

Minutes of the Federal Open Market Committee

November 30 - December 2, 2016

A meeting of the Federal Open Market Committee was held in the offices of Bowman 110 on Wednesday, November 30, 2016 and Friday, December 2nd, 2016.

PRESENT:

Bailey Kratz

Luke Hill

Jordon Weatherwax

Julio Raimundo

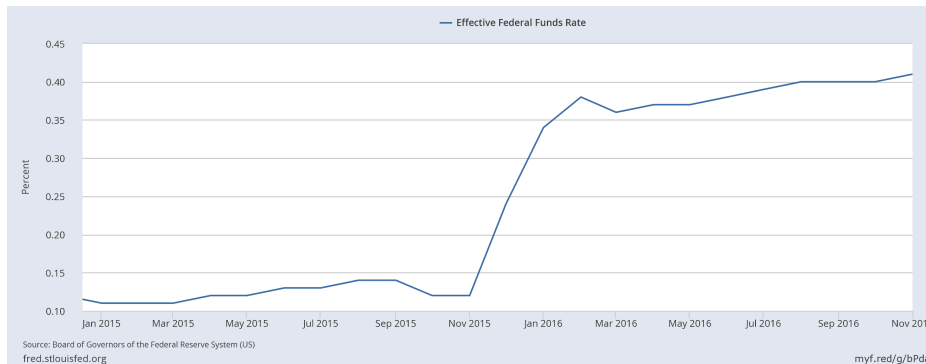
Spencer Keaton

Zellie Wothers

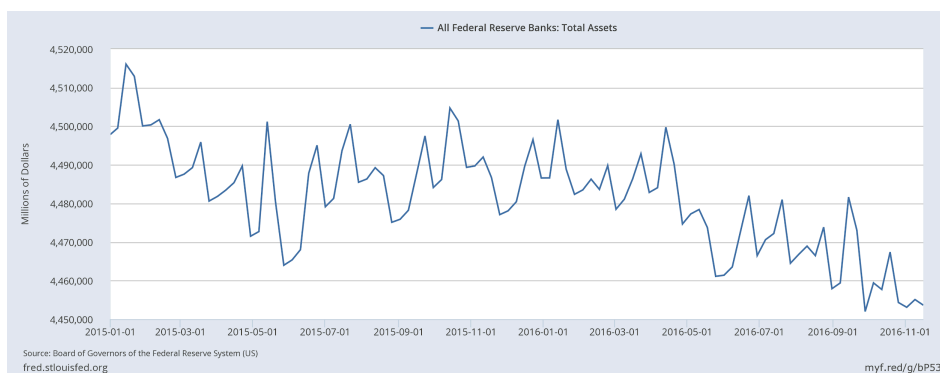
Our discussion will be covering the developments in financial markets, a review of the economic and financial situations, views of the current conditions and economic outlook, which will lead to a decision on necessary policy changes. Indicators discussed include real GDP, levels of employment, exports, and consumption, among others. We will reach a decision on any necessary change in monetary policy in order to stimulate economic activity while maintaining a low unemployment rate based on changes in these factors.

Developments in financial markets and the Federal Reserve's balance sheet

The effective federal funds rate increased drastically since the end of 2015. The percent change went from .11 in January 2015 to .34 in January 2016. In the past year the rate has increased slowly. The most recent percent change recorded by FRED is from November 2016 and is at .41.

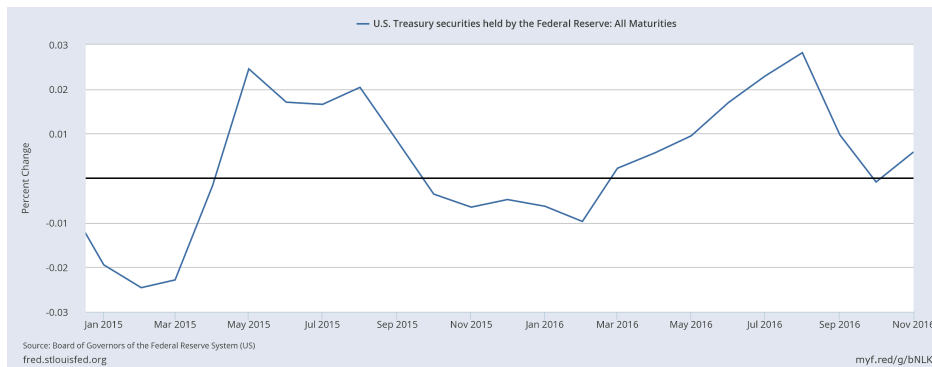


The federal reserve's total assets have been very unpredictable in the past year. Starting in the mid 4,480,000's millions of dollars, the total number has decreased to 4,453,000 from October to November having spurts of growth and decline in the past months. This is illustrated graphically below.



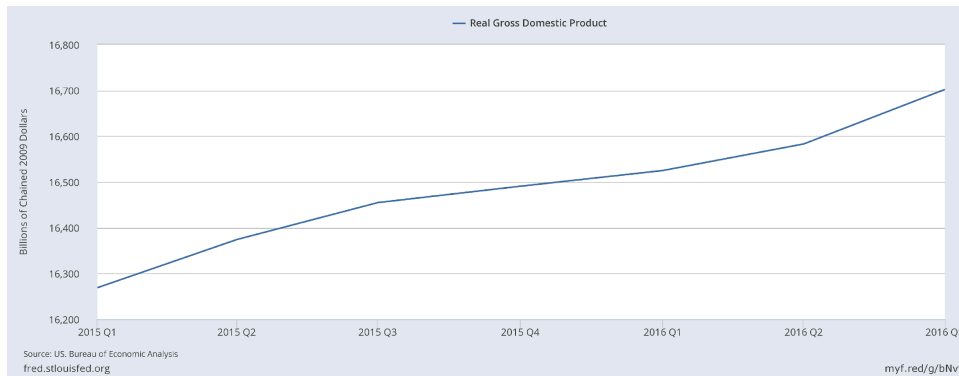
The U.S. Treasury securities held by the Federal Reserve have not been consistent over the past two years. Although there have been fluctuations between a negative percent change and

a positive percent change, in the past month from October to November, the percent change has increased from -0.00085 to 0.00589. This is shown in the U.S. Treasury securities held by the Federal Reserve: All Maturities.

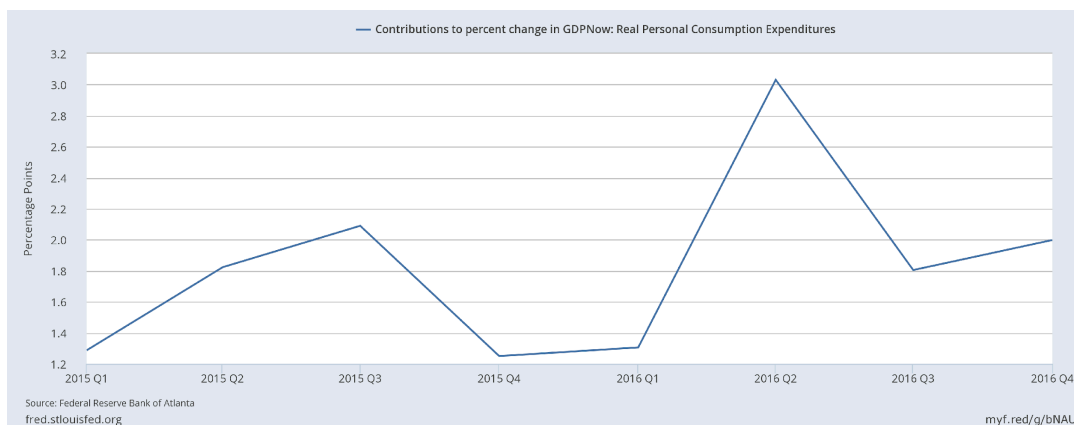


Review of the economic situation

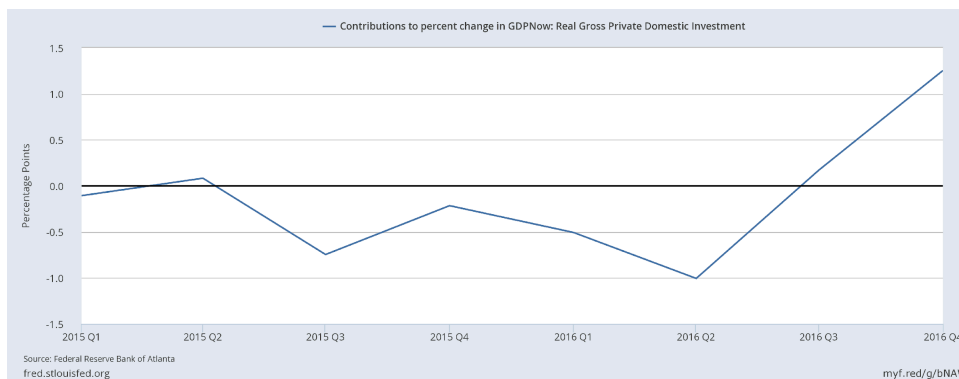
Real gross domestic product has steadily increased since the first quarter of 2015. During the third quarter of 2016, it increased at an annual rate of 2.9 percent, up from 1.4 percent in the second quarter of 2016. At the beginning of 2015, Real GDP was at 16,269 billion Chained 2009 dollars. At Quarter 3 of 2016, Real GDP is now at 16,702.1 billion Chained 2009 dollars. This past quarter it increased by 119 alone, which is the largest increase in the past two years. The increase in Real GDP this past quarter occurred due to an increase in personal consumption expenditures, exports, private inventory investment, federal government spending, and nonresidential fixed investment.



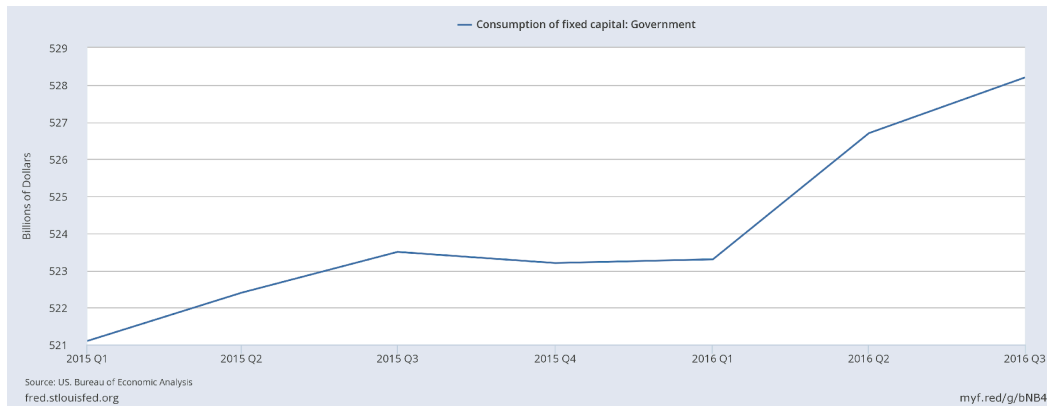
The factors that helped increase Real GDP had fluctuations in their data since the beginning of 2015. Real Personal Consumption Expenditures have fluctuated significantly over the past few years, and are at a pretty medium relative level at the end of the third quarter 2016. Expenditures were high at the end of 2014, before rapidly decreasing back to 1.2879% change in the first quarter of 2015. Expenditures increased during the first half of 2015, reaching a peak of 2.0903% change in quarter 3. They then decreased to 1.2506% change in quarter 4 of 2015 before slightly increasing to 1.3062% change in quarter 1 of 2016. During the first quarter of 2016, expenditures rapidly increased to a peak of 3.0314% change at quarter 2 of 2016. By quarter 3, they decreased back to 1.8051% change and look to be increasing slowly into the final quarter of 2016. These fluctuations have been normal over the past few years.



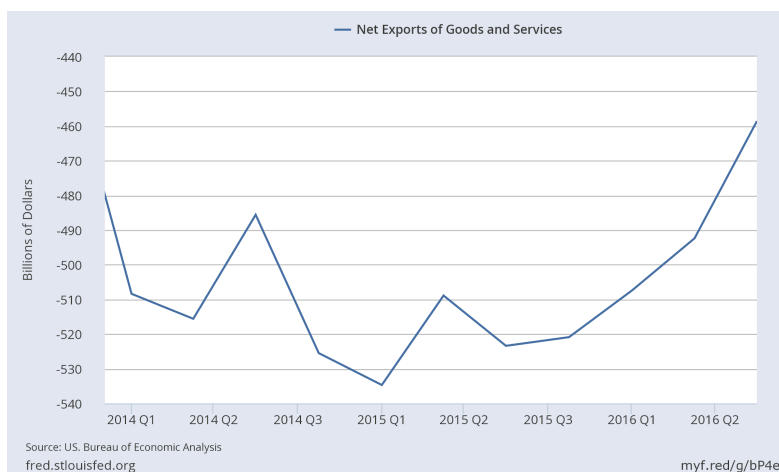
Real Gross Private Domestic Investment began from a -0.1057% change in quarter 1 of 2015, then rose to 0.0837% change in quarter 2. From there it decreased quite rapidly to -0.7454% change in quarter 3. In quarter 4 of 2015, it increased to -0.2417% change before decreasing again through quarter 2 of 2016, to a minimum of -1.0053% change. Since quarter 2 of 2016, Real Gross Private Domestic Investment has been increasing steadily to a 1.4547% change at the end of the third quarter of 2016. This is shown in the graph below.



Government consumption of fixed capital has been increasing overall essentially forever, although the rate of increase has slowed since about 2012. Looking at the past few years, consumption of fixed capital increased steadily from the beginning of 2014 until quarter 3 of 2015, where it essentially plateaued around \$523 billion until the start of 2016. From there it began increasing again and at quarter 3 of 2016 stood at \$528.2 billion. The latter part of this can be seen in the graph below.

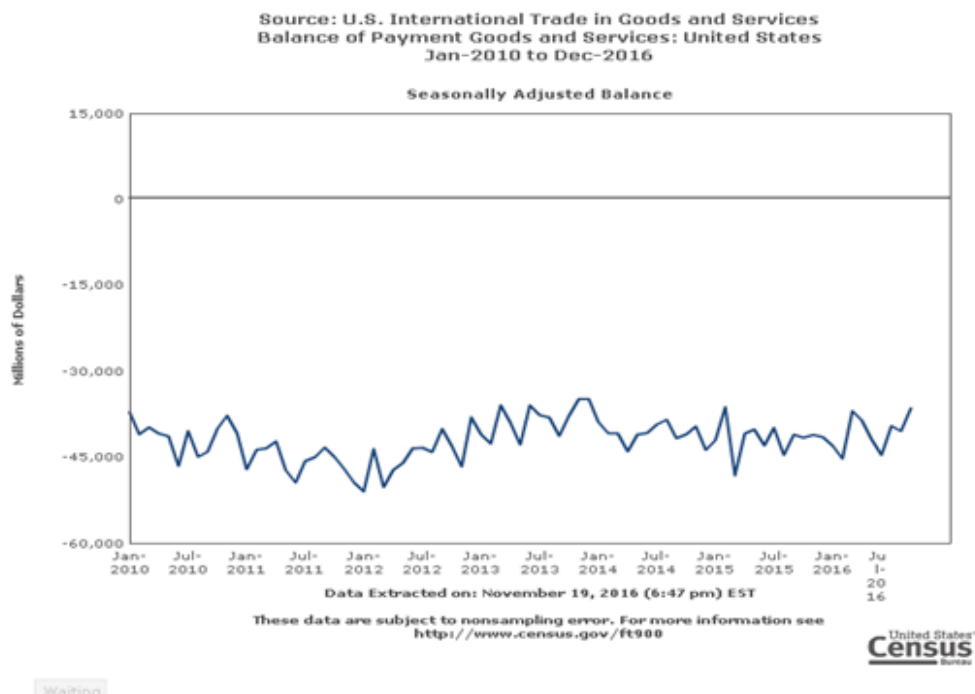


Net exports have continued to increase since quarter 3 of 2015. The level of net exports varied fairly significantly prior to 2015, reaching a recent minimum of \$-534.7 billion in the first quarter of 2015. Exports increased to \$-508.9 billion in the second quarter, before dropping back to \$-523.4 billion by the start of the third quarter of 2015. Exports have increased since, slowly during the rest of 2015 and then more rapidly throughout 2016 thus far, reaching a peak of \$-458.6 at the beginning of the third quarter of 2016. This is displayed in the graph below.

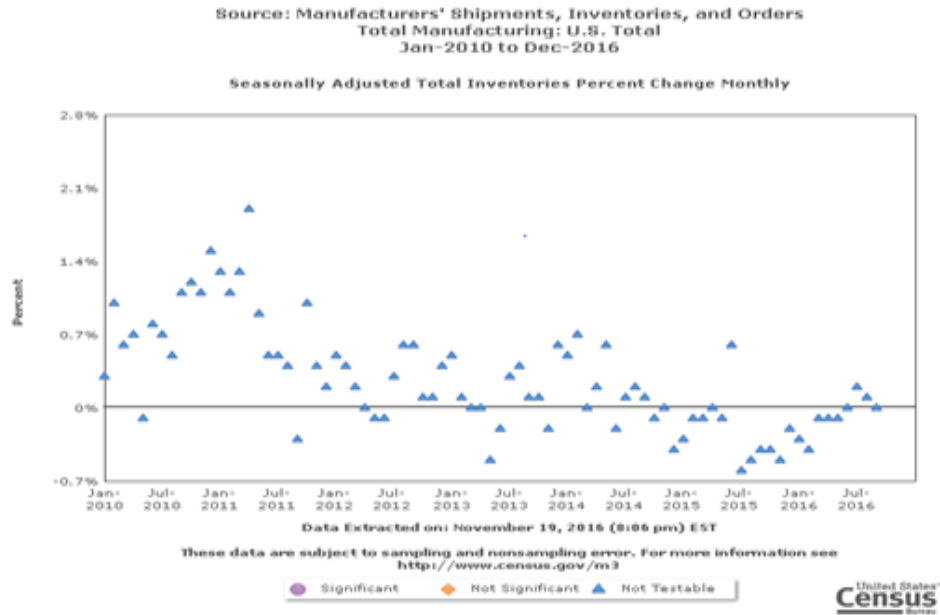


The trade balance deficit on goods and services for the United States increased in the month of August to \$-40,462 from \$-39,547 in July. The trade balance deficit decreased from August to September from \$-40,462 to \$-36,440. This is lower than it was in July and the lowest the trade deficit has been in 2016. This is a positive sign for the economy; the decrease in the

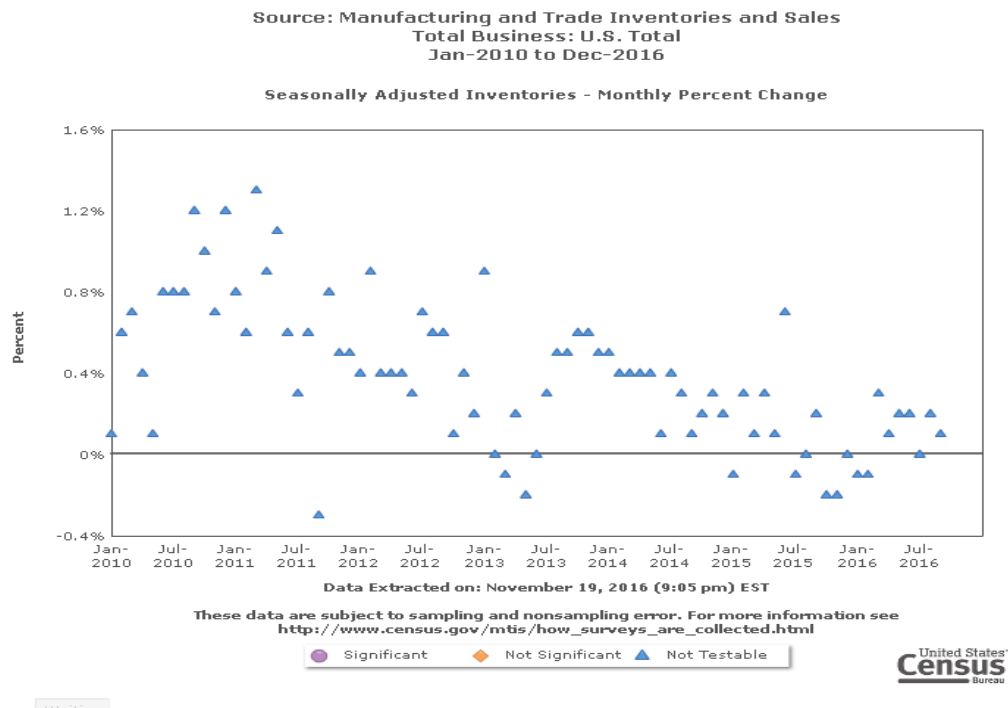
trade deficit shows that U.S. firms are becoming more competitive which will result in an increase in GDP. The trade balance does move considerably per month and therefore the decrease in the deficit does not necessarily suggest that there should be a major policy change. Over the past six years, the trade balance has fluctuated, and the average of each year remains to be very similar in the past six years, resulting in no real substantial change in the trade balance. The lack of change in the trade balance is due to the fact that the U.S. economy has not been able to be competitive with exports and therefore has resulted in a trade deficit.



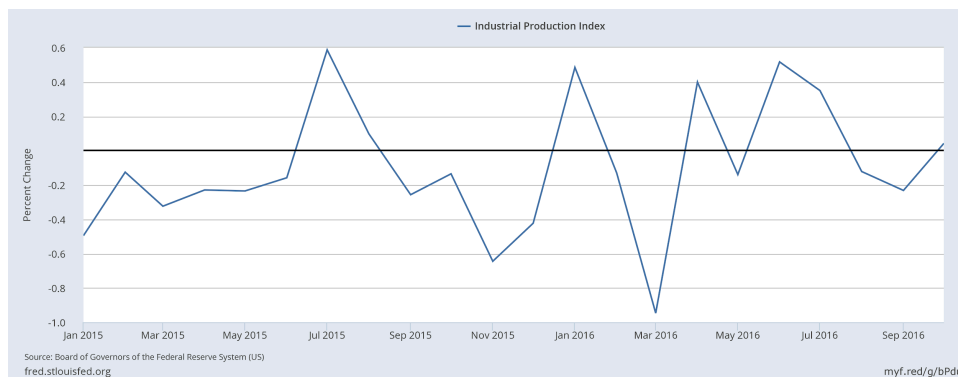
The percentage change in total manufacturing since July has increased by .1 in August and did not change in September. This data shows that the economy is strong in the manufacturing industry and there is plenty of room for growth in total manufacturing.



The manufacturing and trade inventories and sales report shows that there has been an increase in inventories since July. The increase was by .2 percent in August and a .1 increase in September. The change in sales was a slight increase by .2 percent. Since 2010 there has been a steady decrease in the inventories of U.S., but there has been relatively around the same percentage in sales. This could be the result of a change in the ways industries are doing business and have decreased their inventories in order to be more efficient. The overall result of this is no real change in sales in the past six years. This shows that the economy is healthy because we are not seeing a decrease of sales in the economy.

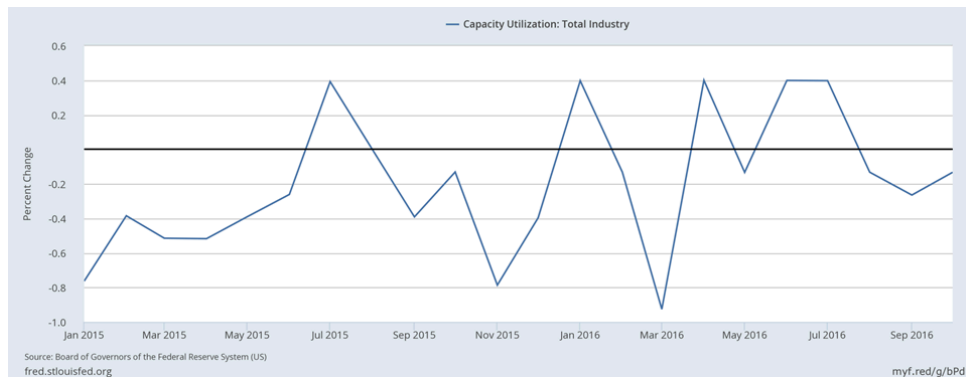


Industrial productions have fluctuated quite dramatically over the past year. In March of 2016, the percent change was a -0.94671, which is its lowest point since the beginning of 2015. In the recent months, the percent change has not been as volatile. In October 2016 it was a positive 0.04212% change.



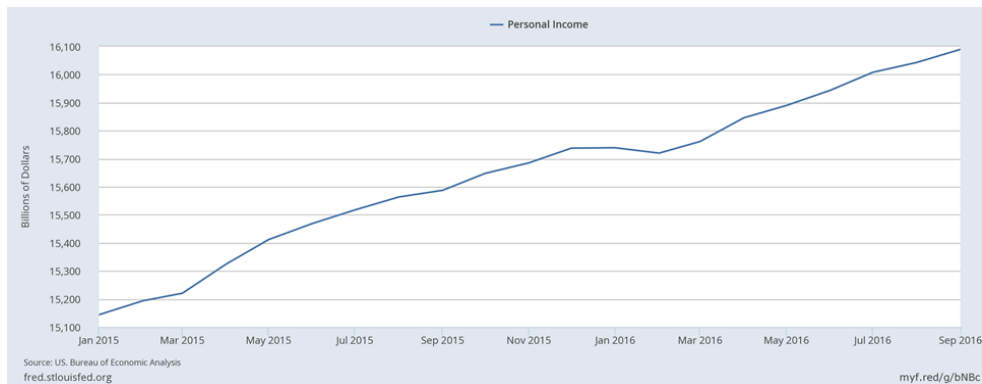
Capacity utilization has also fluctuated over the past year and has an extremely similar graph to industrial productions. Capacity utilization has its lowest point at March as well at a

percent change of -0.92593. Between September and October, although the percent change was negative, there was an increase. The percent change went from -0.26455 to -0.13263. In the past three months of data, between August and October, the fluctuations have not been nearly as severe as the rest of the year.

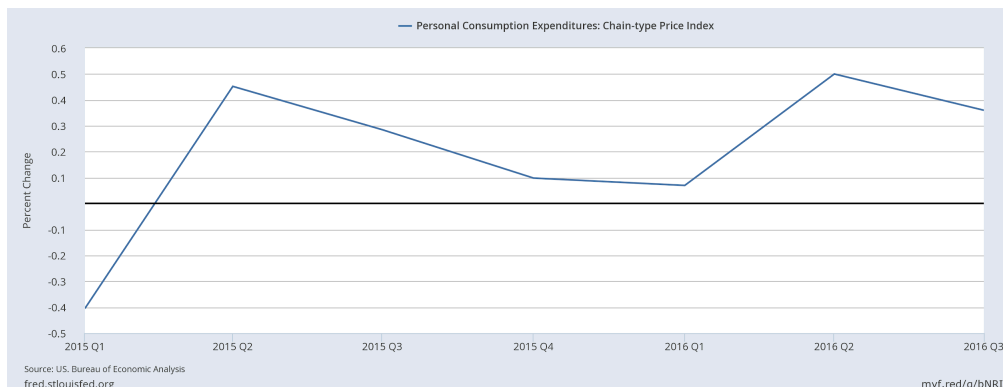


Personal income has steadily increased since January of 2015. There have not been many negative fluctuations. The biggest fluctuation that occurred was in February 2016, but it quickly recovered by the next month. The most recent data from September 2016, has a personal income of \$16089.7 billion. Since the beginning of 2016, personal income has increased by \$350.7 billion. Personal income increased recently in September and caused an increase in compensation of employees and nonfarm proprietors' income. Disposable personal income and personal consumption expenditures also increased. The increase in personal consumption expenditures has helped increase the spending for durable goods. Although it is clear that personal income, disposable personal income, and personal consumption expenditures have increased, personal savings does not have the same clarity. After March 2016, personal savings started to decrease and did not increase again until June 2016. The lowest point between 2015-2016 occurred at March 2015 and was \$709.7 billion. The highest point was in March 2016

and was at \$860.4 billion. The latest point recorded by the Fed was in September and was at \$797.8 billion.

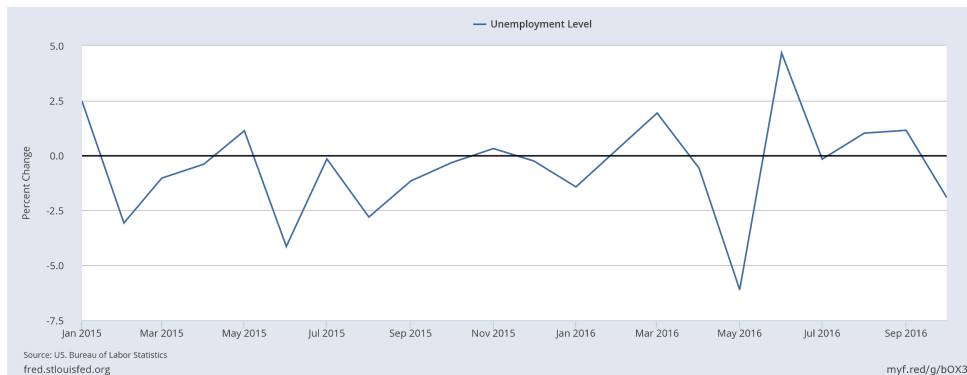


Looking at Personal Consumption Expenditures: Chain-type Price Index, there has been a decrease in quarter three since the last quarter. In quarter two of 2016 there was a percent change of .5, but this past quarter there was only a percent change of .4. The lowest percent change since the beginning of 2015 occurred in quarter one of 2015. This percent change was -.4, which is 1% lower than the recent percent change.

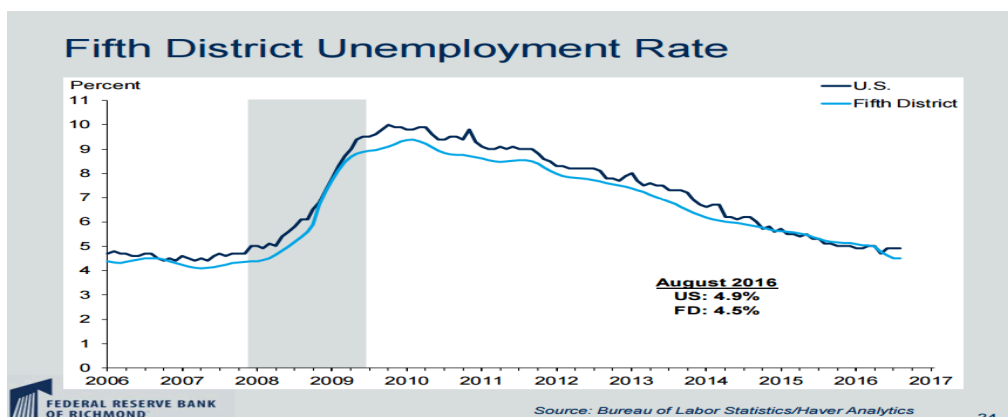


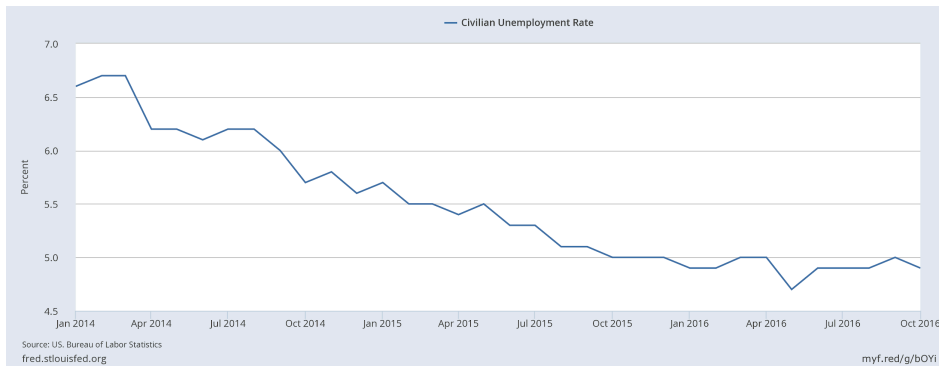
The unemployment level has decreased by a large amount since the beginning of the year 2015. This number reached a low this past May and began to rise back up a little the past few months and is becoming more stable since then. In the last month the unemployment level has

dropped nearly 3.3%. In the past year the total unemployment level has dropped a total of 4.3% from the beginning of January until October of 2016. This can be seen on the graph below.

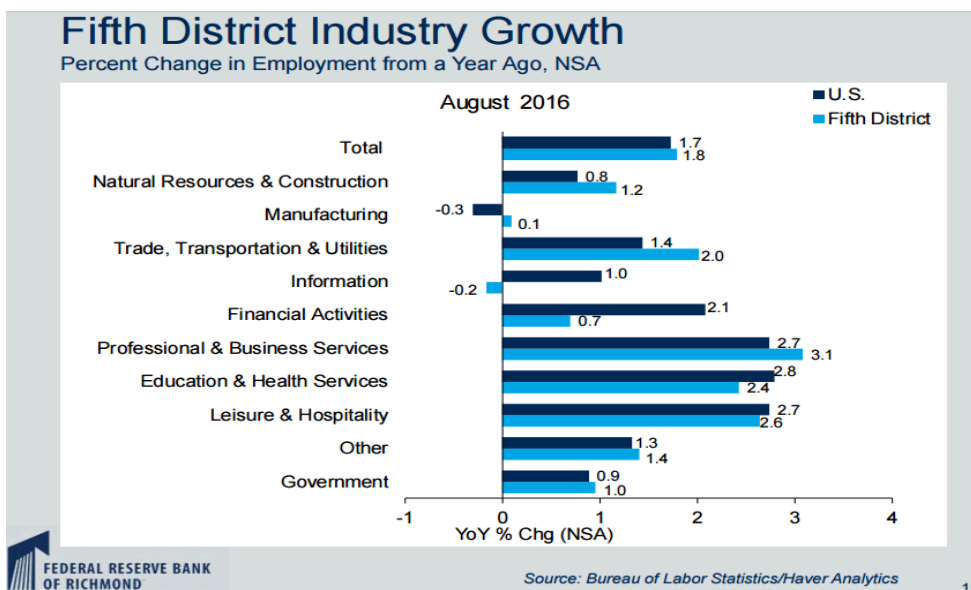


Since January of 2014, the unemployment rate has been on a steady decline from 6.6%. Like the unemployment level, the rate reached a low in May of 2016 of 4.7% and at the beginning of October 2016, was at a rate of 4.9% which is down from a high of 10% in 2010. This rate looks to be very stable at the moment and is healthy at close to 5%. This is because of friction in employment, which keeps the unemployment rate from being extremely low.





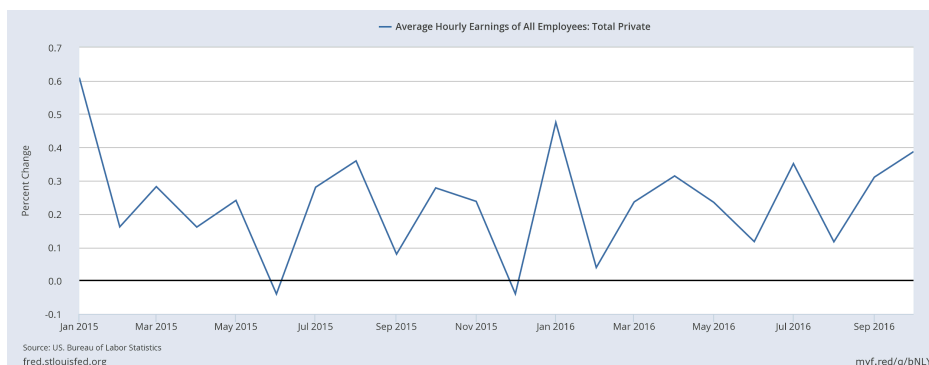
Over the past year there has been an overall increase in employment. The total increase to employment is 1.7 percent. The industries that increased employment consist of Construction, Transportation, Financial Activities, Business Services, Education and Health Services, and Leisure Hospitality. The major industries employment that fell was Manufacturing. Manufacturing fell by .3, which is consistent with the data that shows that exports have not increased, which manufacturing makes up a large part of exports. This is also consistent with America's inability to be competitive in manufacturing.



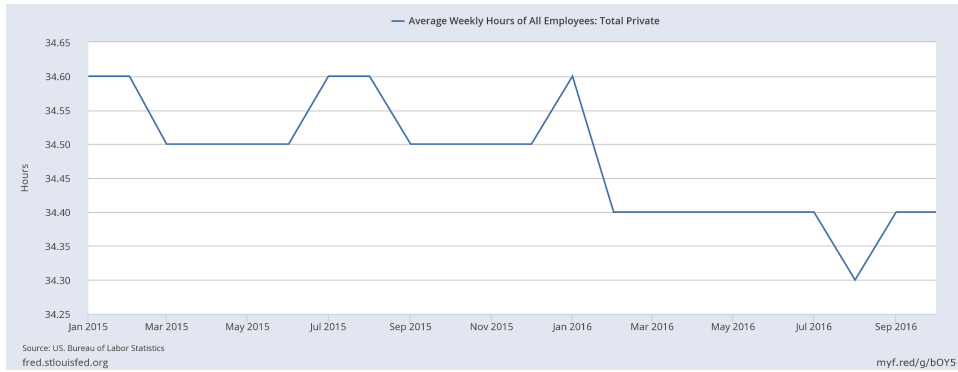
The employment in the US has lowered in the later quarter of the year. In the month of September, the total population of the employment was 151,968 thousand people, the next month

and the beginning of the fourth quarter it when down to 151,925 thousand people. The percent change from September to October is a -0.0283 change in the employment level. You can see that this has not happened during this time period in the past two years, rather, it has always gone up at this time. This could be due to seasonal changes at work, but we will keep a close eye on this to see if this will keep falling in the near future.

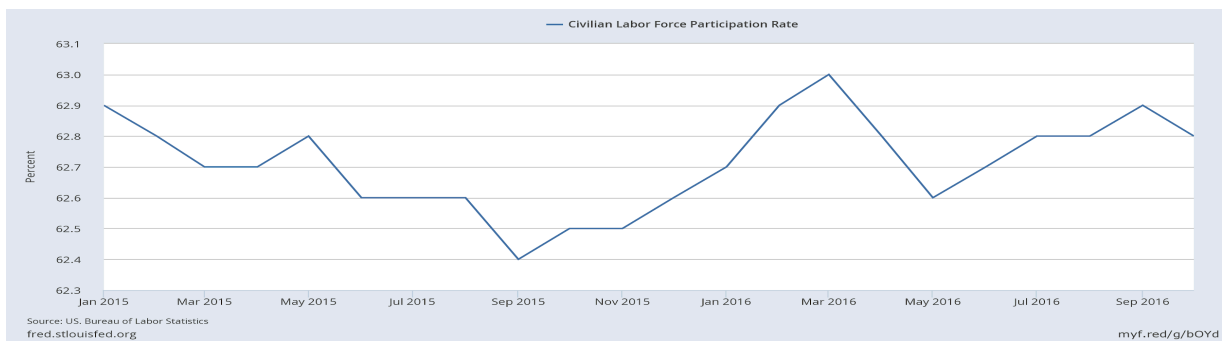
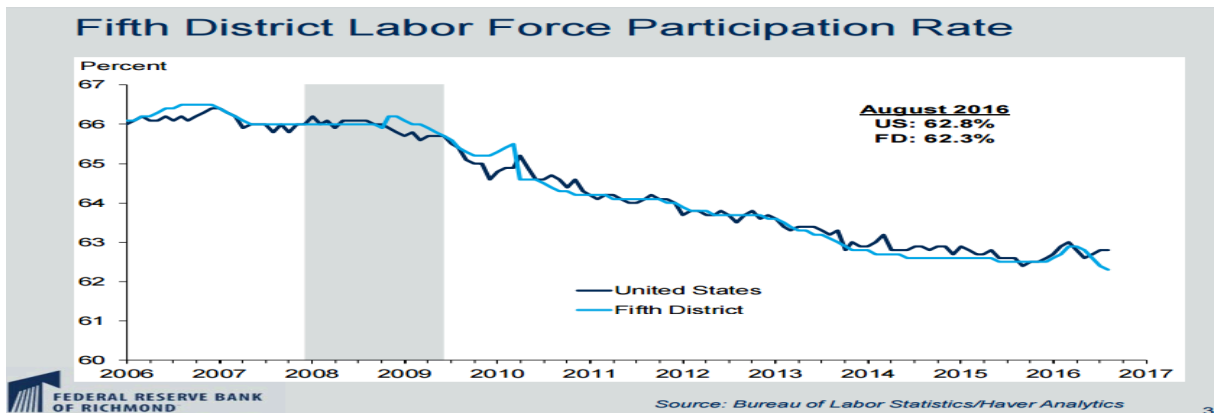
The average hourly earnings of all employees has been in the expansionary phase for many years now. Recently, the average hourly earnings has risen roughly one extra dollar per hour in the last year and half. The percentage change in average hourly earnings has been above zero percent for majority of the last year only to be decreasing in rate of growth. In the past two months, it has risen by about a third of percent.



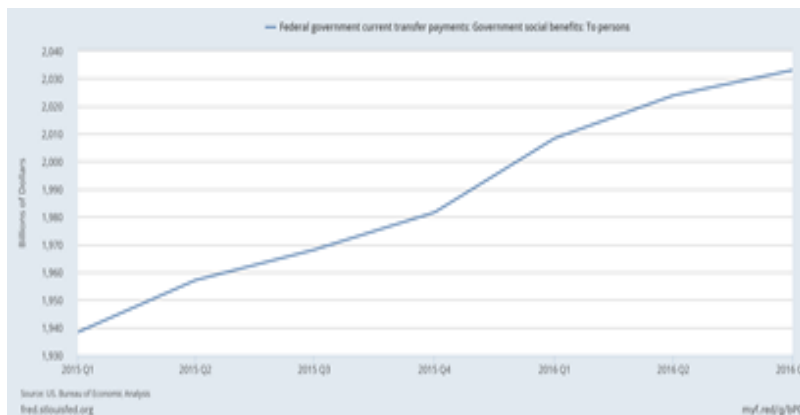
The average weekly hours has seen a fluctuation, but overall a decrease throughout the year. In the past year the average hours have dropped to around 34.4 hours per week. Starting in January of 2015, the average hours per week were around 34.6. The low in the past year came in August 2016 of around 34.3 hours. The average hour work week has been above the current rate for most of the time in the past two years.

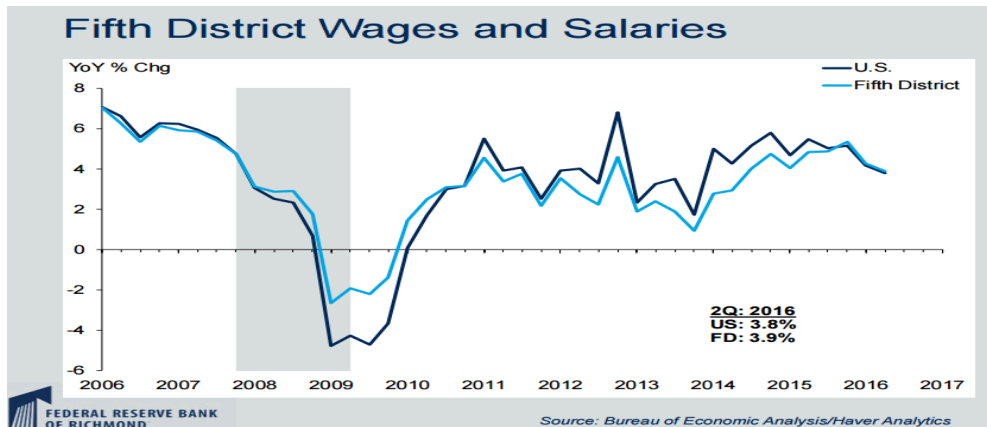


The labor force participation rate has decreased slightly over the past year. From the beginning of January 2015, the rate was at 62.9% and has fluctuated slightly. The low came in September of 2015 of 62.4%, and started the expansion phase and reached a peak in this past May. Over the past three months the rate has been stable at around nearly a 62.8% labor force participation rate.

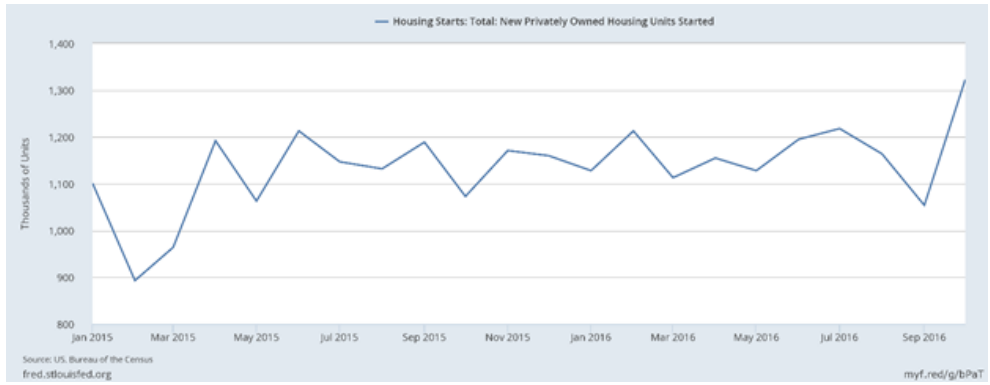
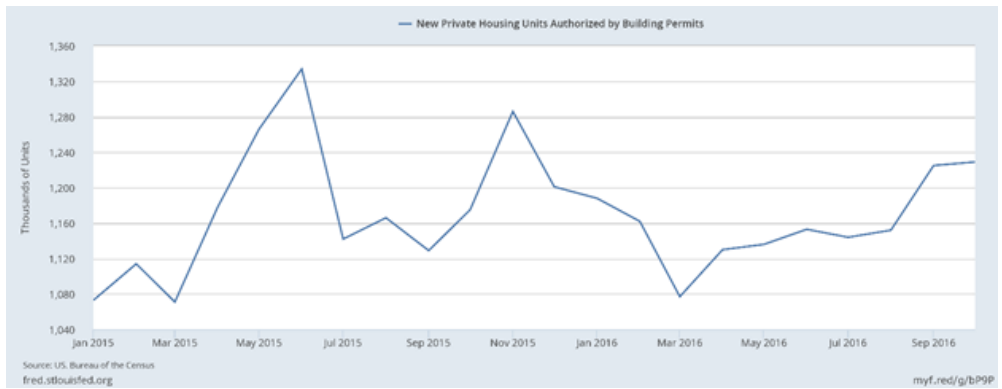
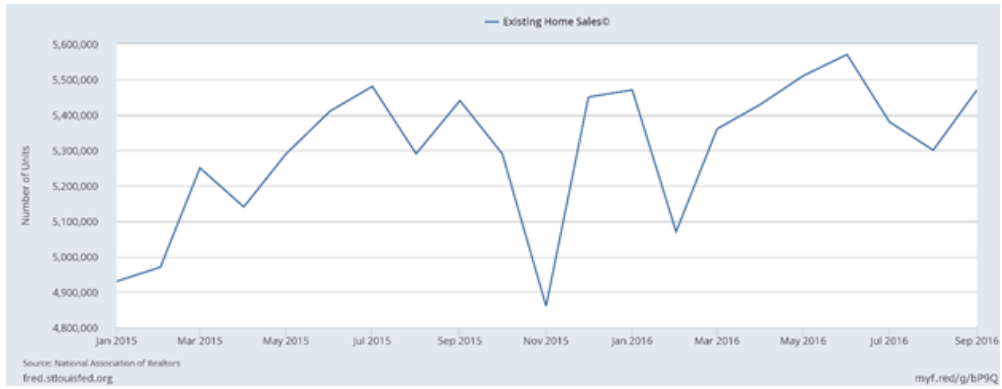


The median usual weekly real earning has been steadily rising since the second quarter of 2015. To the first and the second quarter of the year it stayed at \$346 median dollars week but at the towards the end of the second and at the beginning at the third quarter it continued to rise again (see graph of median weekly real earnings). Government benefits have also been going up at a slightly faster rate than the median weekly wages. This has continued to happen throughout all of 2015 and it looks like this will also continued throughout the rest of the 2016.



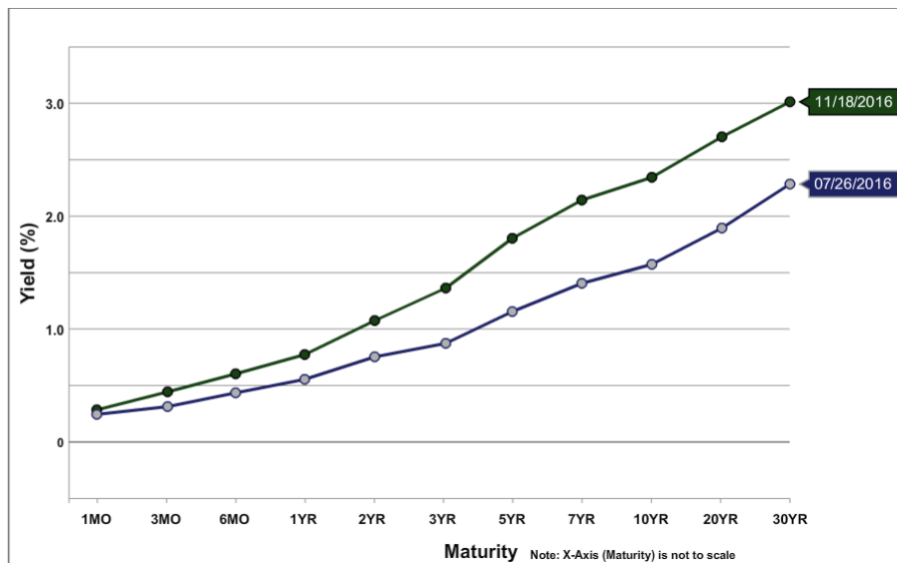


The selling of existing homes is doing well at the present moment. The sales went down in August, but have been improving since. In the last years at this same time, existing home sales hit a peak in September then fell dramatically. Due to this information, it will not be surprising if this happens again. Building permits have been very volatile in the last two years; this could be due to the recession in 2008 and 2009. Recently, it has steadily risen beginning in August and has continued to do so. The market is still difficult to predict because of its volatile state; we will keep an eye open to see if it will become more stable in the future. Housing starts are also doing well at the moment as well, and it seems they are not as volatile as the building permits which is a positive sign. Since the beginning of September this year, it has gone up, while the data from September of 2015 showed that it went down. This could be a sign that the housing market is improving, which is a positive indicator for the overall economy.



Review of the financial situation

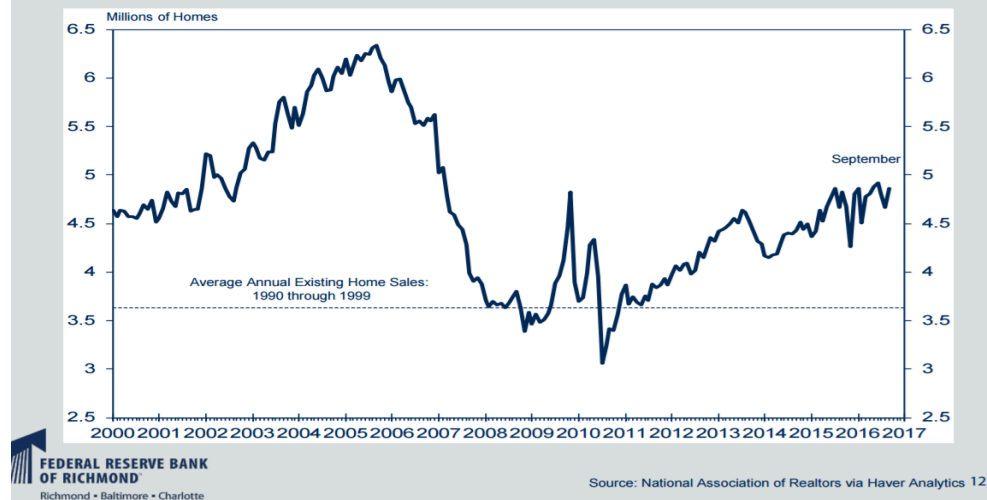
From the previous FOMC meeting the economy has seen an increase in the US Treasury Yield rates for all the different maturity rates. The overall increase in rates for securities with maturity dates of ten years and beyond provide the economy with a positive outlook.



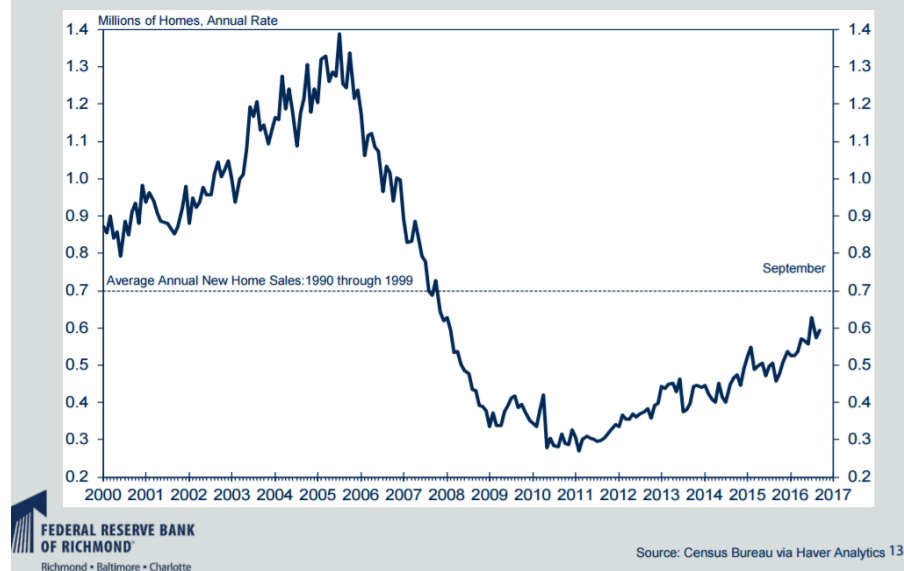
For the past year the annual home sales, both existing and new, have generally increased indicating that the same positive outlook that the Treasury Interest Yields is shared by the real estate market, since most of these mortgages will be from fifteen to thirty years.

Construction permits

Existing Single-Family Home Sales

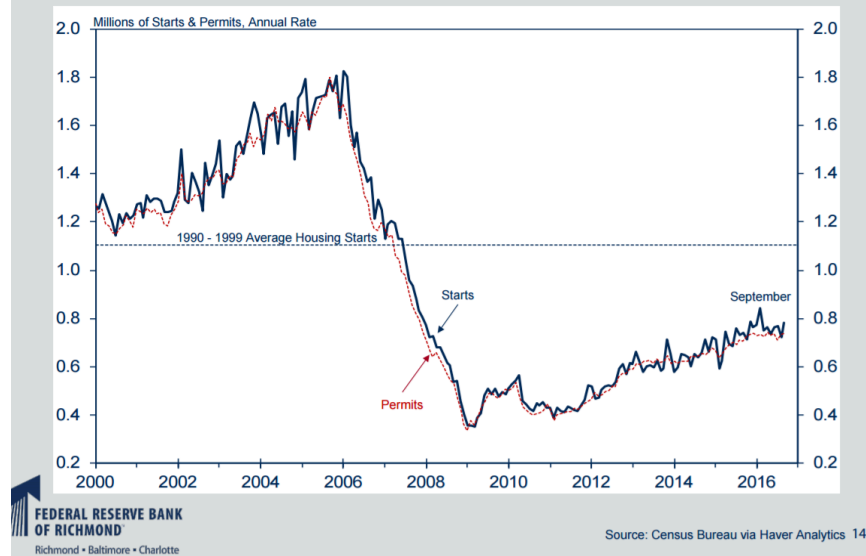


New Single-Family Home Sales



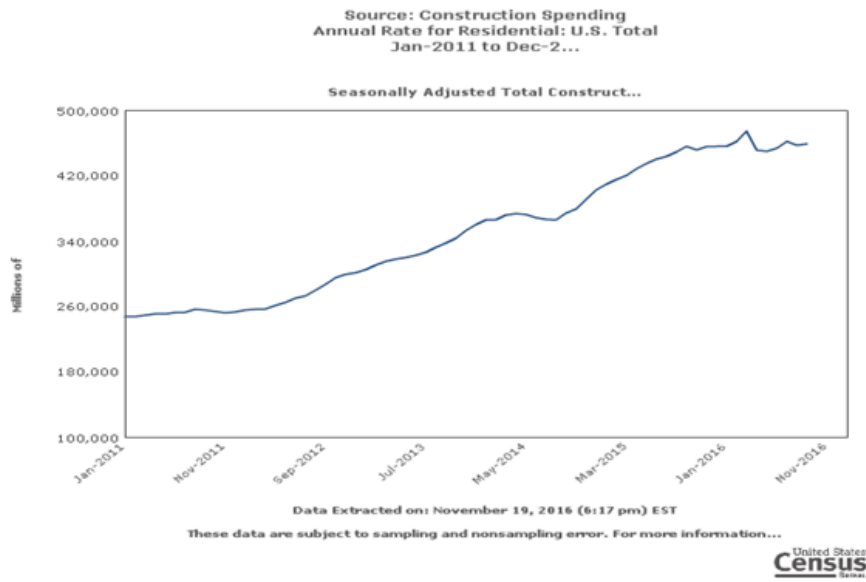
Together with the increase in home sales, there has been an increase in the permits for the construction of new homes, which indicates an increase in infrastructure spending, which creates new jobs, thus increase the overall spending in the economy.

Private Single-Family Housing Starts & Permits



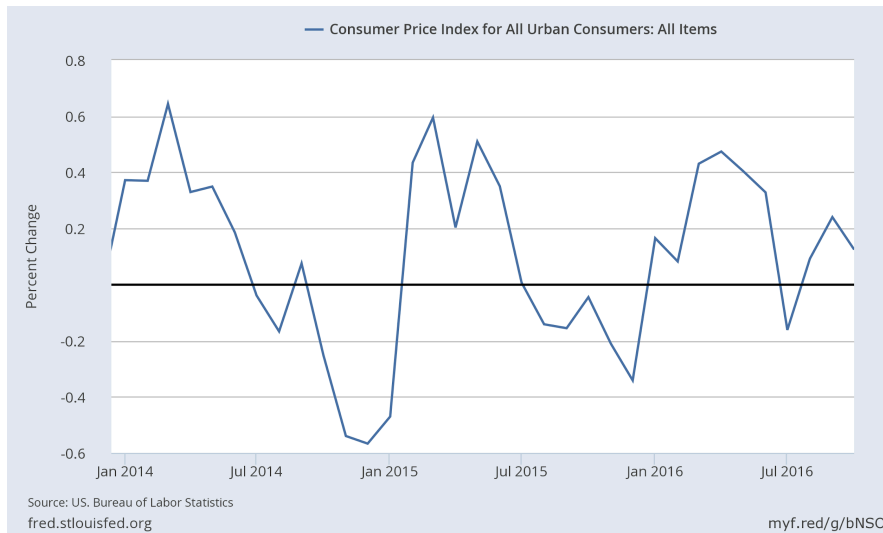
Total construction spending in the U.S has been down since the July FOMC meeting. In the month of August spending was down .5% and spending was down -.4% percent. This is not a major concern for an adjustment in policy because the amount of construction spending varies frequently per month. The construction spending decrease is also very slight as only a half a percent which is a common change in spending and there is no long trend of decreasing spending throughout the year. There is also no trend historical trend in the data that shows any sort of negative correlation with such a small decrease in construction spending. Construction spending over the past six year has steadily increased each year which could indicate that the U.S. growth

is very consistent and show that the economy is healthy and performing well.



Views on current conditions and the economic outlook

The consumer price index increased during quarter 3 of 2016, and began decreasing again in September 2016. The consumer price index has fluctuated substantially for years, so this change is nothing out of the ordinary. This peak is lower than the peak in the previous year, and the trough in July 2016 is not as low as the 2015 trough. This shows that consumer prices are more stable in 2016 than in previous years, which indicates stability in the economy overall.



A policy recommendation based on the data and economic outlook:

In the past year the federal funds rate has increased dramatically. Due to this, the committee is changing its existing policy of maintaining the target federal funds rate at $\frac{1}{4}$ to $\frac{1}{2}$ percent. We are increasing the target federal funds rate closer to $\frac{1}{2}$ percent. This will cause the Board of Governors to increase the interest rates on reserves and discount rates. The unemployment rate has also decreased in the recent months, so an increase to the interest rates will not have a detrimental impact on unemployment.

We will not undertake on additional quantitative easing. If we take on additional quantitative easing, this could disrupt the economy in the long run. The inflation down the road could be worse and stimulating the economy is already possible with inflation rate where it is currently. The expansion of assets purchased by the Federal Reserve has been decreasing in the past months, decreasing the liquidity provision.

This action is also important due to our current position in the business cycle. We have been in the expansion phase since the end of the Great Recession, and it is likely that we reach a peak and begin declining in the very near future. When this occurs, we will need to reduce

interest rates, and if we don't begin increasing now, we will have no room to decrease in the future without going negative, which we will avoid.

Works Cited

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