February 2, 2016

Economics Group

Special Commentary

Sam Bullard, Senior Economist
sam.bullard@wellsfargo.com • (704) 410-3280
Sarah House, Economist
sarah.house@wellsfargo.com • (704) 410-3282
Julianne Causey, Economic Analyst
julianne.causey@wellsfargo.com • (704) 410-3281

Inflation to Support Fed Pause in March

Inflation Chartbook: February 2016

When the FOMC raised interest rates last December, the committee made clear further rate increases would need to be preceded by continued progress on the price-stability side of its dual mandate. Since then, inflation dynamics have shown no clear signs of additional improvement. The further slide in commodity prices has set the return to the Fed's 2 percent target back again, while long-term inflation expectations have edged lower. Recent readings on core inflation have been mixed, with core PCE inflation slowing over Q4 compared to a pickup in core CPI. Both measures, however, have moved up on a year-ago basis. This is not going to be enough, in our view, for the Fed to move ahead with another rate increase in March, particularly as the outlook for growth has deteriorated relative to a few months ago.

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Commodity prices have once again dominated inflation readings in recent months as the rout in energy and industrial metals has resumed. Oil prices hit a 12-year low in mid-January, while prices for industrial metals, including copper and iron ore, hit fresh cycle lows. Accordingly, input prices have continued to fall for U.S. producers and have left little impetus for firms to test pricing power. The prices paid component of the ISM manufacturing index has been in contraction territory for 15 consecutive months, while even non-manufacturing firms have reported prices paid falling in three of the past four months.

The further descent in commodity prices have come amid renewed concerns about global demand as growth in China continues to slow. Although growth in China slowed in line with expectations in Q4, markets remain leery that policymakers can navigate a soft landing. Meanwhile, the recessions underway in Brazil and Russia look to be deeper than thought only a few months ago. We anticipate global growth to rise just 3.0 percent in 2016, little better than the 2.9 percent rate likely registered for 2015 and still below its long-term trend.

Figure 1

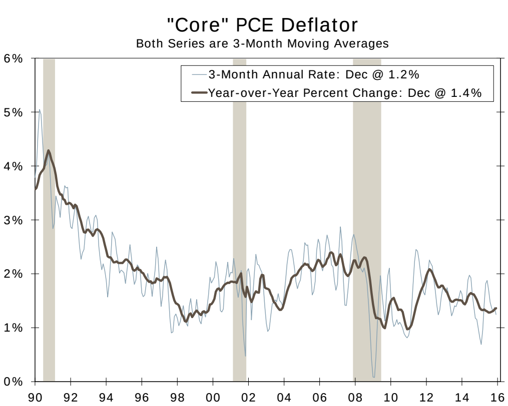
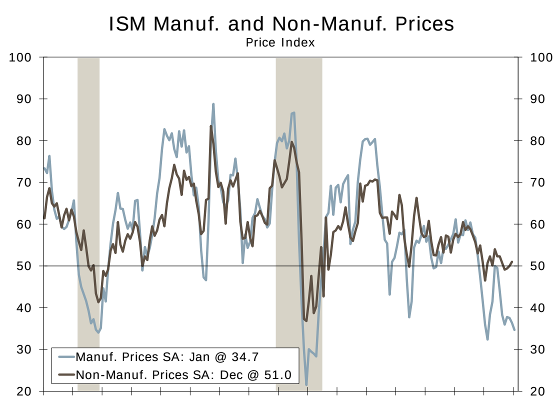


Figure 2



Source: U.S. Department of Commerce, Institute for Supply Management and Wells Fargo Securities, LLC

The ongoing weakness in the global economy has prompted further easing by many of the world's central banks, just as the Fed took its first step in normalizing policy. Even as the Fed's move was largely anticipated, the dollar has proceeded to edge higher. As a result, the deflationary effect of the strong dollar on import prices has continued. That said, the dollar's rate of appreciation has slowed since the summer and is expected to moderate further in the year ahead. The more modest rate of appreciation alongside the slower pace of declines in commodity prices means that inflation is still set to rise in the coming quarter when viewed on a year-ago basis.

Beyond more favorable base effects, gradual firming in core components continues to support underlying inflation. The core CPI index has exhibited the clearest pickup over the past quarter and is up 2.1 percent over the past year. The strength reflects the tight housing market, in terms of rental housing and for-sale inventory, which has led to heavily weighted shelter costs outpacing other components. However, excluding shelter, core inflation has also turned higher.

The pickup is only recently being mirrored in the Fed's preferred measure of core inflation, the PCE deflator. After being stuck at 1.3 percent for nearly the past year, the core PCE deflator has edged up to 1.4 percent year over year in the fourth quarter. The uptick masks the fact that core PCE inflation actually slowed a bit over the quarter. Nevertheless, core PCE inflation still looks mild when compared to the rise in core CPI inflation (even allowing for the fact that CPI runs higher) and alternative measures of core inflation (Figure 3).

Supporting the case for firmer readings on core inflation is further improvement in the labor market. Signs of labor market tightening are broadening in the wage data. Average hourly earnings and wages & salaries for non-incentive paid workers have clearly trended up over the past year (Figure 4). Momentum is expected to continue with the share of small businesses planning to raise compensation now greater than at any point in the past expansion.

As reaffirmed in the Jan. 27 statement, the Fed continues to view the effects of energy and the dollar as transitory. Inflation is still expected to rise in the medium term, helped by further improvement in the labor market. Yet, the lingering low-inflation environment is taking a toll on some measures of long-term inflation expectations. Longer-term TIPS spreads have continued to move down alongside oil, but consumer expectations for inflation 5-10 years out has also edged lower in recent months. The slide in inflation expectations raises the difficulty level in bringing inflation back up to more desirable levels, as the sluggish growth environment drags on.

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In our view, the already cautious Fed will need to see more improvement on the inflation front in light of the renewed concerns about global growth and the ability of the U.S. expansion to withstand the slowdown intact. We expect headline inflation to rebound over the coming quarters as energy prices stabilize, but slow progress in core PCE inflation will leave the Fed on hold in March.

Figure 3

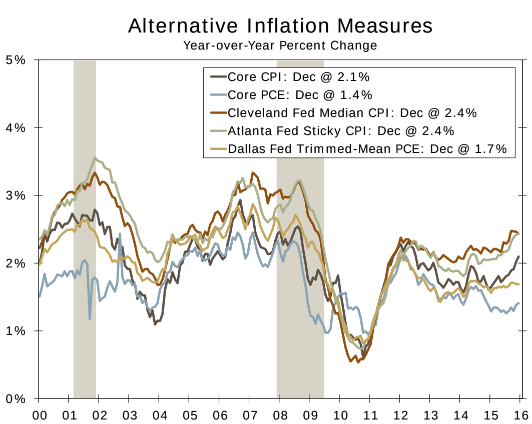
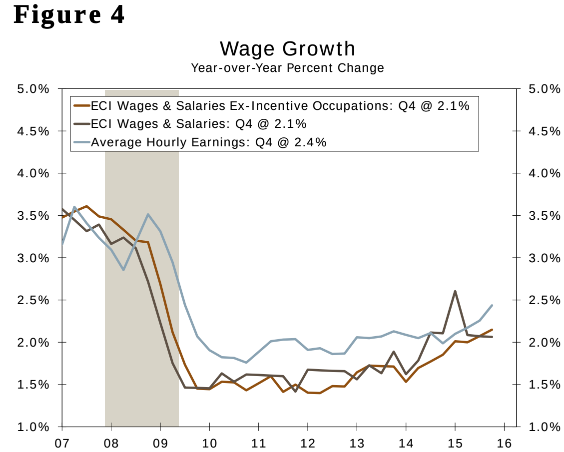


Figure 4



Source: U.S. Dept. of Labor and Commerce, Federal Reserve System and Wells Fargo Securities, LLC

National Economic & Inflation Outlook

	Actual				Forecast								Actual		Forecast	
	2015				2016				2017				2014	2015	2016	2017
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
Real GDP (a)	0.6	3.9	2.0	0.7	1.9	2.5	2.6	2.5	2.2	2.3	2.5	2.3	2.4	2.4	1.9	2.4
Nonfarm Payroll Change (b)	195	231	174	284	195	190	185	180	175	170	165	160	260	221	190	168
Unemployment Rate	5.6	5.4	5.2	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.4	6.2	5.3	4.7	4.5
Capacity Utilization Rate	78.4	77.7	77.9	77.0	77.8	78.4	78.6	78.7	78.5	78.3	78.2	78.3	78.1	77.8	78.4	78.3
CPI (c)	-0.1	0.0	0.1	0.4	1.1	1.0	1.2	1.8	2.4	2.3	2.2	2.1	1.6	0.1	1.3	2.3
Core CPI	1.7	1.8	1.8	2.0	2.1	1.9	2.0	2.0	2.0	2.1	2.1	2.1	1.7	1.8	2.0	2.1
PCE Deflator (c)	0.2	0.3	0.3	0.4	0.9	0.9	1.1	1.6	2.1	2.1	2.0	1.9	1.4	0.3	1.1	2.0
Core PCE	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.5	1.3	1.5	1.7
Employment Cost Index (c)	2.6	2.0	1.9	2.0	1.9	2.3	2.4	2.5	2.6	2.6	2.7	2.8	2.1	2.1	2.3	2.7
PPI Final Demand (c)	-0.5	-0.8	-0.9	-1.2	-0.2	0.0	0.4	1.5	2.3	2.3	2.3	2.2	1.9	-3.3	0.4	2.3
PPI FD Ex. Food & Energy	1.2	1.0	0.8	0.3	0.8	1.2	1.4	2.1	2.2	2.3	2.2	2.2	1.9	2.0	1.4	2.2
Import Price Index (c)	-10.0	-10.0	-11.2	-9.5	-5.8	-6.0	-3.7	-0.9	1.4	1.7	1.9	1.8	-1.1	-10.2	-4.2	1.7
Export Price Index	-5.8	-6.0	-6.9	-6.5	-5.8	-5.6	-3.9	-1.8	0.6	1.2	1.5	1.6	-0.5	-6.3	-4.3	1.2
Trade Weighted Dollar (d)	92.06	89.94	92.26	94.46	93.25	94.75	96.5	97.75	99.0	99.5	99.5	99.0	78.53	91.08	95.6	99.3
Crude Oil (Brent) (e)	55.6	63.9	51.6	45.0	29.0	33.0	41.0	50.0	49.0	53.0	55.0	57.0	99.5	53.9	38.3	53.5
Interest Rates (f)																
Federal Funds Target Rate	0.25	0.25	0.25	0.50	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	0.25	0.27	0.88	1.88
10-Year Treasury Note	1.94	2.35	2.06	2.27	2.31	2.39	2.44	2.50	2.57	2.64	2.71	2.81	2.54	2.14	2.41	2.68

Forecast as of February 2, 2016

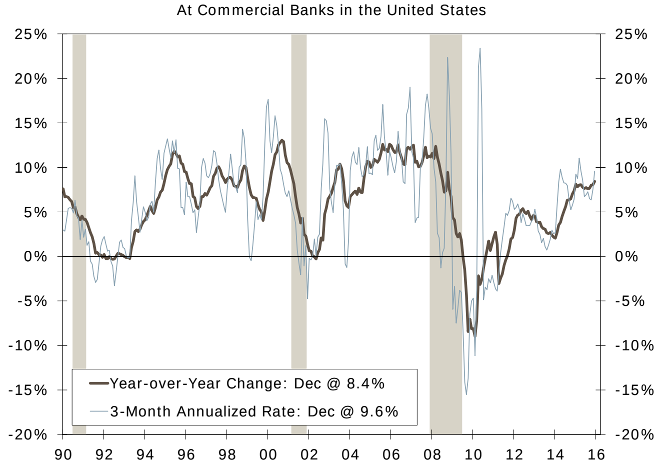
(a) Compound Annual Growth Rate (d) Federal Reserve Major Currency Index, 1973=100, Quarter End
(b) Average Monthly Change (e) Quarterly Average of Daily Close
(c) Year-over-Year Percent Change (f) Quarterly Figures End of Period Close, Annual Figures Period Average

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

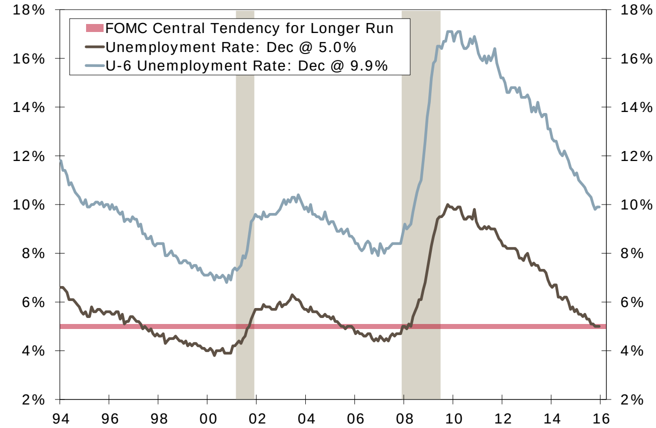
Demand and Slack in the Economy

- Economic growth slowed in Q4, with GDP increasing at an annualized rate of just 0.7 percent. Consumer spending weakened to a 2.2 percent pace, while business fixed investment fell outright and highlighted the demand challenges still facing the energy and manufacturing sectors.
- Labor market figures suggest that conditions in the economy are not deteriorating to the extent of the latest GDP figures. Job gains averaged 284,000 per month, marking the best quarter of the year for hiring.
- Slack continues to decline in the labor market, but the pace of improvement has slowed in recent months. The unemployment rate fell to 5.0 percent in October and held steady for the remainder of the quarter, keeping it within the Fed's estimated range of full employment. Measures of "hidden slack" looked more favorable, with the labor force participation rate unchanged in Q4 and the broader U-6 unemployment rate falling.
- Demand for industrial products faded in the final three months of the year. Industrial production fell at a 3.4 percent annual pace, pulling capacity utilization down to its lowest levels since mid-2013.
- Loan growth continues to exceed broader economic growth and remains supportive of inflation. Banks continue to report higher demand for a broad range of loan categories, including commercial and industrial, consumer and commercial real estate.

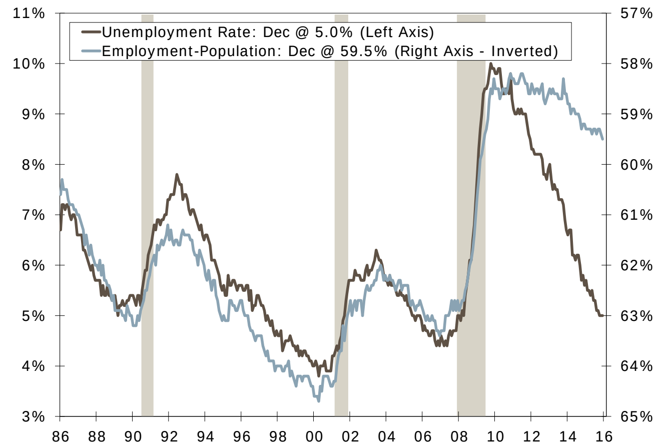
Total Loans
At Commercial Banks in the United States



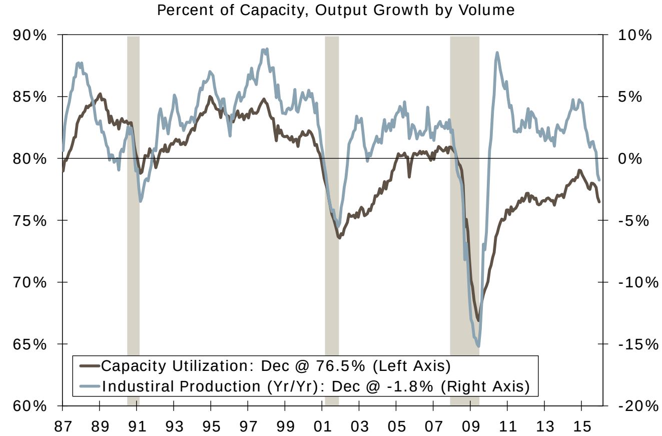
Unemployment Rates
Seasonally Adjusted



Unemployment vs. Employment-Population Ratio
16 Years and Over, Seasonally Adjusted



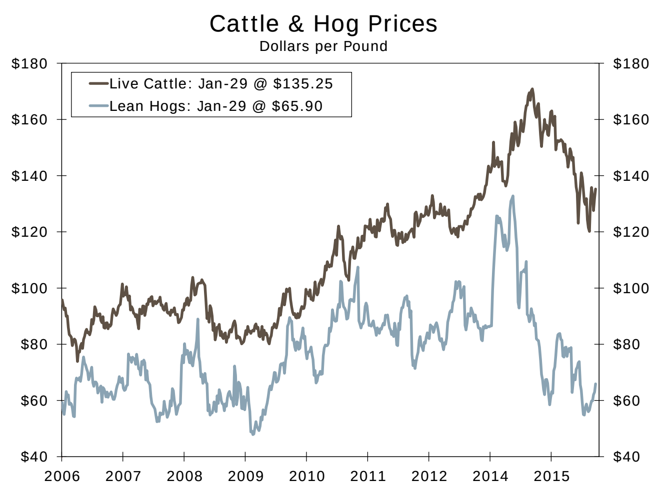
Capacity Utilization vs. Industrial Production
Percent of Capacity, Output Growth by Volume

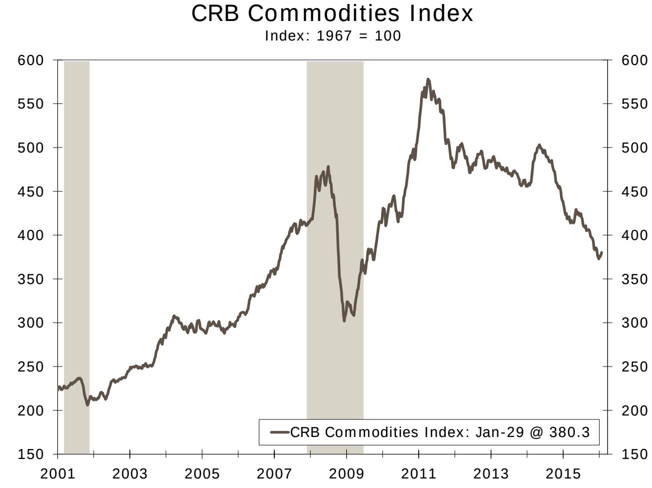


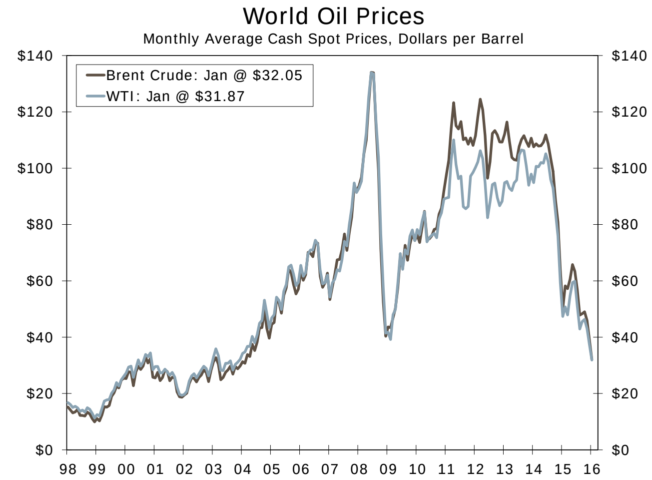
Source: U.S. Depts. of Labor and Comm., Federal Reserve Board and Wells Fargo Securities, LLC

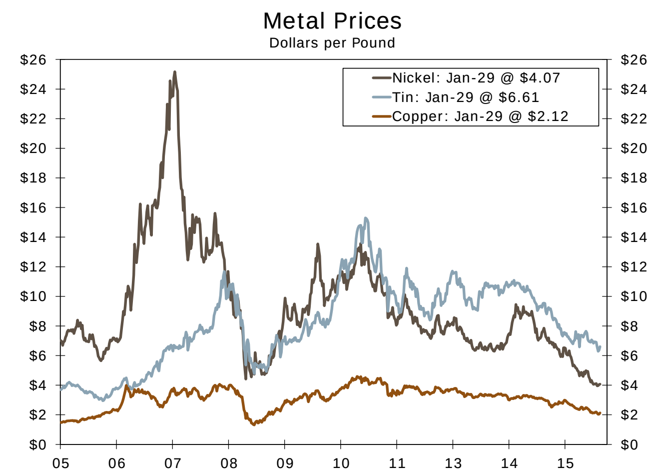
Commodity Prices

- Global demand concerns continue to be the driving force in commodity markets. The CRB commodity index has fallen to the lowest levels since the economy emerged from the last recession, with broad declines in energy and metals components.
- In recent months, energy prices have fallen further, led by crude prices hitting 12-year lows in early January. Although spot prices have since bounce backed a bit, the market has yet to find a definitive bottom. We do not anticipate a meaningful recovery in oil prices until H2 2016 when the market should become more balanced. Crude inventories remain near-record highs, while declining production in North America is being offset by increases in OPEC supply.
- The ongoing reorientation of the Chinese economy away from heavy industry and toward services continues to weigh on metals prices. Prices for copper, iron ore, nickel and aluminum have all moved lower in recent months. Production cuts will help prices to stabilize in the coming quarters, but with growth in China expected to slow further, any recovery will be gradual.
- Compared to energy and industrial metals, prices for agriculture products have been little changed. El Niño weather patterns have thus far had little effect on major crops such as corn, wheat and soybeans. Prices for hogs and cattle have edged up the past few months, but remain about 10 percent below year-ago levels.





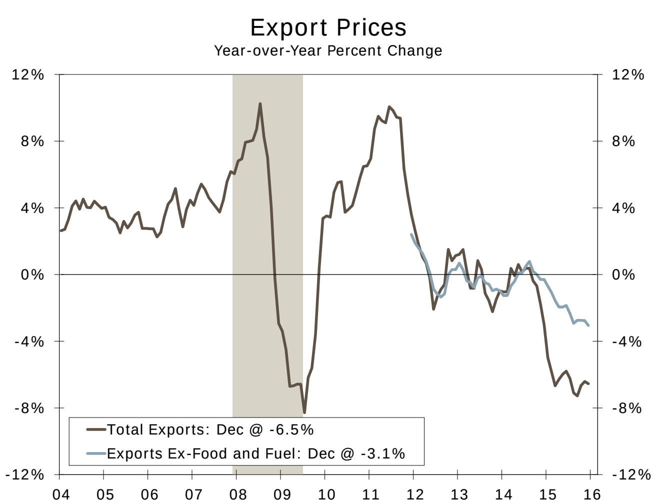


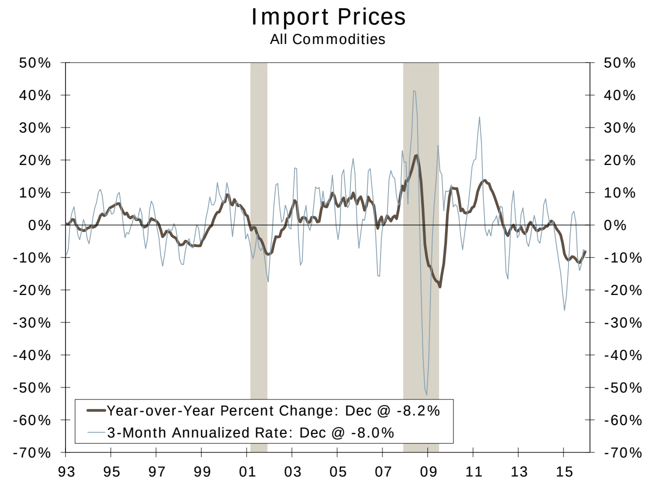


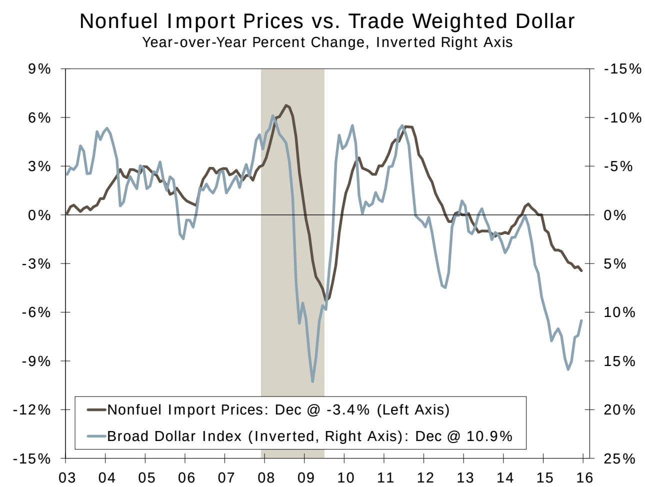
Source: IHS Global Insight, Bloomberg LP and Wells Fargo Securities, LLC

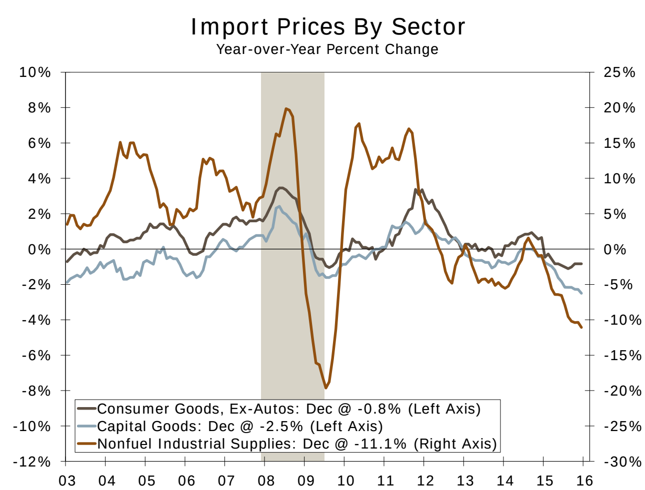
Import and Export Prices

- Another quarter of falling oil prices and a strengthening dollar led to further deflation in import prices. Import prices fell each month of Q4 and ended the year down 8.2 percent on a year-ago basis.
- Weakness was seen in fuel and nonfuel import prices. Nonfuel import prices have not seen a price gain since December 2014, and were down 3.4 percent year over year this past December. Prices for nonfuel industrial supplies led the decline amid nonfuel products this past quarter. The pace of decline, however, has moderated in recent months, with consumer goods (excluding autos), capital goods and automotive vehicles and parts all softer on a year-over-year basis.
- Export prices moved lower over the course of the quarter, as sluggish global growth and continued strength in the dollar have dampened U.S. exporters' pricing power. Falling commodity prices put further pressure on prices for agricultural and fuel-based products, but export prices outside of these items also continued to slide.
- Import and export price inflation is expected to remain soft in 2016. Global growth is expected to rise just 3.0 percent, keeping demand for exports tepid. Import prices will continue to be held down by further strengthening in the dollar. The rate of decline in import and export prices is expected to moderate, however, as oil prices bounce back in H2 and the dollar rises more modestly.





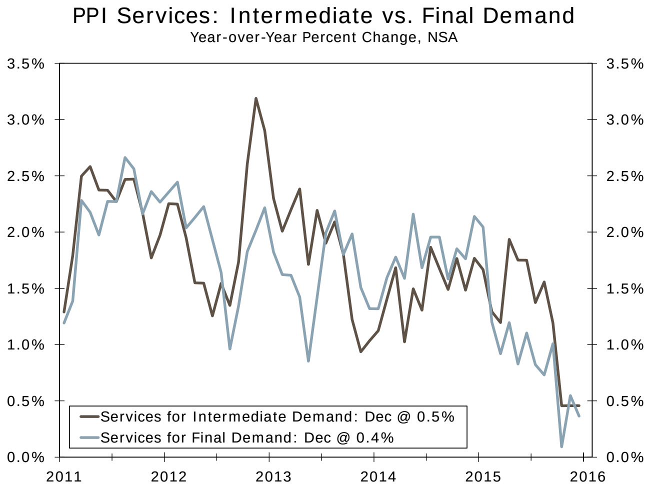


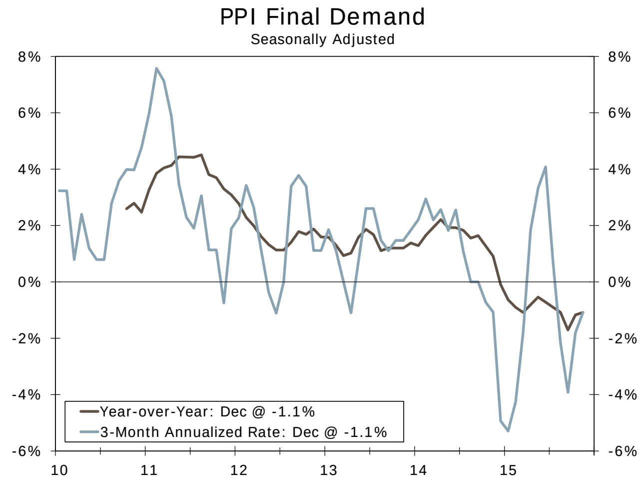


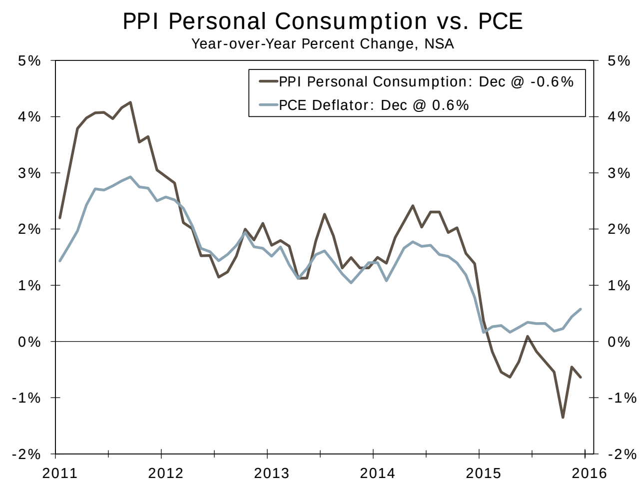
Source: U.S. Department of Labor, Federal Reserve Board and Wells Fargo Securities, LLC

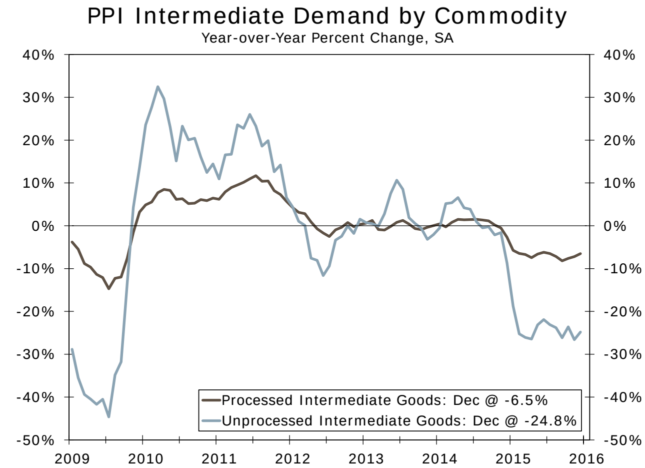
Producer Prices

- Producer prices for goods and services fell more slowly over the course of Q4, but still left the producer price index (PPI) for final demand down 1.1 percent from a year earlier in December. Declining food and commodity prices were the main culprit applying downward pressure on PPI, but the pace has eased somewhat.
- The PPI for personal consumption, which closely traces the PCE deflator was down 1.4 percent on a three-month annualized basis in December and down 0.7 percent on a year-ago basis. The weakness offers further evidence that consumer inflation continues to run well below the Fed's desired levels.
- Food prices softened further in Q4 as prices for chicken, eggs, beef and veal and dairy products tumbled. Year over year, PPI final demand for food was down 5.2 percent.
- Trades services, which are based on margins, had a lackluster quarter, only increasing at a 0.4 percent annualized rate the three months ending in December. Removing food, energy and trade services, our preferred measure of core produce price inflation, rose at a 0.4 percent annualized rate in Q4.
- Further back in the production pipeline, prices for processed and unprocessed intermediate goods continued to fall. The decline offers some support to margins but suggests little need for businesses' to raise final selling prices.





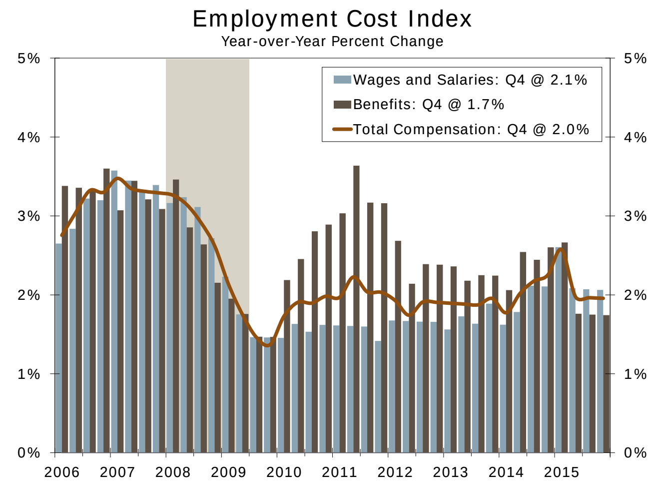


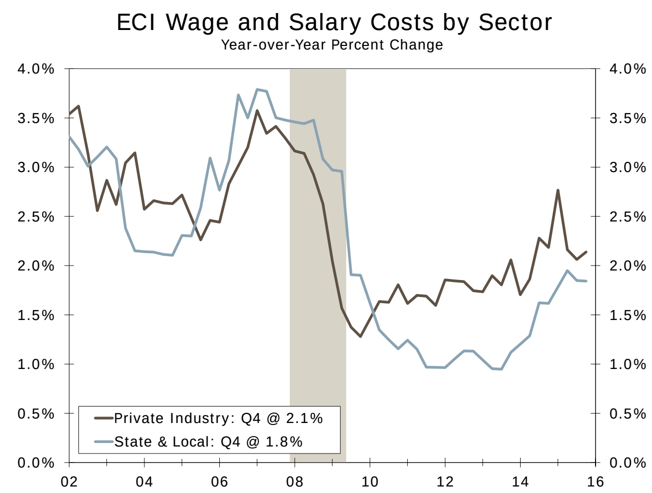


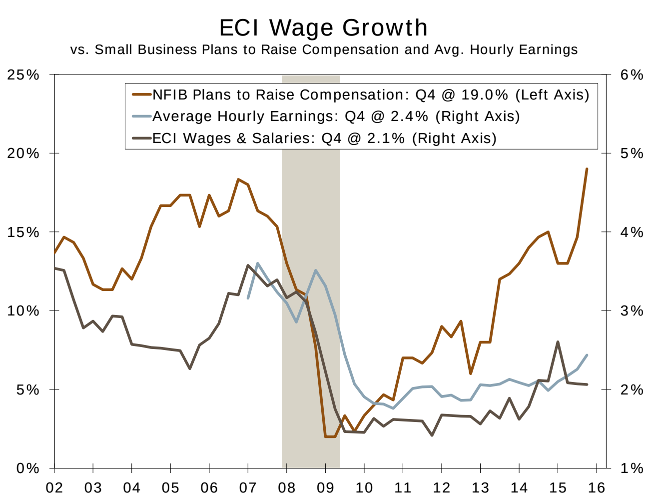
Source: U.S. Department of Labor and Wells Fargo Securities, LLC

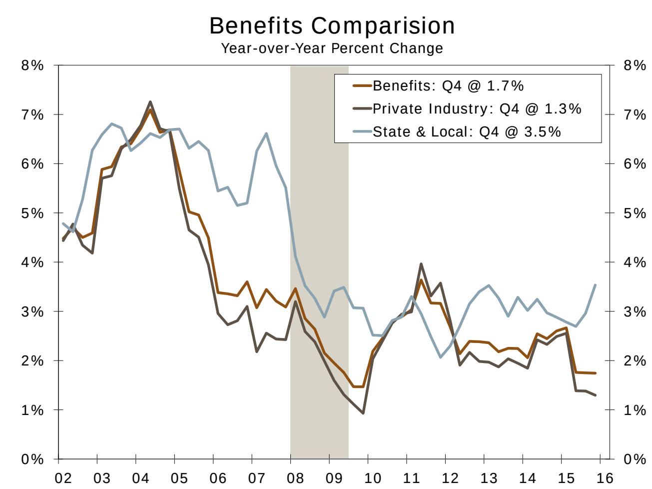
Employment Costs

- The pace of growth in employment costs was unchanged in Q4. Compensation rose 0.6 percent over the quarter, keeping the year-over-year gain steady at 2.0 percent.
- The trend in wage and salary costs was little changed last quarter. Wages and salaries for private sector workers continues to outpace earnings for government workers, but the pace of gains in both sectors was little changed from that registered a year earlier.
- Benefit costs rose 0.7 percent in Q4, driven in large part by a jump in public sector benefits. Employer costs for private sector benefits remained muted at just 0.4 percent last quarter. In 2015, private sector benefits rose 1.9 percent, which was the smallest increase since 2009.
- Outside of the ECI, there are some signs wage growth is picking up. Average hourly earnings data from the monthly payroll survey showed wages rose 2.4 percent year over year in Q4, compared to 2.0 percent the prior year. Meanwhile, the share of small businesses planning to raise compensation in the next six months rose to 19 percent, which was higher than at any point in the past expansion.
- We expect wage growth to continue to advance around 0.6 percent per quarter, which should push up the year-over-year rate beginning in Q2. The pickup in compensation costs is likely to remain fairly muted, however, given weakness in labor productivity.







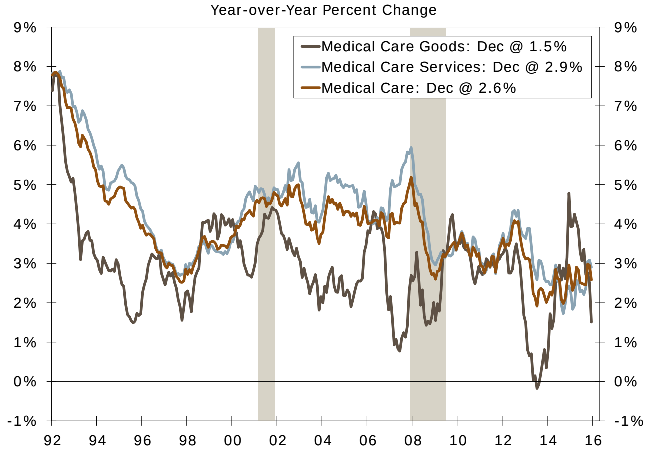


Source: U.S. Department of Labor, NFIB and Wells Fargo Securities, LLC

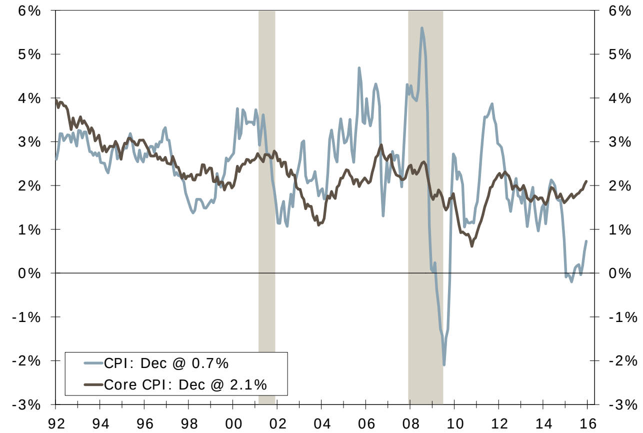
Consumer Prices

- The Consumer Price Index (CPI) showed inflation firming in Q3, as the drag from lower energy prices faded. Although energy prices again fell over the quarter, the decline was more moderate than the same period last year. Looking ahead, as oil prices begin to stabilize, headline inflation is expected to rise at a faster rate.
- Declining prices for agricultural commodities weighed on food prices in Q4. Prices for food at home fell each of the past three months and in December was down from a year ago. Prices for food away from home, on the other hand, continued to rise, albeit at a slower rate.
- Core inflation strengthened over the quarter, rising at the fastest pace since July 2012. Much of the upward pressure has been due to ever-increasing shelter costs, which make up around 40 percent of core CPI. The rise in rental costs reflects increased demand as household formation has surged following stronger employment conditions.
- That said, core inflation excluding the sizeable shelter component has also picked up in recent months, helped by stronger growth in transportation services and education and communication services.
- Rising medical care costs also boosted core inflation in Q4. The uptick in health care inflation was led by rising costs for medical services, while consumers' out of pocket costs for prescription drugs rose more slowly.

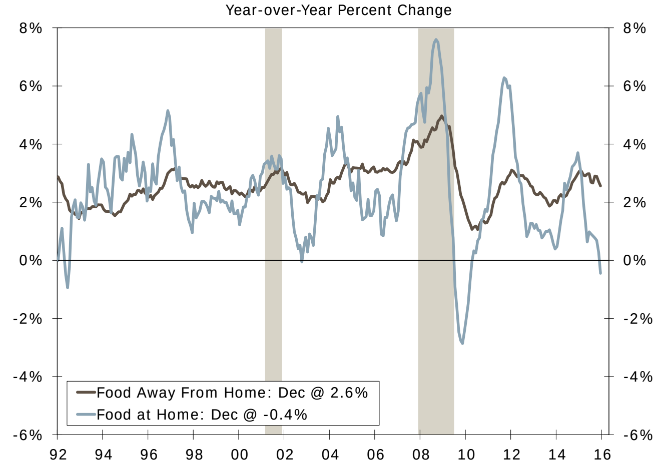
CPI Medical Care
Year-over-Year Percent Change



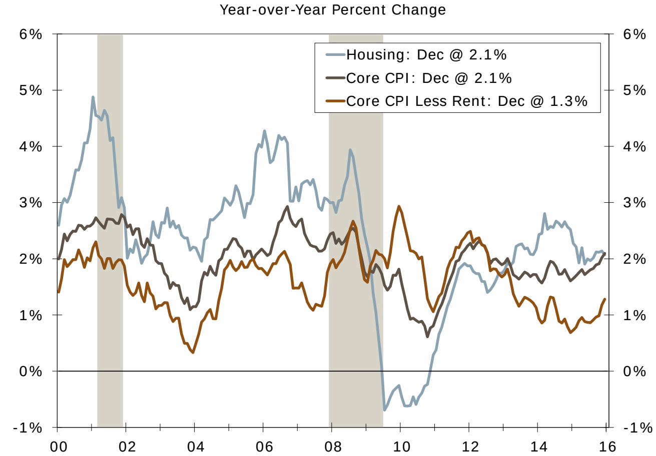
U.S Headline CPI vs. Core CPI
Year-over-Year Percent Change



Food - At Home vs. Away from Home
Year-over-Year Percent Change



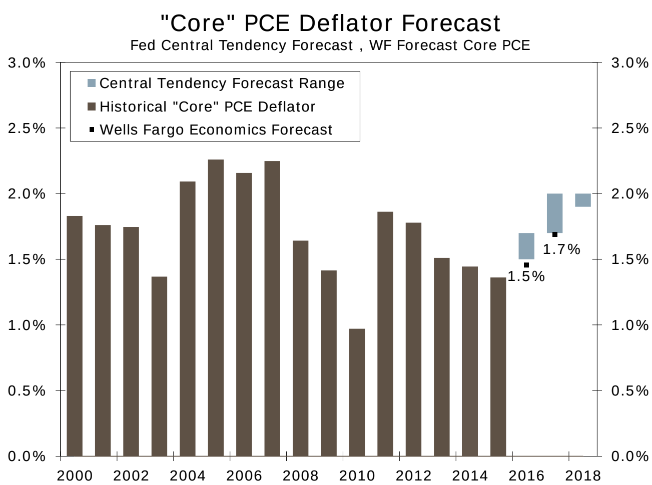
Core CPI vs. Housing Costs
Year-over-Year Percent Change

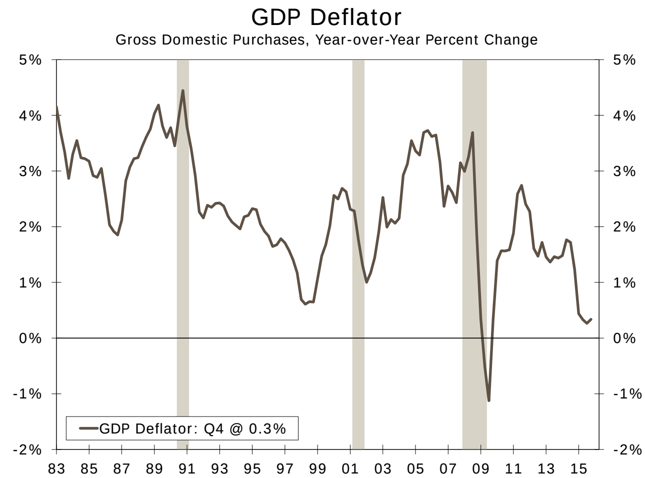


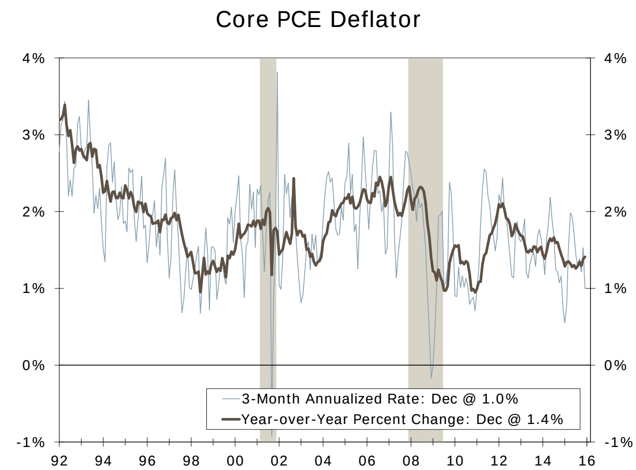
Source: U.S. Department of Labor and Wells Fargo Securities, LLC

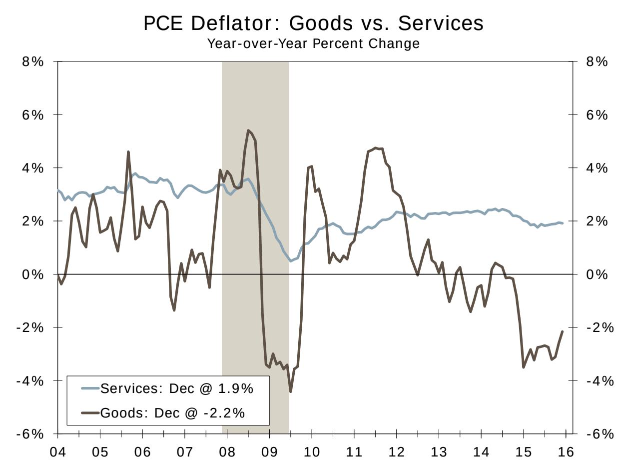
PCE and GDP Deflators

- Overall inflation in the U.S. economy slowed in Q4 as demand sagged across sectors. The GDP deflator eased to a 0.8 percent annualized rate, with weaker readings on inflation for personal consumption, equipment, structures and state and local government investment.
- Prices for consumer goods and services were nearly unchanged in the fourth quarter, partly due to the renewed fall in energy prices.
- Core PCE inflation also eased in Q4, increasing at just a 1.2 percent annualized rate. The slowdown was more modest relative to the end of 2014, however, leading the year-ago pace to edge up to 1.4 percent.
- Weakness in PCE inflation remains concentrated in the goods sector, which is more affected by the decline in gasoline prices and stronger dollar. Prices for services rose at a 2.0 percent annualized pace over the quarter—closer to the Fed's target but still soft relative to a year ago.
- In the December Summary of Economic Projections, Fed officials expected the core PCE deflator to rise to 1.6 percent in the end of 2016. The slowdown in core inflation more recently, however, suggests that expectations may once again be knocked down in March. We expect the core PCE deflator to be up 1.5 percent year over year at the end of this year.





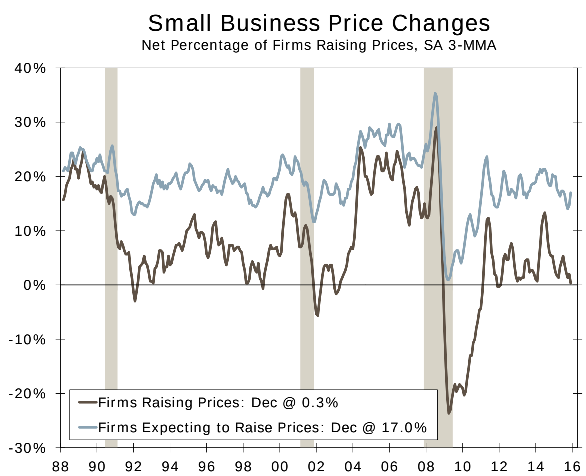


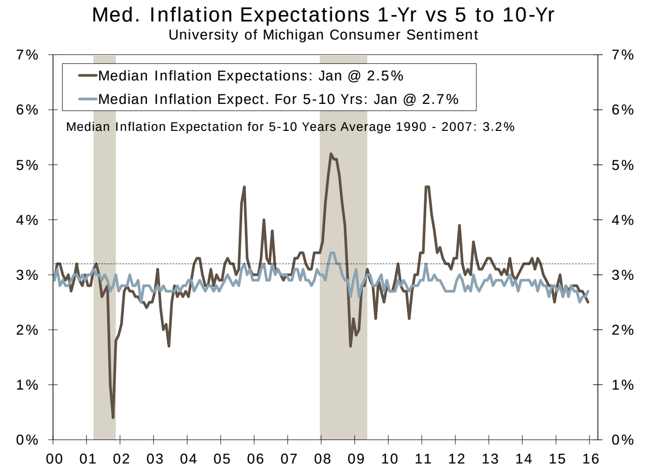


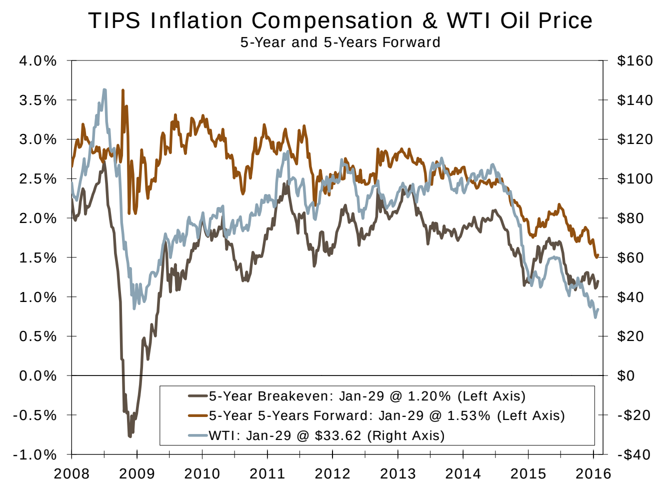
Source: U.S. Department of Commerce, Federal Reserve Board and Wells Fargo Securities, LLC

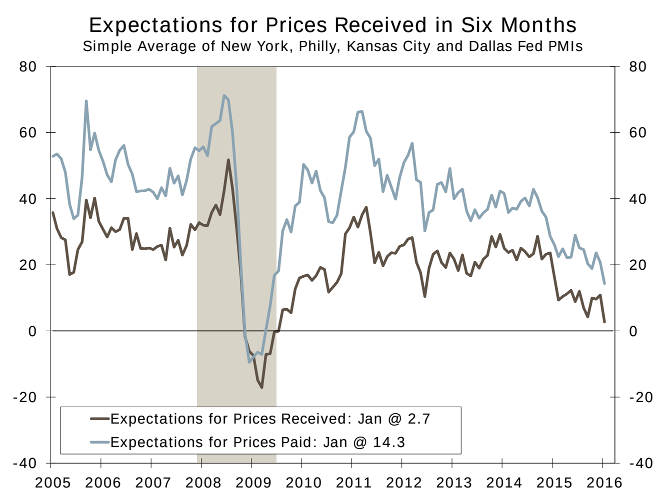
Inflation Expectations

- Inflation expectations have generally deteriorated in recent months. While the FOMC continues to characterize the declines in energy and import prices as "transitory," the dip in longer-term expectations suggests that the effects on inflation may be longer lasting if not reversed soon.
- Short-term consumer inflation expectations continue to fall alongside gasoline prices, but expectations for inflation 5-10 years out have also begun to move lower. In the three months ending in January, consumers' long-term inflation expectations fell to their lowest rate on record.
- Market based inflation expectations, measured by TIPS spreads, have moved nearly tick-for-tick with oil prices in recent months, including long-term TIPS spreads that should be less influenced by commodity prices movements. Using the five-year five years forward, long-term market implied inflation expectations fell to their lowest level since TIPS began trading.
- Not all market participants are expecting lower inflation over the long term. In the New York Fed's Survey of Primary Dealers, the median forecast for CPI inflation 5-10 years ahead was 2.25 percent in December, up slightly from 2.20 percent a year earlier.
- Businesses' views of future selling prices remain at multi-year lows, indicating the soft backdrop for inflation is set to continue, as firms are reluctant to test pricing power.









Source: Bloomberg LP, Univ. of Michigan, NFIB, Federal Reserve System and Wells Fargo Securities, LLC

Wells Fargo Securities, LLC Economics Group

Diane Schumaker-Krieg	Global Head of Research, Economics & Strategy	(704) 410-1801 (212) 214-5070	diane.schumaker@wellsfargo.com
John E. Silvia, Ph.D.	Chief Economist	(704) 410-3275	john.silvia@wellsfargo.com
Mark Vitner	Senior Economist	(704) 410-3277	mark.vitner@wellsfargo.com
Jay H. Bryson, Ph.D.	Global Economist	(704) 410-3274	jay.bryson@wellsfargo.com
Sam Bullard	Senior Economist	(704) 410-3280	sam.bullard@wellsfargo.com
Nick Bennenbroek	Currency Strategist	(212) 214-5636	nicholas.bennenbroek@wellsfargo.com
Eugenio J. Alemán, Ph.D.	Senior Economist	(704) 410-3273	eugenio.j.aleman@wellsfargo.com
Anika R. Khan	Senior Economist	(704) 410-3271	anika.khan@wellsfargo.com
Azhar Iqbal	Econometrician	(704) 410-3270	azhar.iqbal@wellsfargo.com
Tim Quinlan	Economist	(704) 410-3283	tim.quinlan@wellsfargo.com
Eric Viloria, CFA	Currency Strategist	(212) 214-5637	eric.viloria@wellsfargo.com
Sarah House	Economist	(704) 410-3282	sarah.house@wellsfargo.com
Michael A. Brown	Economist	(704) 410-3278	michael.a.brown@wellsfargo.com
Erik Nelson	Economic Analyst	(704) 410-3267	erik.f.nelson@wellsfargo.com
Alex Moehring	Economic Analyst	(704) 410-3247	alex.v.moehring@wellsfargo.com
Misa Batcheller	Economic Analyst	(704) 410-3060	misa.n.batcheller@wellsfargo.com
Michael Pugliese	Economic Analyst	(704) 410-3156	michael.d.pugliese@wellsfargo.com
Julianne Causey	Economic Analyst	(704) 410-3281	julianne.causey@wellsfargo.com
Donna LaFleur	Executive Assistant	(704) 410-3279	donna.lafleur@wellsfargo.com

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