation Indicators (b)																				
PCE Deflator	2.0	1.6	1.6	1.8	1.9	2.2	2.2	2.2	2.4	2.5	2.7	2.6	2.5	2.4	2.4	2.4	1.8	2.1	2.5	2.4
"Core" PCE Deflator	1.8	1.6	1.5	1.6	1.7	1.9	2.0	2.0	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.1	1.6	1.9	2.2	2.2
Consumer Price Index	2.6	1.9	2.0	2.1	2.3	2.6	2.7	2.6	2.6	2.8	3.0	2.9	2.7	2.7	2.5	2.5	2.1	2.5	2.8	2.6
"Core" Consumer Price Index	2.1	1.8	1.7	1.7	1.9	2.2	2.3	2.3	2.4	2.6	2.7	2.7	2.5	2.3	2.4	2.4	1.8	2.2	2.6	2.4
Producer Price Index (Final Demand)	2.0	2.2	2.4	2.8	2.8	3.0	2.9	2.7	2.8	2.8	3.1	3.1	2.9	2.9	2.7	2.6	2.3	2.9	2.9	2.8
Employment Cost Index	2.4	2.4	2.5	2.6	2.7	2.8	2.8	2.9	2.9	3.0	3.1	3.2	3.2	3.3	3.3	3.3	2.5	2.8	3.1	3.3
Real Disposable Income (a)	4.5	2.2	2.2	2.3	4.4	2.5	2.5	2.5	2.8	2.6	2.6	2.6	2.6	2.5	2.2	2.0	2.6	2.9	2.6	2.5
Nominal Personal Income (b)	4.1	4.3	4.5	4.6	4.3	4.7	4.6	4.3	4.5	4.7	4.8	4.8	4.6	4.3	4.2	3.9	4.4	4.5	4.7	4.2
Industrial Production (a)	1.0	5.0	-1.5	7.7	2.5	5.1	3.4	3.7	2.4	4.2	1.2	4.0	2.5	4.7	0.7	0.1	1.6	3.8	3.2	2.8
Capacity Utilization	75.4	76.2	75.8	77.0	77.2	77.8	78.1	78.4	78.5	78.6	78.6	78.8	78.9	79.1	79.0	78.9	76.1	77.9	78.6	79.0
Corporate Profits Before Taxes (b)	3.0	3.6	2.8	3.3	5.9	7.3	8.0	6.2	5.6	1.8	0.5	-0.8	-1.6	-2.2	-2.6	-3.4	3.2	6.9	1.7	-2.4
Corporate Profits After Taxes	6.0	6.2	6.4	7.3	15.1	15.8	17.0	12.5	4.7	1.9	0.3	-1.0	-1.8	-2.4	-2.9	-3.7	6.5	15.1	1.4	-2.7
Federal Budget Balance (c)	-317	4	-143	-225	-375	-7	-168	-321	-396	-63	-270	-337	-416	-63	-283	-364	-666	-775	-1050	-1100
Trade Weighted Dollar Index (d)	94.0	90.5	88.1	87.5	86.3	90.0	90.1	90.5	89.8	88.5	87.3	86.3	84.8	84.0	82.8	81.8	91.1	89.2	87.9	83.3
Nonfarm Payroll Change (e)	177	190	142	221	218	217	190	180	170	170	160	160	150	140	100	90	182	201	165	120
Unemployment Rate	4.7	4.3	4.3	4.1	4.1	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.3	4.4	3.9	3.6	3.3
Housing Starts (f)	1.23	1.17	1.17	1.26	1.32	1.26	1.25	1.33	1.34	1.36	1.36	1.38	1.39	1.40	1.41	1.42	1.20	1.29	1.36	1.41
Light Vehicle Sales (g)	17.1	16.8	17.1	17.6	17.1	17.2	16.9	16.8	16.8	16.7	16.7	16.6	16.6	16.5	16.4	16.3	17.1	17.0	16.7	16.5
Crude Oil - Brent - Front Contract (h)	54.6	50.8	52.2	61.4	66.9	74.6	75.8	82.0	80.0	85.0	88.0	82.0	80.0	74.0	70.0	70.0	54.7	74.9	83.8	73.5
Quarter-End Interest Rates (i)																				
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
3 Month LIBOR	1.15	1.30	1.33	1.69	2.31	2.34	2.40	2.70	2.95	3.15	3.40	3.40	3.40	3.40	3.40	3.15	1.26	2.44	3.23	3.34
Prime Rate	4.00	4.25	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.25	6.25	6.25	6.25	6.00	4.13	5.13	6.06	6.19
Conventional Mortgage Rate	4.20	3.90	3.81	3.94	4.44	4.57	4.63	4.95	5.05	5.15	5.25	5.30	5.30	5.25	5.20	5.15	3.99	4.65	5.19	5.23
3 Month Bill	0.76	1.03	1.06	1.39	1.73	1.93	2.19	2.40	2.65	2.90	3.05	3.10	3.05	3.00	2.95	2.75	0.95	2.06	2.93	2.94
6 Month Bill	0.91	1.14	1.20	1.53	1.93	2.11	2.36	2.60	2.80	2.95	3.10	3.15	3.10	3.05	3.00	2.80	1.07	2.25	3.00	2.99
1 Year Bill	1.03	1.24	1.31	1.76	2.09	2.33	2.59	2.80	3.00	3.05	3.15	3.20	3.15	3.10	3.05	2.90	1.20	2.45	3.10	3.05
2 Year Note	1.27	1.38	1.47	1.89	2.27	2.52	2.81	3.00	3.10	3.15	3.25	3.25	3.20	3.15	3.10	3.00	1.40	2.65	3.19	3.11
5 Year Note	1.93	1.89	1.92	2.20	2.56	2.73	2.94	3.15	3.25	3.35	3.45	3.50	3.45	3.40	3.35	3.25	1.91	2.85	3.39	3.36
10 Year Note	2.40	2.31	2.33	2.40	2.74	2.85	3.05	3.35	3.45	3.55	3.65	3.70	3.70	3.65	3.60	3.55	2.33	3.00	3.59	3.63
30 Year Bond	3.02	2.84	2.86	2.74	2.97	2.98	3.19	3.55	3.65	3.80	3.90	3.95	4.00	4.00	3.95	3.90	2.89	3.17	3.83	3.96

Forecast as of: October 10, 2018

Notes: (a) Compound Annual Growth Rate Quarter-over-Quarter

(b) Year-over-Year Percentage Change

(c) Quarterly Sum - Billions USD; Annual Data Represents Fiscal Yr.

(d) Federal Reserve Major Currency Index, 1973=100 - Quarter End

(e) Average Monthly Change

(f) Millions of Units - Annual Data - Not Seasonally Adjusted

(g) Quarterly Data - Average Monthly SAAR; Annual Data - Actual Total Vehicles Sold

(h) Quarterly Average of Daily Close

(i) Annual Numbers Represent Averages

Source: U.S. Department of Commerce, U.S. Department of Labor, IHS Markit, Federal Reserve Board and Wells Fargo Securities

U.S. Economic Forecast: Change Since Last Monthly Macro Manual (September 12, 2018)

Changes to the Wells Fargo U.S. Economic Forecast

	Actual				Forecast																Actual											
	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	2017	2018	2019	2020	2017	2018	2019	2020	2017	2018	2019	2020
Real Gross Domestic Product (a)	0.00	0.00	0.00	0.00	0.00	-0.07	0.22	-0.06	-0.12	-0.19	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.01	-0.05	-0.01	0.00	0.06	0.06	0.00	0.00	-0.12	-0.10	0.00	0.00	-0.30	-0.23	0.00
Personal Consumption	0.00	0.00	0.00	0.00	0.00	0.03	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.00	0.00	0.06	0.06	0.00	0.00	-0.12	-0.10	0.00	0.00	-0.30	-0.23	0.00
Business Fixed Investment	0.00	0.00	0.00	0.00	0.00	0.18	-1.30	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.12	-0.10	0.00	0.00	-0.12	-0.10	0.00	0.00	-0.12	-0.10	0.00	0.00	-0.30	-0.23	0.00
Equipment	0.00	0.00	0.00	0.00	0.00	0.11	-2.73	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.12	-0.10	0.00	0.00	-0.12	-0.10	0.00	0.00	-0.12	-0.10	0.00	0.00	-0.30	-0.23	0.00
Intellectual Property Products Structures	0.00	0.00	0.00	0.00	0.00	-0.52	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.12	-0.10	0.00	0.00	-0.12	-0.10	0.00	0.00	-0.12	-0.10	0.00	0.00	-0.30	-0.23	0.00
Residential Construction	0.00	0.00	0.00	0.00	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.08	0.00	0.00	0.24	0.08	0.00	0.00	0.24	0.08	0.00	0.00	0.24	0.08	0.00
Government Purchases	0.00	0.00	0.00	0.00	0.00	0.30	-1.50	-1.50	-1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.22	-0.70	0.00	0.00	-0.22	-0.70	0.00	0.00	-0.22	-0.70	0.00	0.00	-0.22	-0.70	0.00
Net Exports	0.0	0.0	0.0	0.0	0.0	0.16	-0.17	0.18	0.19	0.19	0.20	0.20	0.00	0.00	0.00	0.00	0.00	0.02	0.14	0.07	0.00	0.02	0.14	0.07	0.00	0.02	0.14	0.07	0.00	0.02	0.14	0.07
Pct. Point Contribution to GDP	0.00	0.00	0.00	0.00	0.00	2.8	-16.6	-16.9	-17.1	-17.4	-17.6	-17.9	-18.1	-18.4	-18.6	-18.9	0.0	-7.7	-17.5	-18.5	0.0	-7.7	-17.5	-18.5	0.0	-7.7	-17.5	-18.5	0.0	-7.7	-17.5	-18.5
Inventory Change	0.00	0.00	0.00	0.00	0.00	0.05	-0.41	0.00	0.00	-0.01	-0.01	-0.01	0.00	-0.01	-0.01	-0.01	0.00	-0.04	-0.05	-0.01	0.00	-0.04	-0.05	-0.01	0.00	-0.04	-0.05	-0.01	0.00	-0.04	-0.05	-0.01
Pct. Point Contribution to GDP	0.00	0.00	0.00	0.00	0.00	-9.88	18.00	15.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.78	2.50	0.00	0.00	5.78	2.50	0.00	0.00	5.78	2.50	0.00	0.00	5.78	2.50	0.00
Nominal GDP	0.00	0.00	0.00	0.00	0.00	-0.20	0.61	-0.06	-0.11	-0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	-0.02	-0.01	0.00	0.03	-0.02	-0.01	0.00	0.03	-0.02	-0.01	0.00	0.03	-0.02	-0.01
Real Final Sales	0.00	0.00	0.00	0.00	0.00	0.02	-0.06	-0.22	-0.22	-0.23	-0.14	0.00	0.00	0.00	0.00	0.00	0.00	-0.07	-0.15	0.00	0.00	-0.07	-0.15	0.00	0.00	-0.07	-0.15	0.00	0.00	-0.07	-0.15	0.00
Retail Sales (b)	0.00	0.00	-0.01	0.00	0.00	0.00	0.11	0.42	0.41	-0.27	0.10	0.10	0.21	0.12	0.42	-0.22	0.00	0.04	0.16	0.13	0.00	0.04	0.16	0.13	0.00	0.04	0.16	0.13	0.00	0.04	0.16	0.13
Inflation Indicators (b)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.11	0.24	0.20	0.24	0.14	0.07	0.12	0.20	0.13	0.00	0.03	0.21	0.13	0.00	0.03	0.21	0.13	0.00	0.03	0.21	0.13	0.00	0.03	0.21	0.13
PCE Deflator	0.00	0.00	0.00	0.00	0.00	0.03	-0.04	0.00	0.10	0.07	0.13	0.12	0.01	0.00	0.01	-0.03	0.00	0.00	0.11	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.11	0.00
"Core" PCE Deflator	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.26	0.39	0.37	0.34	0.16	0.08	0.20	0.23	0.20	0.00	0.08	0.32	0.18	0.00	0.08	0.32	0.18	0.00	0.08	0.32	0.18	0.00	0.08	0.32	0.18
Consumer Price Index	0.00	0.00	0.00	0.00	0.00	0.00	-0.05	-0.02	0.12	0.18	0.23	0.20	0.05	0.00	0.00	0.00	0.00	-0.02	0.18	0.01	0.00	-0.02	0.18	0.01	0.00	-0.02	0.18	0.01	0.00	-0.02	0.18	0.01
"Core" Consumer Price Index	0.00	0.00	0.00	0.00	0.00	0.00	-0.17	0.04	0.23	0.26	0.43	0.22	0.10	0.11	0.11	0.11	0.00	-0.03	0.29	0.11	0.00	-0.03	0.29	0.11	0.00	-0.03	0.29	0.11	0.00	-0.03	0.29	0.11
Producer Price Index (Final Demand)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Employment Cost Index	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.07	0.00	0.00	0.00	-0.07	0.00	0.00	0.00	-0.07	0.00	0.00	0.00	-0.07	0.00	0.00
Real Disposable Income (a)	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.06	0.06	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.00	0.03	0.03	0.00	0.00	0.03	0.03	0.00	0.00	0.03	0.03	0.00
Nominal Personal Income (b)	0.00	0.00	0.00	0.00	0.00	-0.85	0.44	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.08	0.07	0.00	0.00	-0.08	0.07	0.00	0.00	-0.08	0.07	0.00	0.00	-0.08	0.07	0.00
Industrial Production (a)	0.00	0.00	0.00	0.00	0.00	-0.16	-0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.07	0.00	0.00	0.00	-0.07	0.00	0.00	0.00	-0.07	0.00	0.00	0.00	-0.07	0.00	0.00
Capacity Utilization	0.00	0.00	0.00	0.00	0.00	-0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.09	0.00	0.00	0.00	-0.09	0.00	0.00	0.00	-0.09	0.00	0.00	0.00	-0.09	0.00	0.00
Corporate Profits Before Taxes (b)	0.00	0.00	0.00	0.00	0.00	-0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.07	0.00	0.00	0.00	-0.07	0.00	0.00	0.00	-0.07	0.00	0.00	0.00	-0.07	0.00	0.00
Corporate Profits After Taxes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Federal Budget Balance (c)	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	-0.25	-0.50	-0.50	0.00	-1.00	0.50	0.75	1.75	0.00	0.03	-0.31	0.50	0.00	0.03	-0.31	0.50	0.00	0.03	-0.31	0.50	0.00	0.03	-0.31	0.50
Trade Weighted Dollar Index (d)	0.00	0.00	0.00	0.00	0.00	0.00	10.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.58	0.00	0.00	0.00	2.58	0.00	0.00	0.00	2.58	0.00	0.00	0.00	2.58	0.00	0.00
Nonfarm Payroll Change (e)	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00
Unemployment Rate	0.00	0.00	0.00	0.00	0.00	0.01	-0.02	0.00	0.00	-0.01	-0.03	-0.04	-0.03	-0.03	-0.02	0.00	0.00	-0.01	-0.02	-0.02	0.00	-0.01	-0.02	-0.02	0.00	-0.01	-0.02	-0.02	0.00	-0.01	-0.02	-0.02
Housing Starts (f)	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.04	0.00	0.00
Light Vehicle Sales (g)	0.00	0.00	0.00	0.00	0.00	0.00	0.83	10.00	5.00	5.00	3.00	2.00	4.00	3.00	0.00	5.00	0.00	2.71	3.75	3.00	0.00	2.71	3.75	3.00	0.00	2.71	3.75	3.00	0.00	2.71	3.75	3.00
Crude Oil - Brent - Front Contract (h)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.01	0.00	0.05	0.09	0.01	0.00	0.05	0.09	0.01	0.00	0.05	0.09	0.01
Quarter-End Interest Rates (i)	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.15	0.10	0.10	0.10	0.10	0.15	0.10	0.10	0.10	0.00	0.04	0.10	0.11	0.00	0.04	0.10	0.11	0.00	0.04	0.10	0.11	0.00	0.04	0.10	0.11
Federal Funds Target Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01
3 Month LIBOR	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.10	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.04	0.05	0.05	0.00	0.04	0.05	0.05	0.00	0.04	0.05	0.05	0.00	0.04	0.05	0.05
Prime Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.10	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.05	0.06	0.06	0.00											

International Outlook

Wells Fargo International Economic Forecast

(Year-over-Year Percent Change)

	GDP			CPI		
	2018	2019	2020	2018	2019	2020
Global (PPP Weights)	3.8%	3.7%	3.4%	3.6%	3.8%	3.7%
Advanced Economies ¹	2.5%	2.5%	2.0%	2.2%	2.4%	2.4%
United States	2.9%	2.8%	2.2%	2.5%	2.8%	2.6%
Eurozone	2.0%	2.1%	1.7%	1.8%	1.9%	1.8%
United Kingdom	1.2%	1.5%	1.5%	2.4%	2.1%	2.0%
Japan	1.2%	1.2%	0.5%	1.0%	1.2%	2.0%
Canada	2.2%	2.2%	1.7%	2.5%	2.2%	2.0%
Developing Economies ¹	4.7%	4.6%	4.5%	4.5%	4.8%	4.7%
China	6.6%	6.3%	6.1%	2.1%	2.3%	2.3%
India	7.7%	7.5%	7.3%	4.9%	5.1%	4.8%
Mexico	2.0%	2.4%	2.3%	4.8%	4.0%	3.7%

Forecast as of: October 10, 2018

¹Aggregated Using PPP Weights

Wells Fargo International Interest Rate Forecast

(End of Quarter Rates)

	3-Month LIBOR						10-Year Bond					
	2018		2019			2020	2018		2019			2020
	Q4	Q1	Q2	Q3	Q4	Q1	Q4	Q1	Q2	Q3	Q4	Q1
U.S.	2.70%	2.95%	3.15%	3.40%	3.40%	3.40%	3.35%	3.45%	3.55%	3.65%	3.70%	3.70%
Japan	-0.01%	0.00%	0.00%	0.00%	0.01%	0.01%	0.18%	0.20%	0.24%	0.27%	0.30%	0.30%
Euroland ¹	-0.35%	-0.30%	-0.25%	-0.15%	0.05%	0.30%	0.65%	0.80%	0.95%	1.05%	1.15%	1.25%
U.K.	0.80%	0.85%	0.95%	1.05%	1.10%	1.10%	1.70%	1.80%	1.85%	2.00%	2.10%	2.15%
Canada ²	2.15%	2.40%	2.65%	2.90%	2.85%	2.85%	2.70%	2.80%	2.90%	3.00%	3.05%	3.05%

Forecast as of: October 10, 2018

¹ 10-year German Government Bond Yield ² 3-Month Canada Bankers' Acceptances

Source: International Monetary Fund and Wells Fargo Securities

International Forecast: Change Since Last Monthly Macro Manual (September 12, 2018)

Changes to the Wells Fargo International Economic Forecast

	GDP			CPI		
	2018	2019	2020	2018	2019	2020
Global (PPP Weights)	-0.01%	-0.02%	0.01%	0.03%	0.07%	0.02%
Advanced Economies ¹	-0.03%	0.02%	0.00%	0.01%	0.15%	0.04%
United States	-0.01%	0.00%	0.00%	0.03%	0.34%	0.12%
Eurozone	-0.05%	0.03%	0.03%	0.00%	0.00%	-0.03%
United Kingdom	-0.12%	0.04%	0.00%	0.00%	0.00%	0.00%
Japan	0.00%	0.04%	-0.14%	0.00%	0.00%	0.00%
Canada	0.10%	0.13%	0.09%	0.00%	-0.10%	-0.08%
Developing Economies ¹	-0.01%	-0.05%	0.01%	0.05%	0.01%	0.00%
China	0.00%	-0.05%	0.00%	0.00%	0.00%	0.00%
India ²	0.08%	0.04%	0.12%	0.26%	0.07%	0.00%
Mexico	-0.03%	-0.17%	-0.10%	0.00%	0.00%	0.00%

Forecast as of: October 10, 2018

¹Aggregated Using PPP Weights

Changes to the Wells Fargo International Interest Rate Forecast

(End of Quarter Rates)

	3-Month LIBOR					10-Year Bond				
	2018	2019				2018	2019			
	Q4	Q1	Q2	Q3	Q4	Q4	Q1	Q2	Q3	Q4
U.S.	0.00%	0.00%	0.00%	0.00%	0.00%	0.15%	0.10%	0.10%	0.10%	0.10%
Japan	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.02%	0.03%	0.05%
Euroland ¹	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	0.05%	0.05%	0.05%	0.05%
U.K.	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	0.20%	0.15%	0.10%	0.10%
Canada ²	-0.05%	0.15%	0.25%	0.40%	0.20%	0.30%	0.30%	0.30%	0.30%	0.30%

Forecast as of: October 10, 2018

¹ 10-year German Government Bond Yield ² 3-Month Canada Bankers' Acceptances

Source: International Monetary Fund and Wells Fargo Securities

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Economics Group

MONTHLY OUTLOOK

U.S. Overview

Solid Growth Despite Being Late in Economic Cycle

The general theme of a U.S. economy growing above potential in the near term before gradually losing momentum remains more or less intact. The incoming data over the past month have been broadly positive, though admittedly sometimes a mixed bag, and we have updated our forecast accordingly.

Our full-year GDP growth numbers for this year, 2019 and 2020 are unchanged at 2.9%, 2.8% and 2.2% respectively. Our forecast for third quarter GDP growth benefited from a slight upward revision. We now expect the economy grew at a 3.3% annualized rate in the period, up from just 3.1% in our September forecast. Some of the faster Q3 growth is “borrowed” from the current quarter, and we have pared our estimate for Q4 by just a tenth of a percentage point to 2.7%.

Real personal consumption is shaping up a bit stronger than we had anticipated previously and the indicators in this sector have been broadly positive. Retail sales for August came in a bit weaker than expected, but upward revisions to prior data indicated that retailers were having a good year ahead of the key holiday shopping season.

Consumer confidence is firming as well; though the measures of just how well the consumer is faring vary slightly between the two bellwether measures. Michigan consumer sentiment rose to a six-month high, but the Conference Board’s consumer confidence index rose to a new cycle high of 138.4. The last time this measure of consumer confidence was as high as it is today was in the year 2000. A number of financial and economic indicators from that era are similar to where they are today.

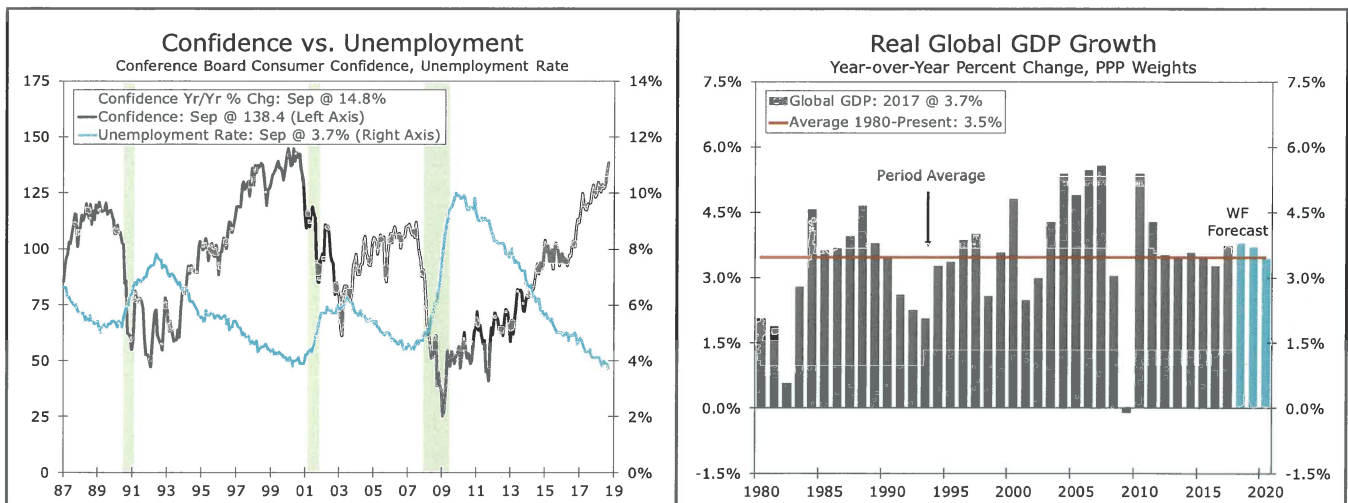
International Overview

Global Growth Stirs Beneath a Calmer Surface

The global economy maintained a steady and solid pace during the first half of 2018, with Q2 GDP growth for the G20 economies at 3.9% year-over-year, near the fastest rate of growth since mid-2011. Still, this relative calmness on the surface masks some areas of instability among the details. U.S. growth has been particularly strong this year, boosted by fiscal stimulus, but growth for the other G7 economies has slowed noticeably. There is also a similar split among the emerging economies, with areas of both strength and weakness.

There are some important downside risks that could lead to a faster global slowdown. Trade tensions between the U.S. and China have continued to escalate, although the latest data for July (which captures the early rounds of tariffs) shows a still-respectable pace of export volume growth. Meanwhile, there are hints of stronger wage growth starting to emerge from some of the major economies. Were that to lead to a more rapid removal of monetary policy accommodation than we currently expect, that could unsettle markets and hurt global economic growth.

There are some reasons for optimism as well. The recently announced trade agreement between the U.S., Canada and Mexico has perhaps eased trade tensions at the margin, and boosted our outlook for the Canadian economy. Meanwhile, with only moderate financial headwinds and as Brexit uncertainty lessens, we expect Eurozone and U.K. growth will firm going forward. Our overall global GDP growth forecasts are unchanged from last month—we see a modest slowing to 3.7% in 2019 and 3.4% in 2020.



Source: The Conference Board, U.S. Department of Labor, International Monetary Fund and Wells Fargo Securities

Together we'll go far



Consumer Spending Stronger...at Least for Now

The stock market was soaring to all-time record highs, the unemployment rate was below 4% and the economy was in its 10th year of uninterrupted expansion. Then, as now, there were few people seeing an end in sight.

For now, the surge in consumer dynamics cannot be denied and we would be foolish to bet against the consumer with such a solid backdrop. But there are some things that are different from 2000. The bottom chart plots consumer confidence alongside both retail sales (ex-autos) and real income growth on a per-capita basis.

Here we see something that Fed policymakers have been wringing their hands over throughout this cycle, which is: if the labor market is so hot, how come income growth is so tepid? That slower income growth tempers our enthusiasm for the ability of consumer spending to sustain growth indefinitely. Personal income grew just 0.3% in August, which was shy of the 0.4% growth that had been expected and the jobs report revealed that despite the lowest jobless rate since the 1960s, average hourly earnings are still growing at less than 3% on a year-over-year basis. As the benefit of tax cuts begins to fade, and without a significant pick-up in earnings, we have limited expectations for the long-term sustainability of spending growth. In the meantime, we expect slightly faster consumer spending in the third quarter at the expense of fourth quarter consumer spending, which we have pared slightly.

Trade Giveth and Trade Taketh Away

We had already expected trade to go from being a help (as it was in Q2) to a hindrance (as we expect it to be in Q3). Net exports added 1.2 percentage points to the blockbuster headline GDP print of 4.2%. It appears that at least some of the pick-up in exports during the second quarter was an attempt by some businesses to get merchandise out the door ahead of the expected retaliatory tariffs. The higher frequency data confirm that some of these vulnerable categories, particularly soybeans,

are already retrenching. We expect trade to be a 1.6 percentage point drag on headline GDP in the third quarter.

Inventories to the Rescue

That might ordinarily be enough to derail the headline growth rate, but despite the big drag from trade we still have a 3-handle for third quarter GDP, thanks to a boost from inventories.

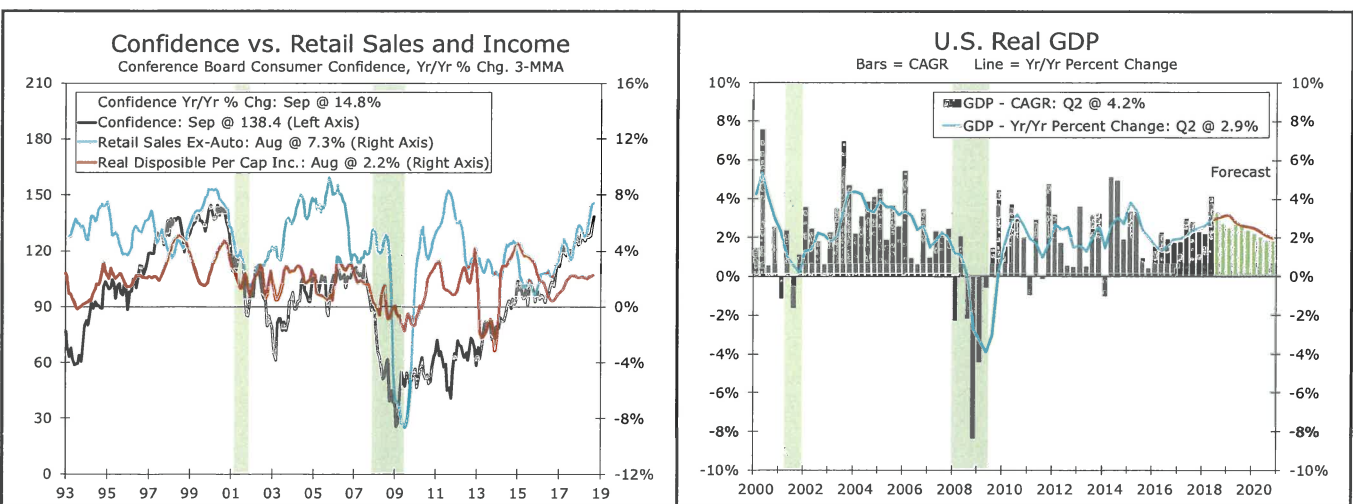
After a big inventory drawdown in the second quarter, even a modest build in the third quarter can translate into a big contribution to headline GDP. The average quarterly change in inventories in this cycle is about \$60 billion. We are penciling in a number of closer to \$50 billion, but even that would result in a nearly 2 percentage point boost to the headline number.

Big Picture: Expansion Intact, No Change in Fed Call

If the economy is still in expansion by next summer, this expansion will break the record for the longest uninterrupted expansion on record. Not only do we not have a recession, we have above-trend growth. Our expectation at this point is that with the job market remaining white hot and inflation cresting above the Fed's 2.0% target, policymakers will continue to raise the fed funds rate a quarter of a point in each of the next four quarters.

If that proves accurate, that would put the fed funds rate at 3.25% by this time next year. We forecast that GDP growth will generally remain solid in coming quarters, but that it will slow somewhat from its current above-potential pace as fiscal stimulus fades and as monetary tightening exerts some headwinds on the economy (bottom right chart).

Looking into 2020, we believe that growth will slow enough to lead the Fed to reverse itself by cutting rates 25 bps at the end of 2020. That is admittedly pretty far out into the forecast horizon and there is a lot that could change. But by that point the current expansion would have exceeded the record for longest duration by about a year and a half, so a circumspect Fed at that stage would not be unusual. In the meantime, the FOMC will continue to hike rates at a gradual pace.



Source: The Conference Board, U.S. Department of Commerce and Wells Fargo Securities

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				
Real Gross Domestic Product (a)	1.8	3.0	2.8	2.3	2.2	4.2	3.3	2.7	2.5	2.7	2.6	2.4	2.2	2.0	1.9	1.8	2.2	2.9	2.8	2.2
Personal Consumption	1.8	2.9	2.2	3.9	0.5	3.8	3.4	2.8	2.2	2.9	2.6	2.5	2.1	2.2	1.8	1.7	2.5	2.6	2.8	2.2
Business Fixed Investment	9.6	7.3	3.4	4.8	11.5	8.7	5.5	5.4	4.7	4.9	4.4	4.0	3.7	3.6	2.9	2.8	5.3	7.3	5.1	3.7
Equipment	9.1	9.7	9.8	9.9	8.5	4.6	4.1	4.8	3.8	4.2	3.7	3.1	2.7	2.6	2.1	2.0	6.1	7.4	4.1	2.8
Intellectual Property Products	8.0	6.6	1.7	0.7	14.1	10.5	7.1	5.2	4.8	5.3	4.7	4.6	4.7	4.6	3.7	3.6	4.6	7.4	5.6	4.5
Structures	12.8	3.8	-5.7	1.3	13.9	14.5	7.0	7.0	6.5	6.0	5.5	5.0	4.5	4.0	3.5	3.5	4.6	7.1	6.8	4.5
Residential Construction	11.1	-5.5	-0.5	11.1	-3.4	-1.3	0.5	2.5	4.5	5.0	4.5	4.0	3.5	3.0	2.5	2.0	3.3	3.0	3.3	3.5
Government Purchases	-0.8	0.0	-1.0	2.4	1.5	2.5	3.2	3.1	2.4	1.6	1.0	0.8	0.7	0.5	0.3	0.1	-0.1	1.8	2.2	0.7
Net Exports	-845.5	-844.1	-845.9	-899.2	-902.4	-841.0	-916.6	-945.8	-960.3	-982.8	-997.6	-1008.1	-1009.5	-1019.1	-1016.5	-1010.6	-858.7	-901.4	-987.2	-1013.9
Pct. Point Contribution to GDP	-0.1	0.1	0.0	-0.9	0.0	1.2	-1.6	-0.6	-0.3	-0.5	-0.3	-0.2	0.0	-0.2	0.1	0.1	-0.4	-0.2	-0.5	-0.1
Inventory Change	-2.4	11.9	64.4	16.1	30.3	-36.8	48.0	50.0	51.0	52.0	57.0	56.0	56.0	55.0	55.0	55.0	22.5	22.9	54.0	55.3
Pct. Point Contribution to GDP	-0.8	0.2	1.0	-0.9	0.3	-1.2	1.8	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Nominal GDP (a)	3.9	4.2	4.8	5.1	4.3	7.6	4.7	5.5	5.7	5.2	5.3	4.9	4.6	4.4	4.4	4.2	4.2	5.2	5.4	4.7
Real Final Sales	2.6	2.8	1.8	3.2	1.9	5.4	2.2	2.7	2.5	2.7	2.5	2.4	2.2	2.0	1.9	1.8	2.2	2.9	2.7	2.2
Retail Sales (b)	4.9	4.1	4.2	5.6	4.5	5.7	6.1	4.9	5.4	4.8	4.4	4.3	4.5	4.4	4.4	3.7	4.7	5.3	4.8	4.2
Inflation Indicators (b)																				
PCE Deflator	2.0	1.6	1.6	1.8	1.9	2.2	2.2	2.2	2.4	2.5	2.7	2.6	2.5	2.4	2.4	2.4	1.8	2.1	2.5	2.4
Core PCE Deflator	1.8	1.6	1.5	1.6	1.7	1.9	2.0	2.0	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.1	1.6	1.9	2.2	2.2
Consumer Price Index	2.6	1.9	2.0	2.1	2.3	2.6	2.7	2.6	2.6	2.8	3.0	2.9	2.7	2.7	2.5	2.5	2.1	2.5	2.8	2.6
Core Consumer Price Index	2.1	1.8	1.7	1.7	1.9	2.2	2.3	2.3	2.4	2.6	2.7	2.7	2.5	2.3	2.4	2.4	1.8	2.2	2.6	2.4
Producer Price Index (Final Demand)	2.0	2.2	2.4	2.8	2.8	3.0	2.9	2.7	2.8	2.8	3.1	3.1	2.9	2.9	2.7	2.6	2.3	2.9	2.9	2.8
Employment Cost Index	2.4	2.4	2.5	2.6	2.7	2.8	2.8	2.9	2.9	3.0	3.1	3.2	3.2	3.3	3.3	3.3	2.5	2.8	3.1	3.3
Real Disposable Income (a)	4.5	2.2	2.2	2.3	4.4	2.5	2.5	2.5	2.8	2.6	2.6	2.6	2.6	2.5	2.2	2.0	2.6	2.9	2.6	2.5
Nominal Personal Income (b)	4.1	4.3	4.5	4.6	4.3	4.7	4.6	4.3	4.5	4.7	4.8	4.8	4.6	4.3	4.2	3.9	4.4	4.5	4.7	4.2
Industrial Production (a)	1.0	5.0	-1.5	7.7	2.5	5.1	3.4	3.7	2.4	4.2	1.2	4.0	2.5	4.7	0.7	0.1	1.6	3.8	3.2	2.8
Capacity Utilization	75.4	76.2	75.8	77.0	77.2	77.8	78.1	78.4	78.5	78.6	78.6	78.8	78.9	79.1	79.0	78.9	76.1	77.9	78.6	79.0
Corporate Profits Before Taxes (b)	3.0	3.6	2.8	3.3	5.9	7.3	8.0	6.2	5.6	1.8	0.5	-0.8	-1.6	-2.2	-2.6	-3.4	3.2	6.9	1.7	-2.4
Corporate Profits After Taxes	6.0	6.2	6.4	7.3	15.1	15.8	17.0	12.5	4.7	1.9	0.3	-1.0	-1.8	-2.4	-2.9	-3.7	6.5	15.1	1.4	-2.7
Federal Budget Balance (c)	-317	4	-143	-225	-375	-7	-168	-321	-396	-63	-270	-337	-416	-63	-283	-364	-666	-775	-1050	-1100
Trade Weighted Dollar Index (d)	94.0	90.5	88.1	87.5	86.3	90.0	90.1	90.5	89.8	88.5	87.3	86.3	84.8	84.0	82.8	81.8	91.1	89.2	87.9	83.3
Nonfarm Payroll Change (e)	177	190	142	221	218	217	190	180	170	170	160	160	150	140	100	90	182	201	165	120
Unemployment Rate	4.7	4.3	4.3	4.1	4.1	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.3	4.4	3.9	3.6	3.3
Housing Starts (f)	1.23	1.17	1.17	1.26	1.32	1.26	1.25	1.33	1.34	1.36	1.36	1.38	1.39	1.40	1.41	1.42	1.20	1.29	1.36	1.41
Light Vehicle Sales (g)	17.1	16.8	17.1	17.6	17.1	17.2	16.9	16.8	16.8	16.7	16.7	16.6	16.6	16.5	16.4	16.3	17.1	17.0	16.7	16.5
Crude Oil - Brent - Front Contract (h)	54.6	50.8	52.1	61.4	66.9	74.6	75.8	82.0	80.0	85.0	88.0	82.0	80.0	74.0	70.0	70.0	54.7	74.9	83.8	73.5
Quarter-End Interest Rates (i)																				
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
3 Month LIBOR	1.15	1.30	1.33	1.69	2.31	2.34	2.40	2.70	2.95	3.15	3.40	3.40	3.40	3.40	3.40	3.15	1.26	2.44	3.23	3.34
Prime Rate	4.00	4.25	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.25	6.25	6.25	6.25	6.00	4.13	5.13	6.06	6.19
Conventional Mortgage Rate	4.20	3.90	3.81	3.94	4.44	4.57	4.63	4.95	5.05	5.15	5.25	5.30	5.30	5.25	5.20	5.15	3.99	4.55	5.19	5.23
3 Month Bill	0.76	1.03	1.06	1.39	1.73	1.93	2.19	2.40	2.65	2.90	3.05	3.10	3.05	3.00	2.95	2.75	0.95	2.06	2.93	2.94
6 Month Bill	0.91	1.14	1.20	1.53	1.93	2.11	2.36	2.60	2.80	2.95	3.10	3.15	3.10	3.05	3.00	2.80	1.07	2.25	3.00	2.99
1 Year Bill	1.03	1.24	1.31	1.76	2.09	2.33	2.59	2.80	3.00	3.05	3.15	3.20	3.15	3.10	3.05	2.90	1.20	2.45	3.10	3.05
2 Year Note	1.27	1.38	1.47	1.89	2.27	2.52	2.81	3.00	3.10	3.15	3.25	3.25	3.20	3.15	3.10	3.00	1.40	2.65	3.19	3.11
5 Year Note	1.93	1.89	1.92	2.20	2.56	2.73	2.94	3.15	3.25	3.35	3.45	3.50	3.45	3.40	3.35	3.25	1.91	2.85	3.39	3.36
10 Year Note	2.40	2.31	2.33	2.40	2.74	2.85	3.05	3.35	3.45	3.55	3.65	3.70	3.70	3.65	3.60	3.55	2.33	3.00	3.59	3.63
30 Year Bond	3.02	2.84	2.86	2.74	2.97	2.98	3.19	3.55	3.65	3.80	3.90	3.95	4.00	4.00	3.95	3.90	2.89	3.17	3.83	3.96

Forecast as of: October 10, 2018
 Notes: (a) Compound Annual Growth Rate Quarter-over-Quarter (b) Millions of Units - Annual Data - Not Seasonally Adjusted
 (c) Year-over-Year Percentage Change (d) Quarterly Data - Average Monthly SAAR; Annual Data - Actual Total Vehicles Sold
 (e) Quarterly Sum - Billions USD; Annual Data Represents Fiscal Yr. (f) Quarterly Average of Daily Close
 (g) Federal Reserve Major Currency Index, 1973=100 - Quarter End (h) Annual Numbers Represent Averages
 (i) Average Monthly Change

Source: Federal Reserve Board, IHS Markit, U.S. Department of Commerce, U.S. Department of Labor and Wells Fargo Securities

Global Growth Stirs Beneath a Calmer Surface

Our outlook for the global economy is little changed from our last update, and we continue to see a slow deceleration in global GDP growth to 3.7% in 2019 and 3.4% in 2020. The global economy maintained steady and solid momentum through the first half of 2018, with Q2 GDP for the G20 economies rising 1.0% quarter over quarter (not annualized), and 3.9% year over year—the latter still near the fastest pace of annual growth since mid-2011. Even areas of significant focus and concern have shown only a modest slowing. Global export volumes rose 3.8% quarter over quarter (not annualized), and 3.9% year over year—the latter still near the fastest pace of annual growth since mid-2011. Even areas of significant focus and concern have shown only a modest slowing. Global export volumes rose 3.8% year-over-year in July, down from the pace seen through much of 2017, but still respectable. The July figures capture the initial round of aluminum and steel tariffs, and the initial tariffs on a wider range of goods between the U.S. and China, although there is likely some lag and admittedly, does not encompass the more recent escalation in U.S./China trade tensions.

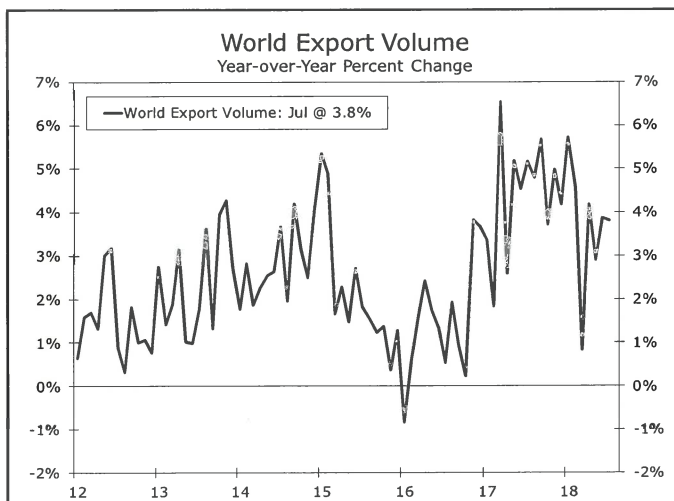
While looking calm and steady on the surface, a closer examination hints at some areas of instability across the global economy. U.S. economic growth has been particularly strong in 2018, boosted by fiscal stimulus, but growth for the other G7 economies has slowed noticeably (see chart at bottom right). A similar dichotomy is apparent among the emerging economies, which have shown areas of strength (India), steadiness (China), and weakness (Argentina). That said, there has not so far been strong evidence of widespread contagion—either economic or financial market—across emerging countries.

With some variation in economic performance, major central banks have also adopted a varied approach to removing monetary policy accommodation. The Federal Reserve continues to lead the way, followed by the Bank of Canada, where we expect one more rate hike in 2018 and three rate hikes in 2019. The European Central Bank and Bank of England are expected to be more cautious, with their initial or next rate hike not seen until well into 2019, due to subdued growth and Brexit uncertainty. Meanwhile, China’s central bank has paused its deleveraging efforts in recent months.

There are some important downside risks that could lead to a faster global slowdown than we currently expect. Should trade tensions between the U.S. and China continue to escalate for an extended period, export volumes could slow noticeably further or perhaps even move into outright contraction, a dynamic that would likely restrain emerging economy performance more broadly. In addition, with some signs of wage growth starting to emerge (including in the U.S., Canada and Eurozone, among others) there remains some risk that major central banks could remove monetary policy accommodation more quickly than currently expected, a risk scenario that could both unsettle markets and hurt economic growth.

There are, however, also some reasons for optimism. The recently announced trade agreement between the U.S., Canada and Mexico has perhaps eased trade tensions at the margin. Moreover, it has led us to increase our GDP growth forecast for Canada, while we also expect Mexican economic growth to remain relatively resilient. In addition, given only moderate financial headwinds we see potential for the Eurozone to emerge from its soft patch early this year, and forecast Eurozone GDP growth of 2.1% in 2019. U.K. economic growth could also improve as Brexit uncertainty lessens, while in China easier liquidity and increased government spending should ensure that economy’s slowdown remains gradual. Taking a balanced approach to the pessimistic and optimistic factors above, our global growth forecast is unchanged from last month, and continues to envisage only a gradual slowdown.

Finally, we see potential for foreign central banks to be more active next year, which could help foreign currencies to strengthen versus the U.S. dollar. In addition to policy moves from Canada, the Eurozone and the U.K., Norway’s central bank recently hiked rates, and Sweden’s central bank is expected to do so by early 2019. The other G10 central banks could be less active. We do not expect significant policy moves from Japan and Switzerland, while little to no change is expected from the Australian and New Zealand central banks in 2019 as well.



Source: IHS Markit, Datastream and Wells Fargo Securities

Wells Fargo International Economic Forecast						
(Year-over-Year Percent Change)						
	GDP			CPI		
	2018	2019	2020	2018	2019	2020
Global (PPP Weights)	3.8%	3.7%	3.4%	3.6%	3.8%	3.7%
Advanced Economies ¹	2.5%	2.5%	2.0%	2.2%	2.4%	2.4%
United States	2.9%	2.8%	2.2%	2.5%	2.8%	2.6%
Eurozone	2.0%	2.1%	1.7%	1.8%	1.9%	1.8%
United Kingdom	1.2%	1.5%	1.5%	2.4%	2.1%	2.0%
Japan	1.2%	1.2%	0.5%	1.0%	1.2%	2.0%
Canada	2.2%	2.2%	1.7%	2.5%	2.2%	2.0%
Developing Economies ¹	4.7%	4.6%	4.5%	4.5%	4.8%	4.7%
China	6.6%	6.3%	6.1%	2.1%	2.3%	2.3%
India	7.7%	7.5%	7.3%	4.9%	5.1%	4.8%
Mexico	2.0%	2.4%	2.3%	4.8%	4.0%	3.7%

Forecast as of: October 10, 2018
¹Aggregated Using PPP Weights

Wells Fargo International Interest Rate Forecast																
(End of Quarter Rates)																
	3-Month LIBOR						10-Year Bond									
	2018		2019				2020		2018		2019				2020	
	Q4	Q1	Q2	Q3	Q4	Q1	Q4	Q1	Q2	Q3	Q4	Q1				
U.S.	2.70%	2.95%	3.15%	3.40%	3.40%	3.40%	3.35%	3.45%	3.55%	3.65%	3.70%	3.70%				
Japan	-0.01%	0.00%	0.00%	0.00%	0.01%	0.01%	0.18%	0.20%	0.24%	0.27%	0.30%	0.30%				
Euroland ¹	-0.35%	-0.30%	-0.25%	-0.15%	0.05%	0.30%	0.65%	0.80%	0.95%	1.05%	1.15%	1.25%				
U.K.	0.80%	0.85%	0.95%	1.05%	1.10%	1.10%	1.70%	1.80%	1.85%	2.00%	2.10%	2.15%				
Canada ²	2.15%	2.40%	2.65%	2.90%	2.85%	2.85%	2.70%	2.80%	2.90%	3.00%	3.05%	3.05%				

Forecast as of: October 10, 2018
¹ 10-year German Government Bond Yield ² 3-Month Canada Bankers' Acceptances

Source: International Monetary Fund and Wells Fargo Securities

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