Outlook and Market Review – Third Quarter 2017

The U. S. economy grew 3.2 percent in the third quarter of 2017 following 3.1 percent growth in the second quarter, according to revisions by the Bureau of Economic Analysis. Fourth quarter growth is shaping up to also hit the 3 percent rate. It is too early to proclaim a breakout from the post-recession doldrums but the economy is now on a better footing. The unemployment rate fell to 4.1 percent in November and job growth remains healthy. Nevertheless, the labor force participation rate is stuck around 62.7 percent and wages have yet to show the kind of growth expected when the economy hits full employment. Inflation also remains tame with the personal consumption expenditure deflator increasing only 1.6 percent on a year-over-year basis and the core rate growing only 1.4 percent.

The Fed continues to follow easy money policies even with gradual increases in the fed funds rate into 2018. The Fed recently increased the fed fund rate target to 1.5 percent and plans on increasing the rate three more times in 2018. Even so, monetary policy remains accommodative. The Fed has a long run target of 2.75 percent for the fed fund rate, which would call for five more increases of 25 basis points each. Applications of the Taylor Rule in its various versions calls for a 4 percent fed fund rate when the economy is at full employment with target inflation. While the Fed continues to "look at everything" rather than follow guidelines like the Taylor Rule, current monetary conditions remain easy with fed funds rates well below 4 percent. Some economists believe the Fed should pause with rate hikes until the economy hits the 2 percent inflation target but the consensus is that tight labor markets justify tightening now. Analysts do not expect the new Fed chair, Jerome Powell, to rock the boat by changing course in 2018.

Wages have not yet fully responded to tight labor markets, partly due to the dismal record of low labor productivity. Productivity in the U.S. economy grew only .8 percent over the past five years. Much of the explanation for low productivity rests on labor market shifts to lower productivity service jobs along with a lack of private investment in productivity enhancing technology and capital equipment. To stay on a trend growth track above 3 percent, productivity growth needs to be on track to grow around 2.5 percent. While it is controversial, many analysts are now considering how the new tax plan might stimulate higher wages, higher quality manufacturing jobs, improved private investment in technology, and new incentives for work. These are many of the missing ingredients for higher productivity growth.

Low expected inflation continues to keep a lid on long-term rates, but the yield curve is slowly getting steeper as a weaker dollar and increased federal government deficits slowly put upward pressure on longer-term rates. Low interest rates, healthy after-tax earnings projections, and strong sentiment are all keeping equity values growing.

Revisiting the Taylor Rule and Directions of Fed Policy

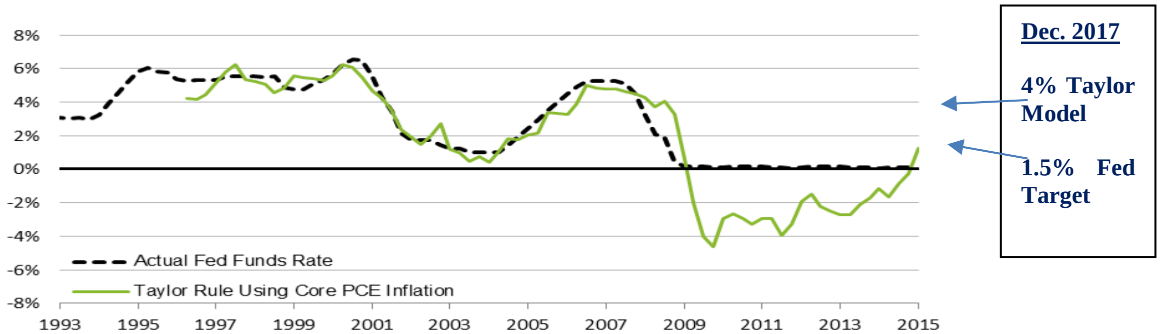
In a 1993 study, Professor John Taylor of Stanford University developed a guideline for how the Federal Reserve Bank should manage the fed fund rate in response to economic conditions. The "Taylor Rule" is a simple model that measures the prudent federal fund rates for short-term stabilization of the economy while also maintaining long-term growth. The rule begins with a 2 percent "real rate" and adjusts for inflation, deviation from an inflation target, and deviation from full employment output. Taylor constructed the following model to approximate the level of the appropriate fed fund rate (r_{Fed}):

$$(r_{Fed}) = .02 + p + .5\,(p - p^*) + .5\,(y - y^*)$$

where p is the inflation rate, p* is the Fed target inflation rate, y is the current level of output growth, and y* is the full employment output growth. Fed fund rate targets go up when inflation exceeds the Fed target and when real output exceeds full employment potential output. The policy response coefficients (.5) come from estimates of Fed policy response decisions over time.

Fed policies clearly deal with complexities in the economy using discretion rather than rules. Responses to inflation or output gaps may be relatively larger or smaller than the predicted response coefficients of .5, depending on what the Fed is considering at that point in time. For example, Ben Bernanke posits a modified Taylor Rule with an output response coefficient of one, reflecting a bias that the Fed is more responsive to deviations from full employment output. Figure 1 illustrates the movement of fed fund rates compared to the prescribed rates from Bernanke's modified Taylor model.

Figure 1. Bernanke's Modified Taylor Rule Relative to Actual Fed Fund Rates



Source: https://www.brookings.edu/blog/ben-bernanke/2015/04/28/the-taylor-rule-a-benchmark-for-monetary-policy/

The Fed just moved the fed fund target to 1.5% with plans to make three more increases in 2018. The Taylor rule illustrates how far behind the Fed is with respect to current economic conditions. The inflation gap and the output gap are now both closed with the economy at full employment (4.1%) and 2% inflation. In this case, the traditional Taylor model and Bernanke's Modified model both predict an equilibrium fed fund rate of 4% (2% real and 2% inflation). Fed policy is now playing catch-up with about 250 basis points to makeup, and it would not be surprising to see more aggressive interest rate hikes in 2018.

The Fed – Abnormally Low Fed Fund Rates

The Federal Open Market Committee raised the fed fund target from 1.25% to 1.5% at the latest meeting. The real fed fund rate remains below zero, signaling easy money conditions. While the Committee recognized that inflation remains below the 2% target, the falling unemployment rate raised concern that inflation will pick up in 2018. The Fed plans three more rate hikes for 2018. The Fed's long run equilibrium fed fund rate is 2.75%, which is 125 basis points below what the Taylor Rule suggests for a normal policy in full employment and target inflation conditions. Janet Yellen's last meeting as chair of the Federal Open Market Committee will be in January. The next chair, Jerome Powell, should remain on the same course, although there is still some concern that the economy is not yet at the 2% inflation target.

Recent projections by the Fed call for slightly higher GDP growth this year of 2.5%. GDP growth projections for 2018 also increased, with a revision from 2.1% to 2.5%. The Fed's long run growth projection remained at a low 1.8%, which seems to be at odds with the Fed's other projections. The Fed expects unemployment to average 3.9% in 2018 and 2019. Even with higher growth projections and lower unemployment, the Fed left inflation projections unchanged.

Government Deficits, Debt, and the Tax Cut – Can this work out well?

The federal government deficit is rising but it is not for lack of revenue growth. Cumulative tax revenues are 5.3% higher so far in fiscal 2018. Even so, the cumulative budget deficit is running well ahead of last year. Government spending is 6.9% higher so far in fiscal 2018, largely due to disaster relief, growth in Social Security payments and chronic growth in net interest payments on the debt. Table 1 below shows the month my month relationship between Federal government receipts and spending.

Table 1. U. S. Federal Government Budget Surplus/Deficit by Month in Billions of Dollars

	Nov. 2017	**Oct. 2017**	**Sept. 2017**	**Aug. 2017**	**July 2017**	**June 2017**	**May 2017**	**Apr. 2017**
Receipts	208.4	235.3	348.7	226.3	232.0	338.7	240.4	455.6
Spending	346.9	298.6	340.7	334.0	275.0	428.9	328.8	272.2
Surplus/Deficit	**-138.5**	**-63.2**	8.0	**-107.7**	**-42.9**	**-90.2**	**-88.4**	182.4

Source: U.S. Department of Treasury

There should be a serious discussion on how the new tax plan will alter the fiscal budget deficit and ultimately affect the overall economy going forward. Media coverage clearly points out the arguments against the cut. While tax cuts in the past have stimulated the economy and have on balance given the economy a needed boost, critics believe the timing of this tax is bad. Unlike past tax cuts, this plan comes when the economy is drowning in debt. Moreover, while the tax cut is likely to stimulate aggregate demand, the economy is already at full employment. Added stimulation now may only fuel inflation. Finally, economists project that the tax plan will add about 1.4 trillion to the Federal debt over the next decade. As an aside, it is interesting how much play the $1.4 trillion added to debt over a 10- year period has received in the press when the $12 trillion increase over the last eight years hardly raised a journalistic eyebrow.

It is very difficult to predict how tax cuts will work through the economy over time, especially for this tax plan. This tax cut is not a traditional fiscal stimulus plan. Rather, the tax plan generally rests on private sector decisions for using higher after-tax earnings. Favorable decisions include payment of higher wages, salaries, and bonuses and reinvestment of earnings in new technology. Elements of the plan encourage repatriation of profits for investment in the U. S. and a more global competitive tax rate should reverse the flow of jobs overseas. An important aspect of the plan relates to the declining productivity rate in the U. S. Increased investment in productivity enhancing technology and capital has the potential to improve wages, ward off inflation, and stimulate new businesses. As wages improve and attractive jobs evolve, we would expect the labor force participation rate to increase, taking some pressure off inflation and creating a lower full employment rate benchmark. It is not clear how this will work out, but the plan has some upside potential that is rarely covered.

Most analysts looking at the plan seem to be stuck in a static “Phillips Curve” view. Lower unemployment inevitably translates to higher inflation in this view, leading critics of the tax plan to point to the dangers of over-stimulating the economy. A more modern dynamic view is that policies linked to business investment, higher productivity, and improved job creation would shift the Phillips curve down, with a better tradeoff of lower inflation for any given level of unemployment. It is also clear that critics of the tax plan do not believe in supply side dynamics in the economy. Higher trend growth for GDP from the tax cuts would offset much of the concern over lower tax rates.

We are seeing anecdotal evidence that the tax cuts may work as planned. A number of firms have announced that they have new room under the tax plan to pay higher wages and offer worker bonuses. Only time will tell, but the “everything else equal” assumptions that economists use when projecting the budget impact of the tax cut misses the point of this tax plan. The plan does not operate with everything else equal; rather the plan has the potential to change many of the bottlenecks in the economy from slumping productivity to job losses overseas. The next step in 2018 will be a plan to invest in infrastructure, which will likely prompt added criticism over the impact on the federal debt.

The Labor Productivity Drag on the Economy

Sagging labor productivity has been an important obstacle to higher growth in the U.S. economy. Over the past five years, productivity grew only 0.8%. Since the last recession, the message has been that "America must learn to do with less and focus on distribution rather than growth." High rates of growth are no longer possible for the U. S. in the new world economy, according to this view. Noted economists such as Robert Gordon (*The Rise and Fall of American Growth*) formally presented these "end of growth" views as the new economic reality.

The pro-growth agenda is a clear challenge to the prevailing attitudes of prior administrations. It is somewhat of an experiment to reverse the attitudes and policies to better align with growth. Higher productivity is a necessary component of the strategy and it is not going to be easy. If the economy is to sustain above trend growth of about 3%, productivity must grow about 2.25%. The following list represents initiatives aimed at boosting productivity over time:

- Streamline regulatory and administrative inefficiencies,
- Promote better education in math, science and engineering,
- Extend job and vocational training,
- Incentivize research and development spending,
- Stimulate private investment spending on new capital equipment,
- Accelerate adaptation to better technology.

The lag in wages has been partly responsible for the lack of investment in productivity enhancing technology and capital equipment. Higher wages and higher labor costs provide strong incentives for businesses to invest more heavily in productivity enhancements. Even so, it takes time to make large gains in productivity even with stronger business formation, better matching of labor skills to openings, lower regulation, and an older workforce.

The Inventory to Sales Puzzle – Economy back on Track?

Prior to the 2008-2009 recession, the inventory to sales ratio trended downward, as illustrated in Figure 2 below. The general explanation for this trend at the time centered on greater efficiency in inventory management and "just in time" supply chain practices. The emergence of online commerce also contributed to leaner inventories, since showrooms and physical examples of products played a smaller role in sales. The upward spike in 2009 is typical during a recession where sales fall more than expected, leaving unwanted inventory. The subsequent slashing of inventory orders deepens the recession until the inventory cycle regains a balanced footing. This adjustment normally takes place quickly in the post-recession period.

Figure 2. Business Inventory to Sales Ratio

Source: Federal Reserve Bank of St. Louis (FRED), Census Bureau

The puzzling observation in all of this is the reversal of the downward trend in the inventory to sales ratio outside the recession. It is not likely that businesses became less efficient in inventory management and we know online commerce expanded in the 2009 to 2016 period. Rather, it is more likely that firms systematically overestimated sales growth. The anticipated scenario of a recovery with trend or above trend growth never materialized. While the media touted a recovery, the actual expansion was far below historical standards. Unemployment rates fell, aided by low labor participation rates, but household income remained flat. Extremely low interest rates coupled with low inflation resulted in wealth gains centered on equity asset appreciation rather than real productivity gains that support higher wages for working households. All these factors led to systematic overestimation of sales.

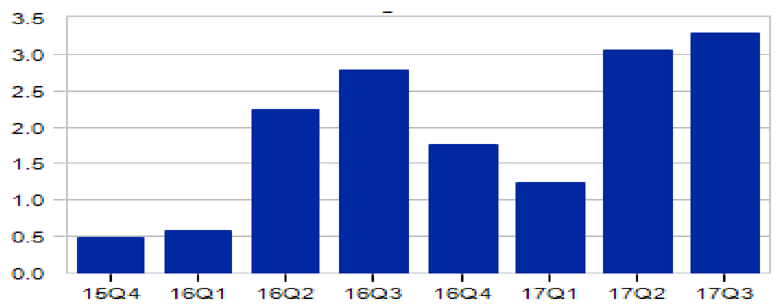
The rise in the inventory to sales ratio following the 2008-2009 recession now appears to be over. Starting in 2017, the inventory to sales ratio is declining again, consistent with more efficient management and online sales growth. A consistent explanation would point to more predictable economic growth and sales expectations. The pro-growth agenda of 2017 has obstacles to overcome, but it would appear that sales are now exceeding expectations. The inventory to sales ratio is returning to the pre-2008 trend. This is good news for the economy since bloated inventories are unproductive investments that ultimately lead to reduced orders in subsequent periods along with deep discounts to move inventory. A healthier business climate is associated with a stable or even slightly declining ratio of inventory to sales. It is probably too early to make strong conclusions from one year of data, but one puzzling relationship that destabilized growth following the last recession may now signal a return to normality and a healthier economic foundation going forward.

Summary of Current Economic Data

GDP and Production *- The economy grew 3.2 percent in the third quarter following 3.1 percent growth in the second quarter of 2017. Fourth quarter growth should also be close to the 3 percent mark. Current dollar GDP reached 19.5 trillion in the third quarter, which is now less than the accumulated value of the national debt.*

- The Bureau of Economic Analysis announced a newly revised 3.2% growth rate for third quarter GDP in the U.S. The economy grew 3.1 percent in the second quarter and fourth quarter growth is also shaping up to also be ahead of the 3 percent mark. Nevertheless, the sluggish 1.2 percent first quarter growth will make it difficult for the economy to achieve an annual rate much above 2.7% for 2017.
- The overall growth pattern of the U.S. economy is improving. Both second and third quarter growth are higher than any other quarterly growth since the first quarter of 2015 and annual growth should exceed the 2.6% growth rate average of the past eight years. Figure 3 illustrates the quarter-by-quarter growth in GDP over the past two years.

Figure 3. Quarterly Percent change in Real Gross Domestic Product (Seasonally Adjusted)



Source: Bureau of Economic Analysis

- Table 2 provides data on the growth in the components of GDP over the last five quarters. Personal consumption expenditures, private inventory investment, nonresidential fixed investment, and exports all provided positive support for growth in the third quarter. Residential fixed investment and imports were the only drags on growth.

Table 2. Annualized Growth Rates of GDP Components

GDP Components	IIIQ 2017	IIQ 2017	IQ 2017	IVQ 2017	IIIQ 2017
Consumption	1.60	2.24	1.32	1.99	1.92
Fixed Investment	0.39	0.53	1.27	0.28	0.25
Fixed Residential Investment	**-0.02**	**-0.30**	0.41	0.26	**-0.18**
Fixed Nonresidential Investment	0.59	0.82	0.86	0.02	0.42
Inventories	0.80	0.12	**-1.46**	1.06	0.16
Net Exports	0.43	0.21	0.22	**-1.61**	0.36
Government	0.07	**-0.03**	**-0.11**	0.03	0.09

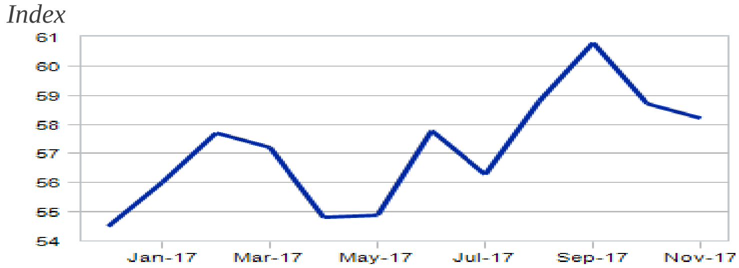
Source: Bureau of Economic Analysis

- Consumer spending has been strong and stable. Fixed investment is now a positive and stable component of growth, but residential investment is more mixed. Government spending is essentially neutral with some volatility from quarter to quarter. Over the past three quarters, a weaker dollar and pro-growth initiatives have helped U.S. exports grow faster than imports, contributing to growth.

- Corporate profitability provided another healthy sign of economic expansion in the third quarter. Corporate profits, with adjustments for inventory valuation and capital consumption increased $91.6 billion in the third quarter compared to an increase of only $14.4 billion in the second quarter. Much of the improvement in profits came from the financial sector as domestic financial corporate profits increasing $60.6 billion in the third quarter after declining $33.8 billion in the second quarter. Profits of U.S. corporations from non-U.S. operations increased $18.6 billion in the third quarter following a decline of $10.8 billion in the second quarter.

- The ISM manufacturing index reflects both manufacturing conditions and sentiment in the economy, measured monthly. The index weakened in October and November, but remains well above the critical reading for an expansion. Overall, an improving global economy along with rising U.S. equity prices and healthy sentiment continue to support the index. Figure 4 shows the ISM index movement in 2017.

Figure 4. ISM Purchasing Managers Index (Index > 50 Signals Expansion)



- Industrial production gained 0.2 percent in November following 1.2 percent growth in October. Manufacturing production also rose 0.2 percent in November, its third consecutive monthly gain. Overall, total industrial production was 3.4 percent higher than one-year ago in November.

- Capacity utilization for the industrial sector remains low at only 77.1 percent in November. November's utilization rate is 2.8 percentage below the long-run average from 1972 to 2016. Capacity utilization for manufacturing was slightly lower at 76.4 percent. Normally, such low capacity utilization rates suggest low inflation pressures.

***Employment and the Labor Market** – The unemployment rate fell to 4.1% in November and job expansion remains strong. A lack of solid growth in wages and prices suggests that the unemployment rate may inch lower before the economy hits full employment.*

- The labor market improved in November with 228,000 new jobs. The composition of job gains was also healthy, with a gain of 62,000 new jobs in production and manufacturing.

- The headline unemployment rate remained at 4.1% in November and October, a figure that is likely to be full employment. However, the participation rate remained flat at 62.7%, which should increase if wages finally respond to tight labor markets and corporate tax cut legislation. Earnings growth remains sluggish with only a 2.5% annualized increase in November. The table below summarizes key labor market data.

Table 3. Job Creation, Unemployment Rate, Participation Rate and Earnings Growth

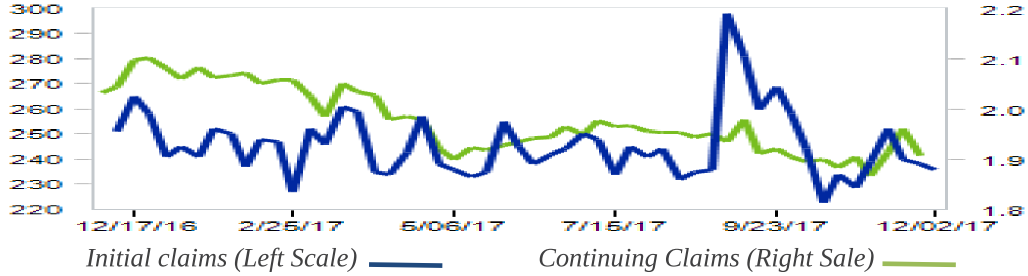
	Nov. 2017	Oct. 2017	Sept. 2017	Aug. 2017	July 2017	June 2017	May 2017
Nonfarm Payrolls (change, thousands)	228	244	38	208	138	210	145
Unemployment Rate (%)	4.1	4.1	4.2	4.4	4.3	4.4	4.3
Labor Force Participation Rate (%)	62.7	62.7	63.1	62.9	62.9	62.8	62.7
Average Hourly Earnings (% change)	0.2	**-0.1**	0.4	0.1	0.5	0.2	0.2

Source: Bureau of Labor Statistics

- Job openings of 6 million represent a record high, based on the October Job Openings and Labor Turnover Survey. The number of hires increased by 232,000 to 5.6 million in October, putting the hires rate at 3.8%. The number of private hires rose 247,000 to 5.2 million, while government hires were little changed. Total separations remained at 5.2 million, putting the separations rate at 3.5%.

- Figure 5 below shows the patterns of jobless claims for both initial unemployment insurance and continuing insurance claims. Continuing claims have trended downward in 2017, suggesting unemployed workers are finding jobs. There are currently 1.908 million unemployed workers with continuing claims in November. Initial claims spiked in September and October, but the series remains centered on 245,000 claims.

Figure 5. Initial and Continuing Unemployment Insurance Claims for 2017



- Productivity (output per hour) in the U.S. remains low and volatile. Over the past five years, productivity has grown only .8%. Overall productivity increased 3% in the third quarter, which is the strongest growth since 2014. Productivity in manufacturing fell 4.4% in the third quarter. Total unit labor costs fell 0.2% at an annualized rate in the third quarter. Table 4 shows the quarter-by-quarter changes in productivity, compensation, and unit labor costs.

Table 4. Quarterly Productivity, Hourly Compensation, and Unit Labor Costs by Sector

Sector	IIIQ 2017	IIQ 2017	IQ 2017	IVQ 2016	IIIQ 2016	IIQ 2016
Nonfarm Businesses						
Output per Hour (Annual % change)	3.0	1.5	0.1	1.3	2.5	0.8
Compensation per Hour (Annual % change)	2.7	0.3	4.9	**-4.5**	2.5	4.8
Unit Labor Costs (Annual % change)	**-0.2**	**-1.2**	4.8	**-5.7**	0.1	3.9
Nonfinancial Corporations						
Output per Hour (Annual % change)	0.0	3.3	2.0	**-4.5**	5.9	**-2.0**
Compensation per Hour (Annual % change)	2.5	0.2	4.3	**-3.6**	1.9	3.7
Unit Labor Costs (Annual % change)	2.5	**-3.0**	2.3	0.9	**-3.7**	5.9
Manufacturing						
Output per Hour (Annual % change)	**-4.4**	3.6	0.2	2.0	**-0.5**	-0.8
Compensation per Hour (Annual % change)	0.2	2.3	4.4	**-4.2**	2.6	7.1
Unit Labor Costs (Annual % change)	4.8	**-1.2**	4.2	**-6.1**	3.1	8.0

Source: Bureau of Labor Statistics

- Productivity should improve as business investment improves and the labor market tightens. Even so, gains will be slow. Compensation should improve with the tight labor market and with corporate tax cuts allowing more room for worker compensation.

***Consumer Income, Saving, and Debt** – Real disposable income increased .5% in the third quarter after a 2.7% increase in the second quarter. The savings rate fell to 3.3% in the third quarter. Household wealth is building due to strong housing and stock market valuations.*

- Real disposable income increased 0.5% in the third quarter following a 2.7% increase in the second quarter. Real consumer income gains have been modest relative to spending increases. The savings rate fell to 3.3% at the end of the third quarter, which is the lowest level since 2007.

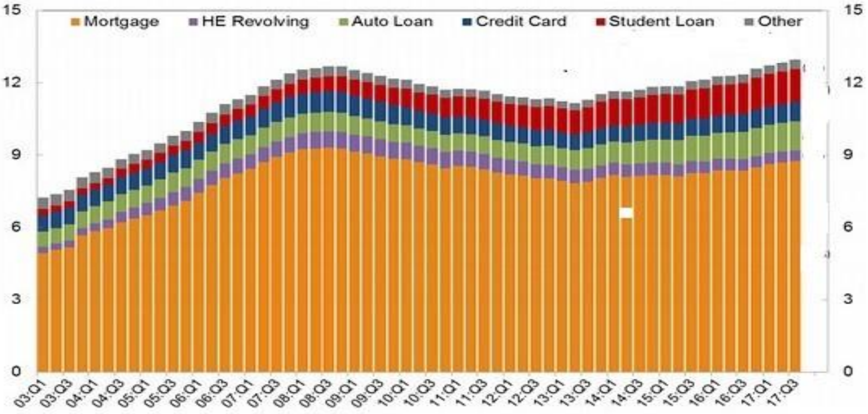
- While consumer income growth has been sluggish, gains in household wealth have been more robust. Historically low interest rates have supported asset value appreciation for both housing and stocks. Continued strength in the economy requires long-awaited gains in wages and salaries that are slowly developing as the economy hits full employment.

- Consumer borrowing is providing a less healthy source for consumer spending. Lending standards have eased and borrowing is picking up. Nevertheless, debt burdens and financial obligations of households are hovering around their lowest levels in 35 years.

- Aggregate household debt balances increased to 12.86 trillion dollars in the third quarter, increasing by 0.9% from the second quarter. Household debt is now 280 billion dollars higher than the prior peak set in the third quarter of 2008. Figure 6 illustrates the pattern of household debt growth for each of the debt components since 2003.

Figure 6. Aggregate Household Debt since 2003 by Debt Component

Trillions of Dollars



Source: New York Fed Consuner Credit

- Aggregate delinquency rates eased up slightly in the third quarter of 2017. About 4.9% of outstanding debt was in some stage of delinquency at the end of the third quarter.

***Inflation** – Inflationary pressures should build due to higher GDP growth. Even so, the inflation measure used by the Fed (PCE) has yet to exceed the 2% target. Premature Fed tightening may lead the market to lock in a long-term inflation outlook below the Fed's optimal target. If inflation does not pick up, the Fed may pause in January rather than announce another increase in the fed fund rate.*

- Inflation, measured by the personal consumption expenditure deflator (PCE), remains below the Fed's 2% target. Year-over-year inflation for the headline PCE was 1.6% while the core rate was only 1.4%.

- On a year-ago basis in November, the headline CPI increased 2.2% and the core rate was up 1.7%. The Table below summarizes the annual inflation rates by month for both the personal consumption expenditure deflator (PCE) and the consumer price index (CPI).

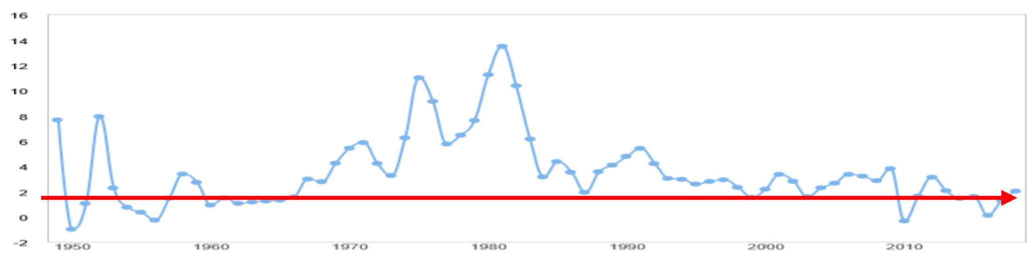
Table 5. Year over Year Inflation Rates by Month for the PCE and CPI Indexes

Inflation Measure	Nov. 2017	Oct. 2017	Sept. 2017	Aug. 2017	July 2017	June 2017
Personal Consumption Expenditure (PCE)	1.6	1.7	1.4	1.4	1.4	1.5
Core (PCE)	1.4	1.4	1.3	1.4	1.5	1.5
Consumer Price Index (CPI)	2.2	2.0	2.2	1.9	1.7	1.8
Core (CPI)	1.7	1.8	1.7	1.7	1.7	1.7

Source: Bureau of Economic Analysis

- Inflation should gradually return to the 2% Fed target as energy prices pick up and as energy prices filter into prices of other core goods. As the U.S. dollar softens, higher prices of U. S. imports should also filter through to higher overall price levels. Figure 7 below illustrates the long run pattern of inflation based on the PCE headline rate. The red line represents the Fed target of 2% optimal inflation.

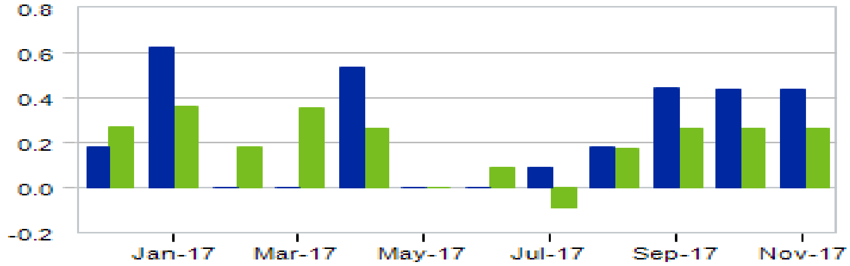
Figure 7. Long Term Inflation Pattern in the U.S.



- The Producer Price Index (PPI) for final demand has been gaining strength in the last few months. The 0.4% increase in November matched the gain in October. On a year-over-year basis, final demand prices grew 3% in November after increasing only 2.7% at the end of October.

- Much of the recent growth in the PPI stems from higher gasoline prices. Excluding food and energy, the PPI is growing along a trend of about .3% per month. Figure 8 shows the monthly change in the PPI for final demand and core goods.

Figure 8. Producer Price Index for Final Demand and Core Goods by Month

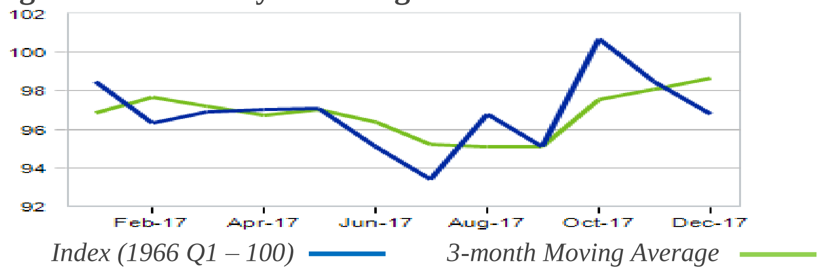


Final Demand *Core Goods* *Source: Bureau of Economic Analysis*

Sentiment and Confidence *– Sentiment remains high but there was some tapering off toward the end of 2017. Leading indicators continue to signal an expanding economy.*

- The University of Michigan Consumer Sentiment Index fell 1.7 points in December. The index is down 1.4 points from one year ago. While sentiment is softening, the overall level of the index remains high. A majority of respondents reported an improvement in household finances over the past year. Approximately 62% of respondents reported better business conditions over the year. Figure 9 shows the Michigan index over the past year.

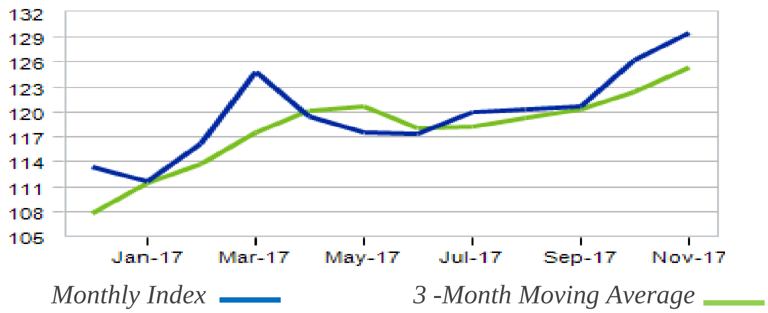
Figure 9. University of Michigan Consumer Sentiment Index



- Respondents to the Michigan survey reported higher inflation expectations in December. The 12-month inflation expectation edged up to 2.8% and long run inflation expectations increased to 2.5%.

- The Conference Board's index of Consumer Confidence improved in November, reaching and index value of 129.5 (see Figure 10). The November index is the highest reading since December of 2000.

Figure 10. Consumer Confidence Index (Index = 100 in 1985)

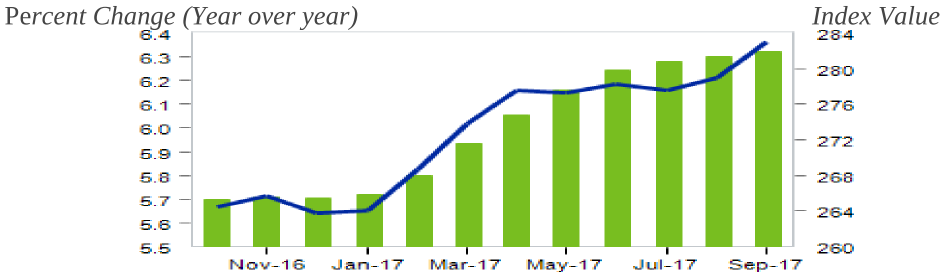


- The Conference Board Leading Economic Index for the U.S. increased again in November, suggesting continued growth into early 2018. The index increased .4% to 130.9 in November following a 1.2 percent increase in October and .1 percent increase in September. The index is better at predicting downturns than signaling upturns.

***Housing** – Housing prices increased over six percent in 2017 and limited inventory should keep housing prices rising well into 2018. Mortgage rates remain low and prospects for higher wages and salaries in 2018 should keep housing demand strong.*

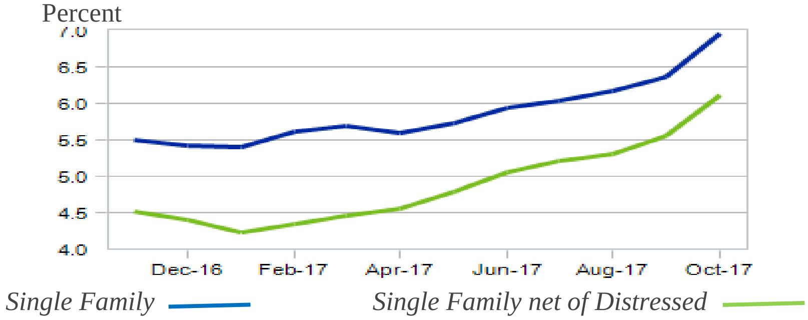
- Based on the Black Knight Home Price Index, house prices increased 6.4% on a year-over-year basis in September. The Black Knight index tends to be in line with other housing price measures. Figure 11 shows the Black Knight Index over the past year.

Figure 11. Black Knight Home Price Index



- The CoreLogic Home Price Index (Figure 12) gained 7% on a year-over-year basis in October. The monthly increase was 0.9% in October for the second month in a row. The index has gained month over month for sixty consecutive months. The key driver of higher housing prices tends to be the limited supply. The inventory-to-sales ratio is at a cyclical low.

Figure 12. CoreLogic Price Index (Single Family and Single Family net of Distressed)



***U. S Trade Account** – The trade account continues to be a drag on GDP growth but the weaker dollar and improved global growth offer tailwinds for exports. 2018 may be the year where new trade agreements address chronic deficits and seek more balance in trade relationships.*

- The U. S. trade deficit increased to $48.7 billion in October. The October deficit was the largest since January, largely due to stronger imports rather than lower exports. Trade is shaping up to be a drag on GDP growth in the fourth quarter.

- The trade account accumulated a deficit of $462.9 billion in the first 10 months of 2017 compared with a deficit of $413.8 billion in the same period a year earlier. Exports were up 5.3% and imports were 6.5% higher.

- The value of a dollar generally moves in tandem with the yield on Treasury notes. Higher yields (lower prices for Treasury notes) relates to lower demand for dollars. Figure 13 shows the trade-weighted value of a dollar over time. Prolonged strengthening of the dollar paused early in 2017. A weaker dollar in 2017 corresponds with slightly higher Treasury yields.

Figure 13. Trade Weighted Value of a Dollar (1997 = index of 100)

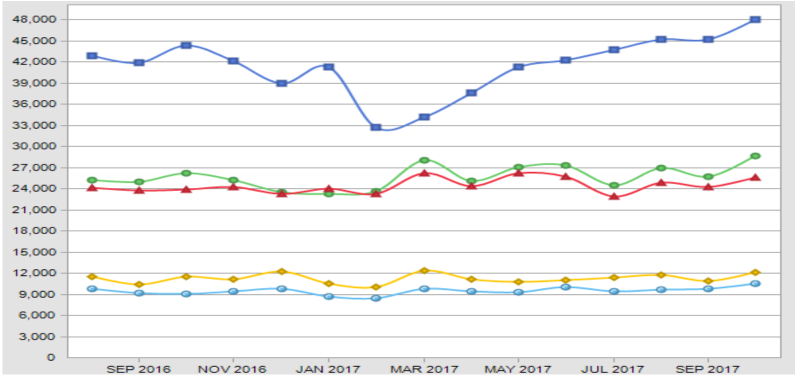
Source: Federal Reserve Bank of St. Louis (FRED)

- The U.S. dollar has depreciated since the beginning of the year, improving the competitiveness of U.S. exports. The global economy has firmed and faster growth overseas should drive stronger demand for U.S. products.

- Figures 14 and 15 show the composition of the top five countries selling to the U. S. and top five countries buying from the U.S. China has the largest trade imbalance with the U. S. and is likely be the focus of any new trade arrangement in 2018.

Figure 14. U. S. Imports by Top Five Countries - U.S. International Trade Commission

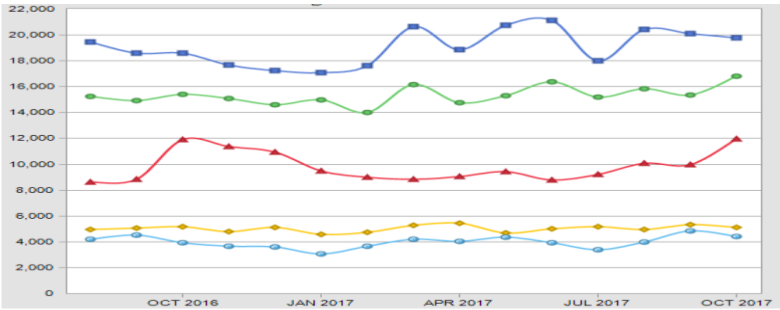
Millions of Dollars



China **Mexico** **Canada** **Japan** **Germany**

Figure 15. U. S. Exports by top Five Countries – U. S. International Trade Commission

Millions of dollars



Canada **Mexico** **China** **Japan** **United Kingdom**

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