Outlook and Market Review – Fourth Quarter 2015

The economy grew 0.7% in the fourth quarter of 2015 based on the preliminary announcement by the Bureau of Economic Analysis. Economic growth for the year matched the 2014 rate of 2.4%. The unemployment rate fell to 4.9%, which now matches the Fed's estimate of the long range full employment rate. The labor market is strong overall with healthy job gains averaging over 200,000 per month. The strength of the labor market appears to be ahead of the rest of the economy as production remains soft and the capacity utilization rate is 3.6% below the long run average. Personal income is improving and consumer spending is the only real driver of growth with dormant private investment, slowing government spending, and a chronic trade deficit. Wages and salaries are improving but at a modest rate. The loss of wealth due to the declining equity market will likely be a drag on spending in the coming quarters.

Inflation continues to be below the 2% target set by the Fed with falling import prices and competitive pressures keeping domestic prices tame. Low commodity prices are responsible for keeping the headline personal consumption expenditure (PCE) low and there is no indication that there will soon be a recovery in commodity prices. The PCE, the Fed's key inflation measure, increased only 0.58% on a year- over- year basis. Over the same period the core PCE, which excludes more volatile food and energy components, increased 1.41%. The trend is increasing slightly for the core PCE with the year-over-year rate of 1.26% five months ago. The CPI inflation index tends to be a bit higher but the overall pattern of low inflation persists.

The Fed announced a modest 25 basis point increase in the Fed Fund rate in December, the first increase in over a decade. As a follow up, the Fed forecasted four more 25 basis point increases in 2016. Market reaction to the Fed moves and weak GDP performance will most likely change the Fed's intended path. Financial markets reacted negatively to higher rates given slow global growth, slow U.S. growth, negative interest rate targets in many other countries, disinflation and an already strong dollar. Fed officials are now singing a tune that looks like a return to "forward guidance" based on performance data. The Fed is watching data closely and the odds are they will not raise the Fed Fund rate at the next meeting in March. Goldman Sachs reduced its forecast to three rate hikes this year rather than four. Consistent with the Goldman forecast, the Fed Fund futures prices do not fully price the next increase until the second half of 2017. The CME's FedWatch tool indicates just a 44% chance of an increase dating all the way out to February 2017. The yield curve is getting flatter as longer term yields remain low due to strong demand for U.S. Treasuries and low expectations of future inflation.

GDP growth for 2016 will face headwinds from higher interest rates, slower exports, lower asset values, and continued slowing of government spending. Nevertheless, consumer spending will be aided by higher wages and salaries. GDP growth closer to 2% is most likely with the Fed Fund rate, ending the year around 75 basis points. Inflation should remain tame even as commodity prices recover from their bottom. Long-term yields are not likely to rise much as the strong dollar and relatively lower rates abroad support healthy Treasury bond prices.

Fed Policy in Transition: Catching up to the Taylor Rule

The Fed's Dual Mandate - Where do we stand now?

The Fed has a dual mandate to keep the economy growing at full potential with low unemployment and to also keep inflation in line with a 2% target. After years of near zero Fed fund rates and waves of quantitative easing the inflation rate has been moving in the wrong direction with only mixed success with economic growth. Since early 2013 the core PCE has moved in a narrow year-over-year range of about 1.5%. With low GDP growth that is likely to be between 50 to 100 basis points below potential growth and inflation well below the 2% target, it is not clear that the inevitable Fed move to tighten short-term interest rates now is well-timed. Certainly, financial markets have not reacted well to the Fed's 25 basis point increase in December and subsequent announcements of four expected increases in 2016.

The Fed has been following a "forward guidance" approach where the markets are informed about what to expect in order to limit surprises and allow markets to "price in" information <u>before</u> actual moves occur. The goal is to not disrupt the markets with surprises that cause fluctuations in asset prices. With Janet Yellen as the Chair, the emphasis has been on the labor market as the key measure of economic health. Low rates were maintained while the labor market recovered, but now that the unemployment rate is 4.9% with healthy monthly job expansion, the balance of the Fed Open Market Committee has finally tilted toward raising rates. The negative financial market reaction to the first 25 basis point increase in the Fed Fund rate was likely to have surprised the Fed, given the ample warning from forward guidance. Clearly, financial markets had not already priced in higher future interest rates.

Suggestions by the Fed's Vice-Chair, Stanley Fischer, that four more moves are to be expected in 2016 have not been received well by the markets. Outside the labor markets the economy remains weak, corporate profits are declining, and inflation continues to be below the Fed target of 2%. Central banks in Japan and parts of Europe have targeted negative short term rates in an effort to stabilize growth. Very slow growth in the fourth quarter of 2015 coupled with low inflation and dramatic market response to the Fed guidance of "measured increases" suggests that the Fed may reconsider its policy approach. Both the futures market pricing of Fed Funds contracts and practitioner forecasts suggest that the Fed will back off the original plan to raise rates by 100 basis points over the course of 2016. For example, the Fed is not expected to raise rates in the March meeting.

The Taylor Rule and Bernanke's Modification – What should the Fed Fund Rate Be?

Stanford economist John Taylor developed a simple monetary policy rule that describes how a central bank should systematically adjust short term interest rates in response to inflation and economic growth. The rule is a descriptive model but there is substantial support for instituting a version of the model to guide policy. Discretionary policy is often criticized for poor policy timing that causes more harm than good. Taylor and former Fed Chairman Ben Bernanke have differing views on the application of the model and the interpretation of policy timing and effectiveness. Both seem to agree that an appropriate model can describe how Fed policy has approached the dual mandate.

Taylor's Perspective - The Taylor rule provides an estimate of what the Fed Fund rate ($FFR_{expected}$) should be given the gap in observed and targeted inflation ($P_{observed\ GDP\ Deflator} - P_{Target}$) and the gap between actual and trend GDP growth ($G_{observed} - G_{Trend}$). The adjustment parameters (0.5) are Taylor's estimates of past policy relationships between the dual mandate and the Fed Funds rate.

Taylor Model

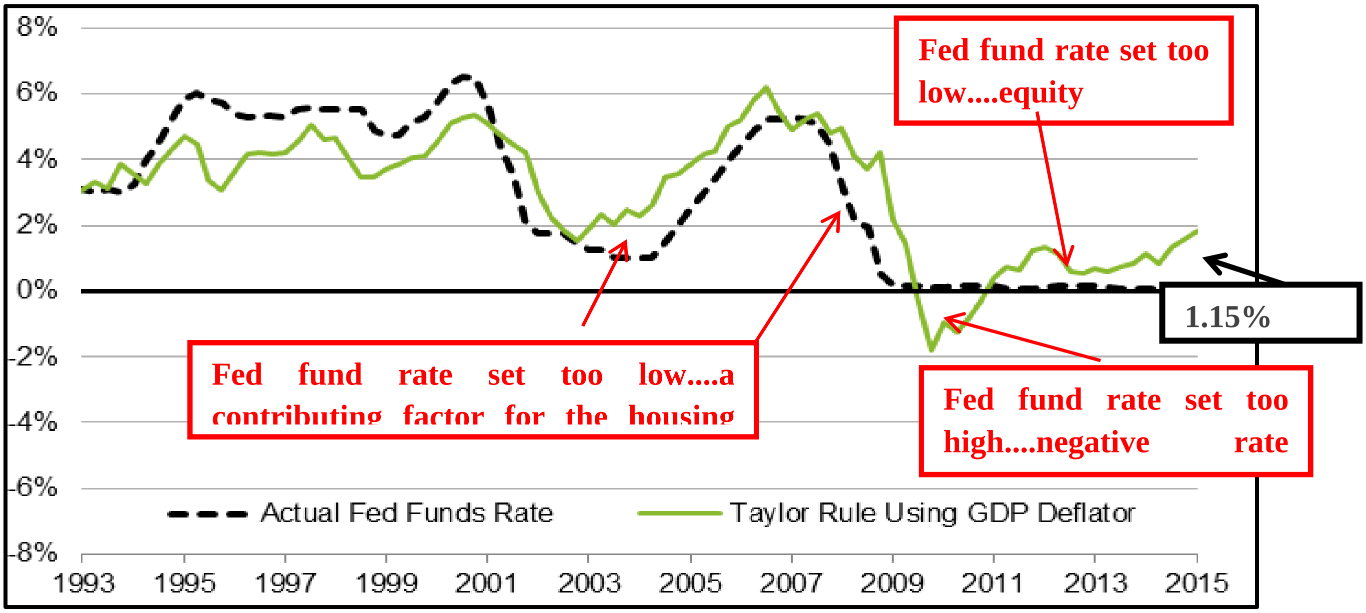
$$FFR_{expected} = P_{Target} + .5(P_{Observed\ GDP\ Deflator} - P_{Target}) + .5\,(G_{observed} - G_{Trend})$$

For example, the current Fed inflation target is 2% and the long run trend growth in GDP is about 3.2%. The inflation rate based on the last four quarters of the GDP deflator is 1.09% and GDP growth over the past four quarters was 2.4%. The Taylor rule predicts that the Fed Fund rate should be about .02 + .5(.0109 - .02) + .5(.024 - .032) = 1.15% given current conditions. Obviously the inputs make a big difference and the transition to the target rate should take time. Nevertheless, this application of the Taylor rule is consistent with the preliminary announcement by the Fed to expect an added 100 basis point increase beyond the initial 25 basis point increase in December. This is a rather dramatic adjustment given years of near zero rates but it remains well below long run averages of the Fed Fund rate.

The graph in Figure 1 below is adapted from Bernanke's Blog with the Brookings Institute. It represents the fitted Taylor rule to past Fed Fund data, allowing comparison of Taylor Rule estimates with the actual Fed Fund rates set in prior economic environments. The annotations to the graph illustrate deviations of actual and expected Fed Fund rates where active Fed actions have raised criticism. From 2003 to 2009 the Fed Fund rate was set lower than what the Taylor Rule would suggest, playing a role in fueling the housing bubble. After 2009 the Fed froze rates at zero while the Taylor rule suggested negative rates. Since 2011 the Fed Fund rate has been too low for too long, making an adjustment back to a more normal rate feel overly dramatic.

The graphs in Figure 1 are also consistent with Greenspan' view, that in hindsight, he kept rates too low for too long. It is also consistent with critics of Yellen who suggest her labor economist biases have kept her wedded to low rates until the labor market is in full recovery, missing opportunities for more gradual early moves in rates linked to low inflation. This argument would also suggest that the equity market run-up in 2013 and 2014 (that is now tanking) was fueled by interest rates that were kept too low for too long. Rather than help stabilize markets, the Fed's recent discretionary policies may well have destabilized the market.

Figure 1. The Original Taylor Rule and the Fed Funds Rate 1993 – Present



Source: Graph adapted from Bernanke Blog, Brookings Inst.

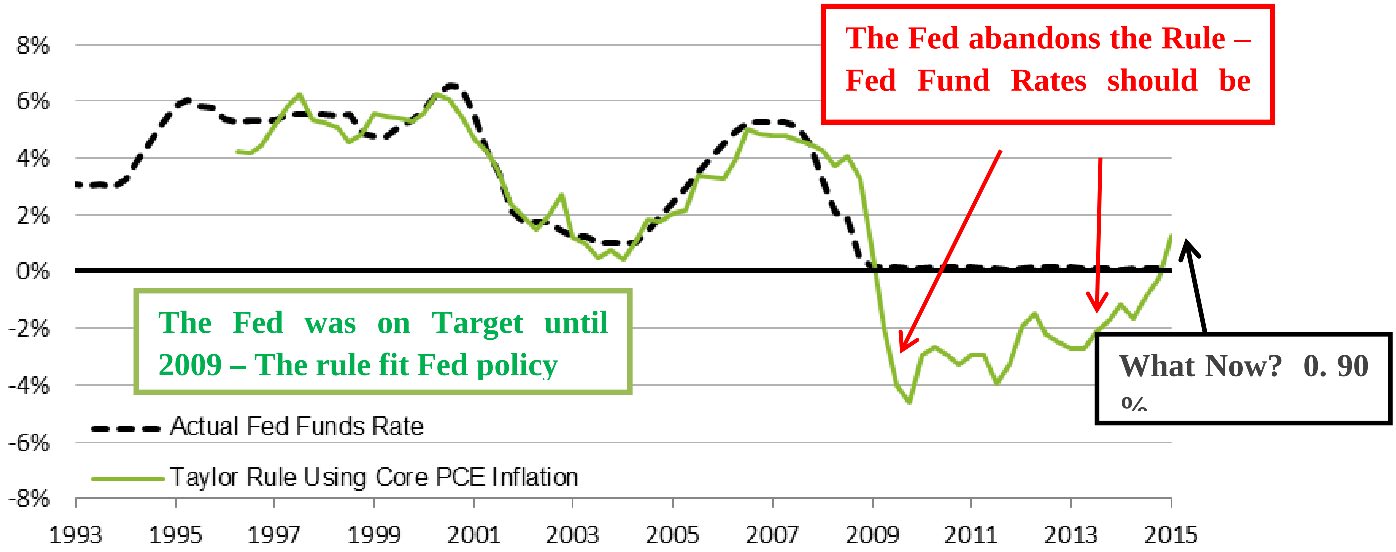
Bernanke's Modification - Ben Bernanke supports Fed discretionary policy and believes that a modification of the Taylor Rule will show a more consistent relationship between the observed Fed Fund rate and the rate expected from the modified model. Bernanke generally supports the Taylor rule as a description of policy but not as a rule to follow. He modifies the Taylor Rule in two respects. First, the Fed inflation target is measured by the core PCE inflation rate, not the GDP deflator used by Taylor. Second, he believes the adjustment factor for the GDP growth gap to be closer to 1 than Taylor's .5. His modification is given below.

Bernanke Modification to the Taylor Model

$$FFR_{expected} = P_{Target} + .5(P_{observed\ Core\ PCE\ Rate} - P_{Target}) + 1.0\,(G_{observed} - G_{Trend})$$

Figure 2 provides a comparison of the actual Fed Fund Rate and the expected Fed Fund rate by applying Bernanke's model given above. Differences in the Figure 1 and Figure 2 graphs are due to the adjustments in the modified model. In general, the modifications lead to a lower expected Fed Fund rate compared to the Taylor Rule expectations. The fit between the expected Fed Fund rate from Bernanke's model and the actual Fed Fund rate is much better up to the 2009 post-recession period. Bernanke's explanation of consistent Fed policy suggests that the Fed did not cause destabilization leading to the housing bubble or contribute to an overvalued equity market leading up to 2016. However, the Fed's decision to sit on zero Fed Fund rates following the Great Recession was and is overly restrictive compared to normal policy responses to inflation and growth performance. Negative Fed Fund rates would have been in order until 2015 when an upward adjustment should have taken place.

Figure 2. Bernanke's Modified Taylor Rule – In Defense of the Fed



Given current conditions, Bernanke's modified Taylor Rule would lead to an expected Fed Fund rate of 90 basis points, given a core PCE deflator of 1.4% over the past four quarters. The Table below summarizes the inputs and expectations for the Fed Fund rate in the Taylor Model and in Bernanke's modification.

Table 1. Summary of the Taylor Rule and the Bernanke Modification Estimates

	Fed Core PCE Target	GDP Core Deflator[1]	PCE Core Inflation[2]	Current GDP Growth Rate	Target Trend GDP Growth	Fed Fund Estimate
Taylor Rule	2%	1.09	n.a.	2.4%	3.2%	**1.15%**
Bernanke Rule	2%	n.a.	1.4%	2.4%	3.2%	**0.90%**

1. *The GDP deflator is a geometric average annual rate based on the past four quarters of the GDP deflator.*
2. *The core PCE inflation rate is an annualized rate based on the past four quarters.*

What to Expect?

While timing is everything it helps to know where the Fed Fund rate is likely to go. For whatever reason, the Fed seems to have been against negative Fed Fund rates and deviated from long standing relationships for many years following the Great Recession. The Fed will move to a higher rate in the range from 90 to 115 basis points over time to be consistent with "normal" policy relationships between the Fed Fund rate and the dual mandate of stable 2% inflation with long range trend growth. Of course if inflation picks up and GDP growth improves beyond the 2.4% rate of the past two years, the Fed Fund target will be higher.

Summary of Recent Economic Data

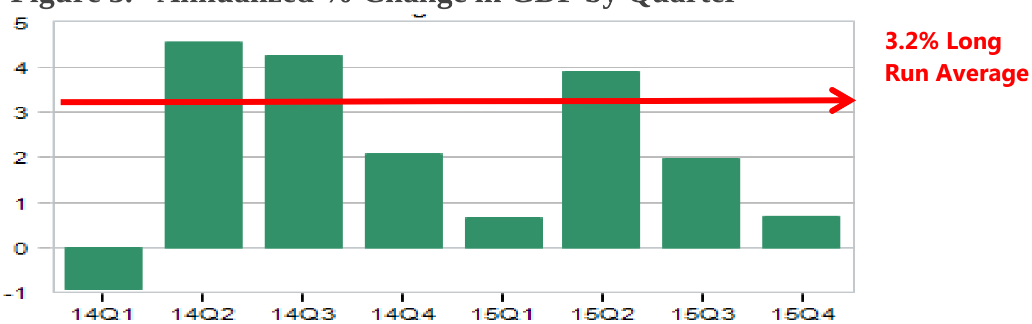
Gross Domestic Product – *The economy grew at only .7% in the fourth quarter of 2015. Positive contributions came from personal consumption expenditures, residential fixed investment, and federal government spending. Private inventory investment, exports and nonresidential fixed investment were drags on growth. Annual GDP growth in 2015 matched the growth rate of 2.4% for 2014.*

- The economy grew at a scant 0.7% in the fourth quarter of 2015 according to the preliminary report by the Bureau of Economic Analysis. Economists had been revising fourth quarter estimates downward but the announcement was still a surprise on the downside. The first revision is likely to move the growth rate above 0.7%, but not by enough to change the conclusion about disappointing growth.

- Slower inventory investment was a key factor behind the lower than expected fourth quarter growth. Inventories rose $68.6 billion at an annual rate in the fourth quarter compared with $85.5 billion in the third quarter and $113.5 billion in the second quarter. The inventory correction could extend into 2016.

- The figure below illustrates the path of real GDP growth since the first quarter of 2014. The long run growth rate trend of 3.2% per year is shown in red. Real GDP increased 2.4% in 2015 (that is, from the 2014 annual level to the 2015 annual level), the same rate as in 2014.

Figure 3. Annualized % Change in GDP by Quarter



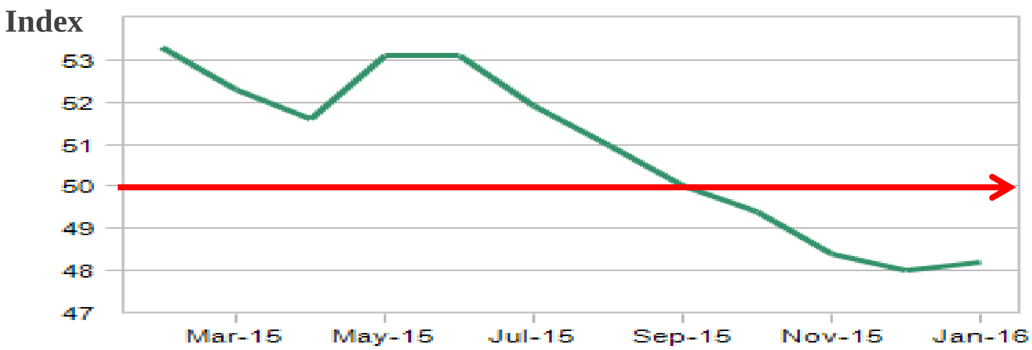
- Real GDP minus inventories (real final sales) rose only 1.2% at an annual rate in the fourth quarter. Trade was also a drag on GDP growth. Negative net exports shaved 0.47% off GDP growth in the fourth quarter. Trade has been a drag on GDP growth in four of the past five quarters, largely due to the strong value of the dollar. This trend is likely to extend into 2016.

- Consumers contributed 1.5% to GDP growth in the fourth quarter but fixed investment fell for the second consecutive quarter. Residential investment remained strong, rising 8.2% at an annual rate for the second consecutive quarter. Government spending added 0.1% to fourth quarter GDP growth.

Production, Manufacturing and Sales – *Production and manufacturing deteriorated in the fourth quarter against strong headwinds from weak global growth, low energy prices, and an inventory correction. The ISM index is below the benchmark for an expansion and production is slowing. Capacity utilization remains about 3.6% below the long run trend. Retail sales are also weak going into 2016.*

- Figure 4 shows that manufacturing is on a downward trend that began in the middle of 2015, based on the ISM manufacturing index. The index had a slight uptick to 48.2 in January of 2016 but has been below the threshold for an expansion (50) since September of 2015. The index may well continue to slide due to the overall weakness in the global economy, low energy prices and an ongoing inventory correction it the U.S.

Figure 4. ISM Manufacturing Index (50 is the Expansion Benchmark)



- Manufacturing output fell 0.1% in December following a 0.1% decline in November.

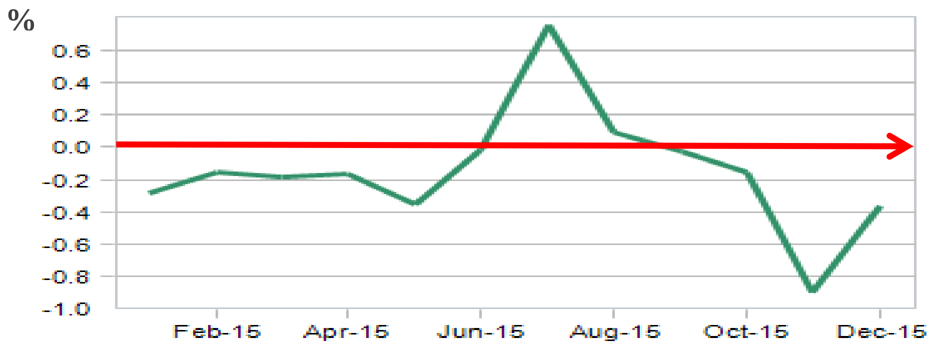
- For the fourth quarter, manufacturing output grew 0.5% at an annual rate, down from a 3.4% rise in the third quarter and a 1.5% increase in the second quarter.

- New orders for durable goods fell 5.1%, which was more than expected. The weakness was fairly broad-based. The strong dollar and soft overseas growth have been the primary obstacles to stronger manufacturing. The latest figures show that durable inventories were being cleared out at a fairly aggressive pace.

- Industrial capacity utilization fell to 76.5% in December, the lowest since the middle of 2013. Utilization is 3.6% below the long run average of 80.1%. The manufacturing capacity utilization rate fell to 76%.

- Industrial production fell 0.4% in December. November's production numbers were revised downward from -0.6% to -0.9%, while there were small upward revisions for August, September and October. The figure below illustrates the monthly movement in industrial production.

Figure 5. Monthly Industrial Production Percentage Change



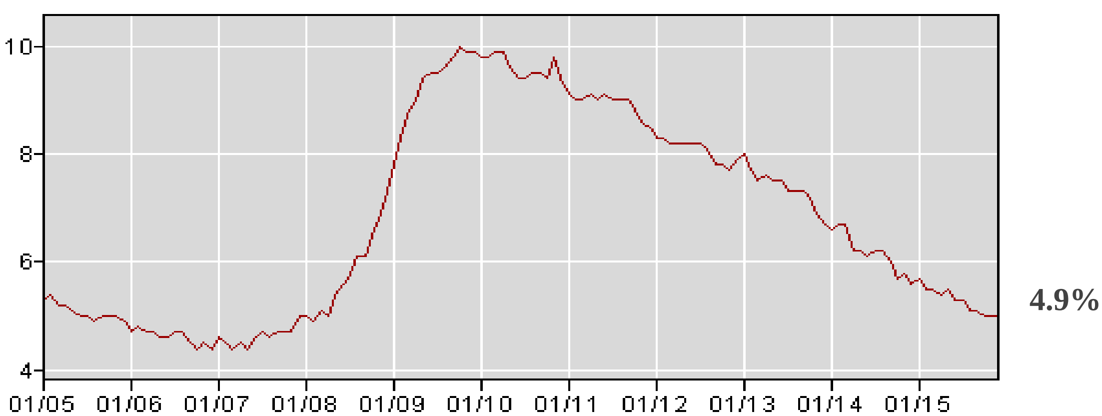
- Retail sales continue to be sluggish. Sales fell 0.1% in December and have only had one positive month of growth in the last five months. Excluding gas, sales were nearly unchanged. Core sales, excluding autos and gasoline, were essentially unchanged.

Unemployment and Labor Market – *The job market continues to be out of sync with GDP growth. Jobs gains are healthy and the unemployment rate is finally at a full employment benchmark of 4.9%. Yet, GDP growth is disappointing and financial market wealth is being destroyed. The job market is tightening making it more difficult for job expansion in 2016. But, there should be an improvement in wages and salaries going into 2016.*

- The labor market ended 2015 on a strong note as nonfarm payrolls increased by a net 262,000 in December. The average monthly gain over the prior six months was 220,000.

- The U-3 unemployment rate fell to 4.9% in January and has been declining steadily from a high of 10% in early 2010. There are approximately 7.9 million unemployed workers who are actively seeking placement.

Figure 6. U-3 Unemployment Rate January 2001 – December 2015



- The U-6 unemployment rate is 9.9%. The U-6 rate defined the unemployed as the civilian labor force that is unemployed, plus all marginally attached workers, plus total employed part time for economic reasons.

- The labor force participation rate remains very low at 62.7%. The labor force participation rate peaked in the 1997 to 2000 period and has been steadily declining since then. The labor force is projected to grow over the next 10 years at an average annual rate of only 0.5%, a slower rate than in recent decades. The population of the U.S. is growing more slowly and is getting older than in previous decades leading to a slow growth in the labor force.

- The Employment Cost Index (ECI) increased 0.6% in the fourth quarter matching the increase in wages and salaries. Year-over-year growth in the ECI index was 2% in the fourth quarter. Compared with historical norms and expectations, the gains in the ECI should be closer to 3.5% in a well-functioning economy.

- While wage growth based on the ECI data is modest, other data suggests that wages will improve. Wages often lag job growth and monthly job creation remains strong.

- Initial unemployment claims in January remained well below 300,000, suggesting that the job market is holding steady while GDP growth is slow and financial markets are slumping.

- Structural changes in the labor market have taken place to reduce the supply of labor and lower the labor force participation rate. Compared to the pre-recession period, we now face high retirements, increased disability, higher school enrollment, and more discouraged workers.

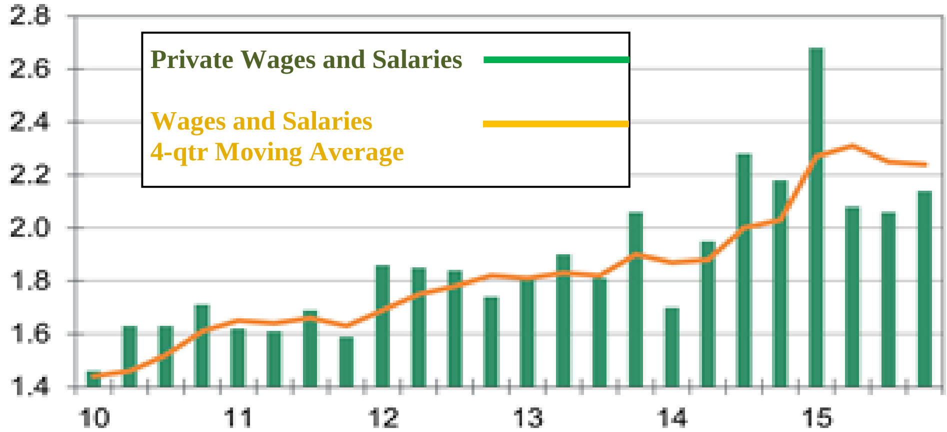
- The Federal Reserve’s Labor Market Conditions Index (LMCI) increased to 2.9 in December compared to 2.7 in November. For the fourth quarter the index averaged 2.8, twice the third quarter value. The December LMCI also far exceeded the average of 1.7 for all of 2015. The LMCI is based on 19 labor market indicators and is used by the Federal Reserve to evaluate labor market conditions.

- Labor productivity gained only 0.1% in the fourth quarter while hours worked rose 3.3% leading to a 4.5% jump in unit labor costs. During the current expansion, overall nonfarm business productivity has expanded at an anemic 1% per annum pace compared to the 2% average growth since World War II. Nominal compensation per hour increased 4%, implying unit labor costs increased 1.8%. On a year-ago basis, hourly compensation is up 3.6%, and unit labor costs are up 3%. If this becomes a trend it should eventually lead to higher inflation.

Consumer Income and Savings - *While personal income growth continues to lag behind what we would tend to see in a normal recovery, it is improving. Personal income grew 4.51% in 2015 following growth of 4.45% in 2014. The saving rate increased to 5.5% in December. Growth in wages and salaries tailed off in the last three quarters of 2015.*

- Personal income grew 0.3% in December matching its average for the last six months. In 2015, personal income grew 4.51% following growth of 4.45% in 2014. The gain in personal income in 2015 was the highest since 2012, but lags the typical annual gain in a recovery.
- Real disposable income grew 0.4% in December from a 0.2% rate in November. October's real disposable income growth was revised downward to 0.2%.
- The saving rate increased to 5.5% in December from 5.3% in November. Income growth is slowly outpacing spending growth.
- Wage and salary growth was slower than personal income growth in the fourth quarter. Figure 7 below shows the monthly and 4-quarter moving average growth rate of wages and salaries in the private sector from 2010 through 2015.

Figure 7. Year Ago Percentage Growth in Wages and Salaries (2010 – 2015)



Inflation - *Inflation continues to undershoot the 2% inflation target and remains low with few pressures on prices going forward. China's slump, slower global growth, the strong dollar, and collapsing energy prices are all working to ease price pressures. Long-term inflation expectations are also falling, making it harder to achieve the Fed's 2% inflation target. It is likely that the Fed will now move to an emphasis on inflation rather than the labor market.*

- The personal consumption expenditure (PCE) deflator fell 0.1% in December. The core deflator was unchanged following a 0.2% increase in November. On a year ago basis the PCE deflator was up 1.4% in December. The table below provides the annual percentage change in the PCE and Core PCE by month since June. The PCE is the Fed's preferred measure of inflation.

Table 2. PCE Year Ago Percentage Change by Month

	Dec. 15 2015	Nov. 15 2015	Oct. 15 2015	Sept. 15 2015	Aug. 15 2015	July 15 2015	June 15 2015
PCE	-0.7	-.06	-.06	-.05	-0.5	-0.5	-0.5
Core PCE	1.4	1.4	1.3	1.3	1.3	1.3	1.3

Source: Bureau of Economic Analysis

- The Consumer Price Index (CPI) fell 0.1% in December and was unchanged in November. On a year-ago basis the CPI was up 0.7% and the core index rose 2.1%. The table below shows the CPI from June 15, 2015 to December 15, 2015.

Table 3. CPI Year Ago Percentage Change by Month

	Dec. 15 2015	Nov. 15 2015	Oct. 15 2015	Sept. 15 2015	Aug. 15 2015	July 15 2015	June 15 2015
CPI	0.7	0.4	0.1	0.0	0.2	0.2	0.2
Core CPI	**2.1**	**2.0**	**1.9**	**1.9**	**1.8**	1.8	1.8

Source: Bureau of Labor Statistics

- The Producer Price Index (PPI) for final demand fell 0.2% in December. Final demand goods prices fell 0.7%, their sixth consecutive monthly loss. Energy prices fell 3.4%, compared with November's 0.6% drop. Within energy, gasoline prices fell 8.3%. Food prices also fell in December, dropping 1.3%.

- On a year-ago basis, the PPI for final demand fell 1.1%, its fourth consecutive month down in excess of 1%. Core goods prices were up 0.1% on a year-ago basis, and total services prices rose 0.4%. The table below provides the quarterly annual percentage change in the PPI deflator.

Table 4. Quarterly Implicit Price Deflator by Quarter (2014-2015)

Quarter and Year	IVQ 2015	IIIQ 2015	IIQ 2015	1Q 2015	IVQ 2014	IIIQ 2014	IIQ 2014	IQ 2014
Implicit Price Deflator	0.82	1.30	2.12	0.12	0.09	1.62	2.23	1.57

Note: Annualized percentage change *Source: Bureau of Economic Analysis*

Sentiment and Confidence *– At the start of 2016, consumers feel relatively good about the present, but skeptical about the future. Confidence and sentiment index data suggest moderate weakening in expectations but the overall index levels are consistent with the modest recovery. There has not been enough time for the decline in stock market wealth to filter into the surveys.*

- The University of Michigan January Consumer Sentiment Index fell to 92, losing 0.6 point over the final December index. The index was as high as 96 earlier in the year. This is the first monthly decrease since September. Consumer expectations remained flat at 82.7, holding expectations at roughly the same level for four straight months. Twelve-month inflation expectations fell to 2.5%, down 0.1%. Inflation expectations five to 10 years ahead rose to 2.7%, up 0.1%.

- January's Conference Board Consumer Confidence Index rose to 98.1 from 96.3 in December. The index remains in the upper 90s, on par with most of last year.

- The Chicago Fed National Activity Index increased -0.22 in December from -.36 in November. The index suggests that the economy grew at a below-average rate for the fifth consecutive month. Production indicators were the largest drag on the top-line reading and employment indicators were the only positive contributors to growth. The index's three-month moving average fell to -0.24 in December from -0.19 in November, indicating limited inflation pressures for 2016.

- The Conference Board Index of leading indicators fell by 0.2% in December after rising by 0.5% each in October and November. A series of positive gains over many months is necessary to support a strong growth scenario.

Housing *- Housing prices are increasing faster than one year ago, but much of the improvement comes from specific states. Overall, housing prices increased about 6% form one year ago. Added income from stronger wages will be needed to sustain the housing recovery and the drag of lower stock market values will likely moderate growth in the early part of 2016.*

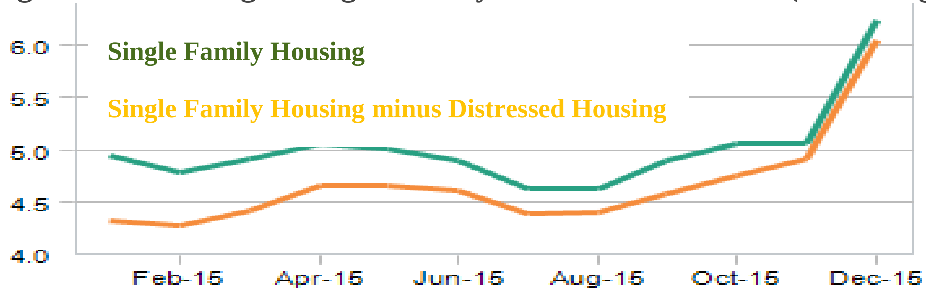
- The U.S. monthly purchase-only house price index rose 0.5%, seasonally adjusted, from October to November and is up 5.9% from a year earlier.

- Pending home sales grew slightly by 0.1% to 106.8 in December on a seasonally adjusted basis. The index is only 4.2% higher over the year.

- The Black Knight house price index increased 5.5% in November on a year-ago basis. House price appreciation was nearly unchanged on a year-ago basis and is closely tracking the rise in other major house price indexes. The national aggregate index for house prices is just 5.3% lower than its June 2006 peak of $267,760 and is up more than 27% from its trough in January 2012.

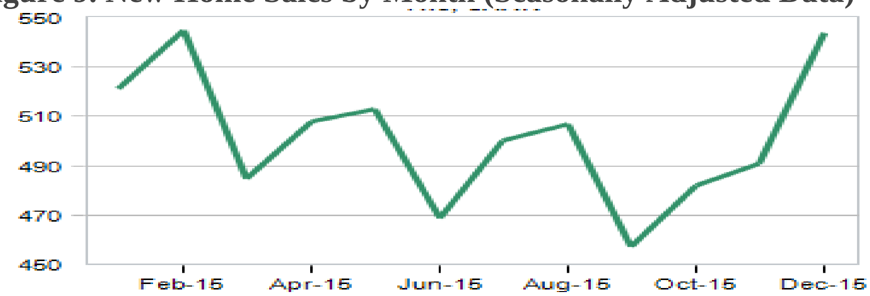
- The CoreLogic Home Price Index increased 6.3% on a year-over-year basis in December. The December monthly growth was 0.8% and was the 12th consecutive month of gains. House prices are 37% higher than the low reached in March 2011 but are still 7% below their peak set in April 2006. Figure 8 shows the pattern of increase in the index over 2015 with and without distressed housing.

Figure 8. CoreLogic Single Family Home Price Index (Percentage Change)



- New-home sales improved in December with a 10.8% growth over the November total and 9.9% above the December 2014 total. The jump in sales made up for slight losses over the previous six months. Figure 9 illustrates the new home sales data for 2015.

Figure 9. New Home Sales by Month (Seasonally Adjusted Data)



Source: Census Bureau

- The homeownership rate remains low and is declining as rising home prices put downward pressure on housing affordability. The homeownership rate fell to 63.8% in the fourth quarter of 2015 compared with the same quarter in the previous year. Homeownership rates for households with family income greater than or equal to the median family income fell 0.5% to 78.5%, compared with the fourth quarter of 2014.

- The year-over-year percentage increase in the S&P/Case-Shiller Home Price Index for the 20-city composite index increased to 5.8% from 5.5% in the prior month. Growth in the 10-city composite index accelerated to 5.3% from 5% between October and September.

***U.S. Trade** - Trade deficits continue to be a drag on U.S. growth fueled by the strong dollar and relatively stronger income growth in the U.S. than in trading partner countries. Foreign capital inflow is the counter to the trade deficit, helping to keep long term interest rates down.*

- The U.S. goods deficit averaged $61.2 billion per month in the fourth quarter following an average of $61.7 billion per month in the third quarter. The figure below illustrates the declining trade balance since the last recession.

Figure 10. U.S Goods Trade Balance in Millions of Dollars

Source: Bureau of the Census

- Movement of the U.S. inflation rate up to the Fed's 2% target is being made more difficult by the continued slide in import prices. U.S. import prices dropped 1.2% in December, its sixth consecutive decline. The decline in import prices was the largest since August and leaves prices down 8.2% on a year-ago basis. The appreciation in the U.S. dollar and falling Chinese product prices will continue to dampen inflation.

***Key Global Issues** – Slow growth is in order for 2016 while monetary policies in developed markets continue to diverge. Even so, the U.S. is not likely to increase rates more than 50 basis points. The theme of high global leverage will continue along with low inflation. Energy prices have likely hit bottom but there isn't much pressure for a rapid rebound.*

- **Global Growth –** The table below summarizes the 2015 and expected 2016 growth rates for a large part of the global economy. Estimates from Goldman Sachs and the World Bank are given to allow some comparisons. The green shading represents expected improvements in growth and the red shading represents expected lower growth.

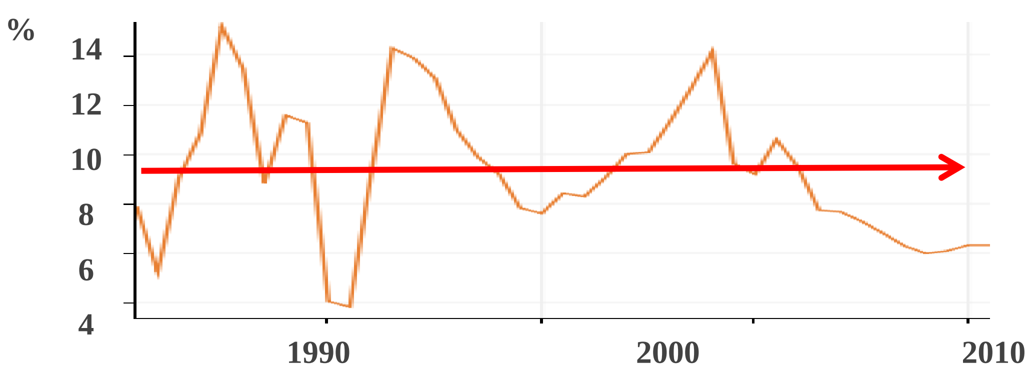
Table 5. Summary of GDP Growth Estimates

Country or Region	2015 GDP Growth	2016 GDP Growth Forecast Goldman Sachs	2016 Growth Forecast – World Bank
World	3.2%	**3.5%**	**3.3%**
Developed Markets	2.0%	2.0%	**2.4%**
Emerging Markets	4.45	**4.9%**	**5.2%**
USA	2.4%	**2.2%**	**2.8%**
Euro	1.5%	**1.7%**	**1.8%**
Germany	1.5%	**1.7%**	**n.a.**
France	1.2%	**1.4%**	**n.a.**
Italy	0.8%	**1.6%**	**n.a.**
Spain	3.1%	**2.5%**	**n.a.**
UK	2.5%	**2.7%**	**2.6%**
China	6.9%	**6.4%**	**7.0%**
India	7.4%	**7.8%**	**7.9%**
Russia	-3.5%	**1.5%**	**0.7%**
Brazil	-3.2%	**1.6%**	**1.1%**

Source: Goldman Sachs and World Bank

- **China -** China's economic growth rate slowed to a 25-year low of 6.9% in 2015, as the world's second-largest economy continues to shift away from its manufacturing roots. China's economy grew 6.8% in the fourth quarter of 2015 from the same period last year. The economy appears to be transitioning from manufacturing toward consumption and services. A real estate construction slump and weak exports are slowing growth, especially for heavy industry. Several more interest rate cuts matched with reserve-requirement cuts are likely as China attempts to reach a 6.5% growth rate target. Figure 11 below illustrates the long run average trend growth and the highly volatile annual GDP growth for China.

Figure 11. Change in Real GDP in China (Annual Percentage Change)



- **Eurozone** - The Eurozone is growing at a modest 1.6% annual rate with an unemployment rate of 10.4%. A recovery is underway but a slow transition is likely. Inflation remains very low. Consumer prices in the Euro Area are expected to increase 0.4% on a year-on-year basis in January of 2016. Inflation Rate in the Euro Area averaged 2.06% from 1991 through 2015, reaching a high of 5% in July of 1991 and a record low of -0.70% July of 2009. The interbank borrowing rate is -0.18%.

- **Emerging Economies -** The growing global debt problem was addressed in a prior Outlook. The consequences of debt accumulation will be especially relevant for emerging market growth. Developed economies are slowly managing to recover from the financial crisis with Europe lagging the U.S. recovery. Emerging markets, which now make up about 58% of the global market, are the least capable of handling this debt burden. Earning hard currency and repaying debt is especially difficult with the strong dollar.

    - Unlike the U.S. and Europe, where households are the key borrowers, businesses are the key borrowers (about 75%) in emerging markets. Such credit booms that help fuel expansions also make the downturns more severe and difficult to manage. Recessions are already underway in Brazil and Russia with generally weak economies being highly correlated to high debt to GDP ratios.

    - Not all emerging economies have the same degree of risk. China, South Korea, Singapore, and Thailand are not likely to see the explosion that high debt and capital flight often cause. Rather, a slow series of adjustments will play out. Brazil and Turkey, for example, are in more immediate danger. They have large current account deficits and are finding it harder to attract the necessary capital inflows to offset these flows.

    - There may be exceptions going forward for performance in emerging markets. India has been ahead of the curve in emerging markets and is making the structural changes to regain growth of 7% or so. Mexico is in a relatively good positon in terms of debt management and the link to the U.S. economy will likely pull it along with a slow recovery. Argentina has a lower debt burden but successful economic performance hinges on the political management by the new president.