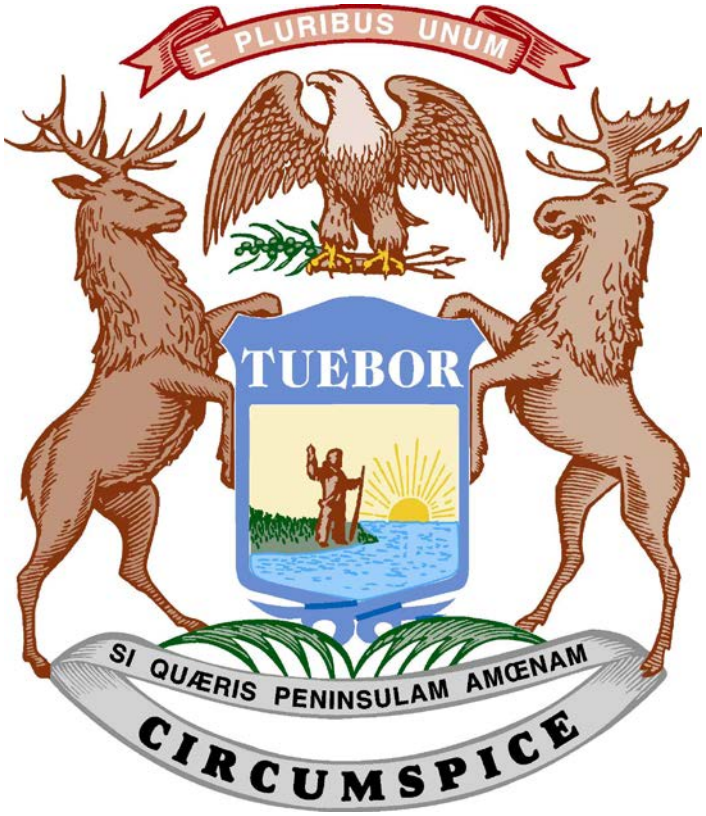
Economic and Revenue Outlook

FY 2017-18, FY 2018-19 and FY 2019-20

Michigan Department of Treasury



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January 11, 2018

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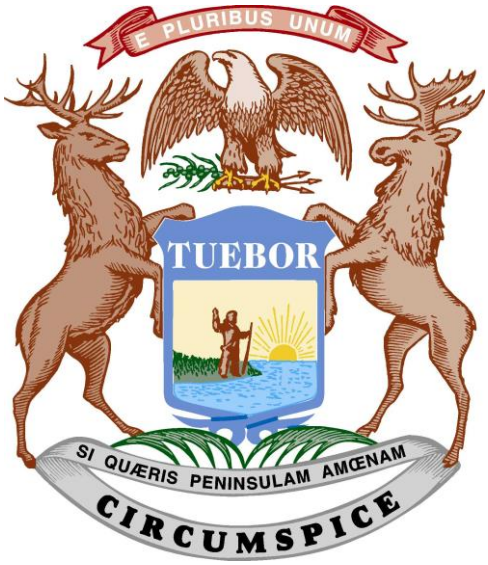


Administration Estimates
Executive Summary
January 11, 2018

Revenue Review and Outlook

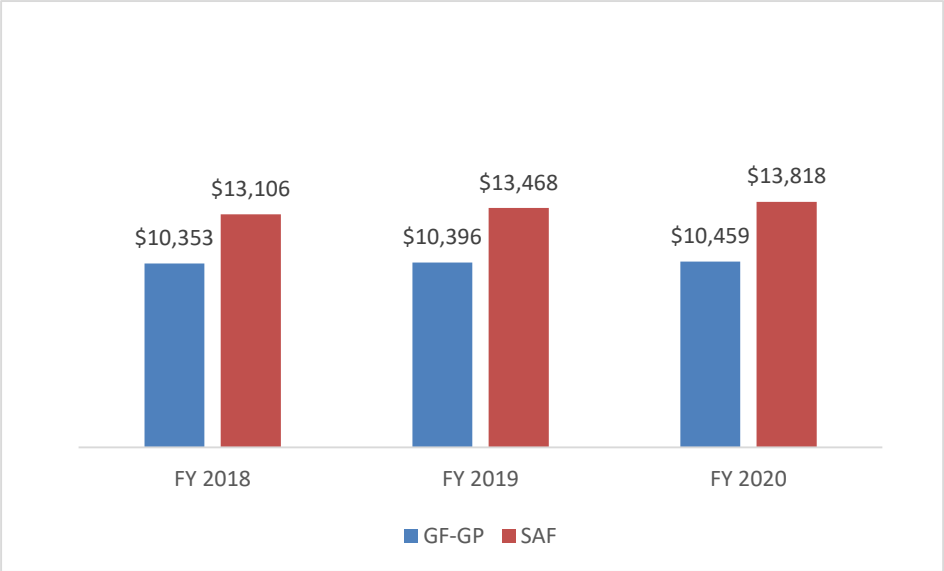
- FY 2017 General Fund-General Purpose (GF-GP) revenue totaled $10,192.3 million, up $81.0 million from the May 2017 Consensus estimate. FY 2017 School Aid Fund (SAF) revenue totaled $12,685.1 million, up $75.2 million from the May 2017 Consensus estimate.

- FY 2018 GF-GP revenue is forecast to increase 1.6 percent to $10,353.4 million, down $55.2 million from the May 2017 Consensus estimate. FY 2018 SAF revenue is forecast to increase 3.3 percent to $13,105.9 million, up $135.4 million from the May 2017 Consensus estimate.

- FY 2019 GF-GP revenue is forecast to increase 0.4 percent to $10,396.4 million, down $93.1 million from the May 2017 Consensus estimate. FY 2018 SAF revenue is forecast to increase 2.8 percent to $13,468.1 million, up $137.6 million from the May 2017 Consensus estimate.

- FY 2020 GF-GP is forecast to increase 0.6 percent to $10,458.9 million. FY 2020 SAF revenue is forecast to increase 2.6 percent to $13,818.1 million.

Administration GF-GP and School Aid Fund Revenue Estimates (millions of dollars)



Impact from the Tax Cuts and Jobs Act

- The Tax Cuts and Jobs Act will have a direct impact on Michigan taxes, as both individual and corporate income taxes rely on federal income measures as a starting point of the Michigan return. Additionally, many of Michigan's tax definitions are tied to the federal Internal Revenue Code.

- Treasury has estimated the impacts of reforms that directly impact Michigan taxpayers. A table summarizing the estimated impact to Michigan taxpayers is below.

Michigan Revenue Impact from the Tax Cuts and Jobs Act (millions of dollars)

	FY 2018	FY 2019	FY 2020
Impact from the Personal Exemption	$840	$1,647	$1,482
Other individual income tax impacts	-$14	$10	$44
Corporate income tax impacts	$22	$70	$103
Total	$848	$1,727	$1,629

- The biggest change results from the personal exemption, which was set to zero in the tax reform. Michigan's exemption is set to the number "allowable on the taxpayer's federal income tax return" (MCL 206.30(2)). The act therefore eliminates the ability for Michigan taxpayers to claim the exemption.

- The elimination of the personal exemption accounts for 97 percent of the total fiscal impact in FY 2018, 95 percent in FY 2019, and 91 percent in FY 2020.

- Other changes from the legislation are much smaller than the change from the exemption. Changes from the Tax Cuts and Jobs Act on expensing, bonus depreciation, and simplified accounting will decrease Michigan taxes on individuals and corporations. Provisions on pass-through losses, net operating deductions, expense deductions will increase revenue.

- Typically, all revenue forecasts estimate current law provisions. Due to the timing and potential action taken by the legislature to change these impacts, the amounts are not included in the Administration or Consensus Conference revenue estimates. All of these provisions, and any enacted legislative response, will be included in the May 2018 consensus revenue forecast.

2018, 2019 and 2020 U.S. Economic Outlook

- Real GDP rose 2.9 percent in 2015 and then 1.5 percent in 2016. In 2017, real GDP grew an estimated 2.2 percent. Economic growth is forecast to accelerate to 2.6 percent in 2018 but then slow to 2.3 percent in 2019 and 2.0 percent in 2020.

- In 2015, U.S. wage and salary employment rose 2.1 percent in 2015 – the fastest annual growth since 2000. U.S. employment growth slowed to 1.7 percent in 2016. In 2017, national employment growth slowed to 1.5 percent – marking the seventh straight national annual employment increase. Employment growth is projected to remain at 1.5 percent in 2018 before slowing to 1.3 percent in 2019 and 1.1 percent in 2020.

- The U.S. unemployment rate has declined in each of the past seven years. Most recently, the national unemployment rate fell 0.4 of a percentage point to 4.9 percent in 2016 and dropped an additional 0.5 of a point to 4.4 percent in 2017. The national unemployment rate is forecast to fall to 4.2 percent in 2018 and 4.0 percent in 2019. The national unemployment rate is projected to remain unchanged at 4.0 percent in 2020.

- Housing starts increased 8.5 percent in 2014 and rose above 1.0 million units for the first time since 2007. In 2015, starts increased 10.8 percent. Housing starts increased 5.6 percent in 2016 and an estimated 2.4 percent in 2017. Housing starts are forecast to rise 8.3 percent in 2017, 2.0 percent in 2019 and 1.6 percent in 2020. In 2020, starts are expected to total 1.35 million units – still historically low.

- In 2013, light vehicle sales increased to 15.5 million units – marking the first year that sales topped 15.0 million units since 2007. Sales rose to 16.5 million units in 2014 and to 17.4 million units in 2015, slightly exceeding the previous record sales level of 17.35 million units set in 2000. In 2016, light vehicle sales rose – although slightly – to a new record high of 17.46 million units. In 2017, light vehicle sales fell to an estimated 16.9 million units. Over the forecast horizon, light vehicle sales are projected to remain at historically high levels of 16.9 million units in 2018, 16.9 million units in 2019 and 16.8 million units in 2020.

- Consumer prices increased 1.5 percent in 2013 and rose 1.6 percent in 2014. In 2015, sharply lower fuel prices slowed consumer price inflation to 0.1 percent. Inflation accelerated to 1.3 percent in 2016. In 2017, inflation is estimated to have accelerated to 1.9 percent. Inflation is forecast to slow to 1.5 percent in 2018 before accelerating to 2.0 percent in 2019 and 2.2 percent in 2020.

2018, 2019 and 2020 Michigan Economic Outlook

- After falling each year from 2001 to 2010, Michigan wage and salary employment has increased each year since 2011. State employment increased 2.3 percent in 2011, 2.1 percent in 2012, 1.9 percent in 2013 and 1.8 percent in 2014. In 2015, Michigan employment rose by 61,500 jobs (1.5 percent). Michigan wage and salary employment increased 1.9 percent in 2016 and rose an estimated 1.4 percent in 2017. Michigan employment is forecast to rise 0.9 percent in 2018, 1.1 percent in 2019 and 1.3 percent in 2020.

- The Michigan unemployment rate has dropped each year since 2010. After peaking at 13.7 percent in 2009, the jobless rate fell steadily and was down to 7.3 percent in 2014. In 2015, the rate declined substantially (1.9 percentage points) to 5.4 percent. In 2016, the State unemployment rate dropped 0.5 of a percentage point to 4.9 percent. In 2017, the Michigan unemployment rate fell to an estimated 4.3 percent. The Michigan unemployment rate is forecast to fall 0.4 of a percentage point to 3.9 percent in 2018, rise to 4.0 percent in 2019 and remained unchanged at 4.0 percent in 2020.

- After dropping 8.3 percent in 2009 (the largest percent decline since 1945), Michigan wages and salaries have increased each year. Michigan wages and salaries rose 5.1 percent in 2015, grew 3.8 percent in 2016 and increased an estimated 3.8 percent in 2017. Michigan wages and salaries are forecast to rise 3.7 percent in 2018, 4.5 percent in 2019 and 4.7 percent in 2020.

- Michigan personal income fell 5.1 percent in 2009 – marking the first annual Michigan personal income drop since 1958 and the largest annual decline since 1938. Personal income began to rise 2010 and increased an average of 4.1% each year from 2010 to 2015. Michigan personal income increased 2.8 percent in 2016 and rose an estimated 3.1 percent in 2017. Michigan income is projected to increase 4.2 percent in 2018 and 4.9 percent in both 2019 and 2020.

- On a fiscal year basis, Michigan disposable income rose 5.1 percent in FY 2015 and increased 3.7 percent in FY 2016. Disposable income grew an estimated 2.6 percent in FY 2017. Disposable income is projected to rise 4.0 percent in FY 2018, 5.2 percent in FY 2019 and 4.9 percent in FY 2020.

- Wages and salaries increased 4.9 percent in FY 2015 and rose 5.0 percent in FY 2016. In FY 2017, wages and salaries grew an estimated 2.9 percent. Wages and salaries are forecast to increase 3.6 percent in FY 2018, 4.4 percent in FY 2019 and 4.7 percent in FY 2020.

Forecast Risks

- Substantial uncertainty surrounds the macro-economic impact of tax reform legislation enacted in December 2017. In addition, uncertainty surrounds the timing, composition and impact of other fiscal policies that will be proposed by the President and enacted by Congress. In addition, risk surrounds the economic impact of possible international trade or immigration actions that might be taken.

- Recently heightened business and economic sentiment may fall sharply to the extent to which greater optimism regarding the enactment of the major federal fiscal legislation and a stronger U.S. economy is disappointed. A sharp drop in sentiment may, in turn, weaken the macro-economy.

- Slower than expected economic growth across Asia, particularly China, could have a negative impact on the U.S. economy. Europe's weak financial and economic recovery from its massive financial crises leaves the Continent vulnerable to slower economic growth, which would have negative financial and economic impacts on the U.S. economy.

- A stronger (weaker) housing market would boost (depress) the economy more than forecast.

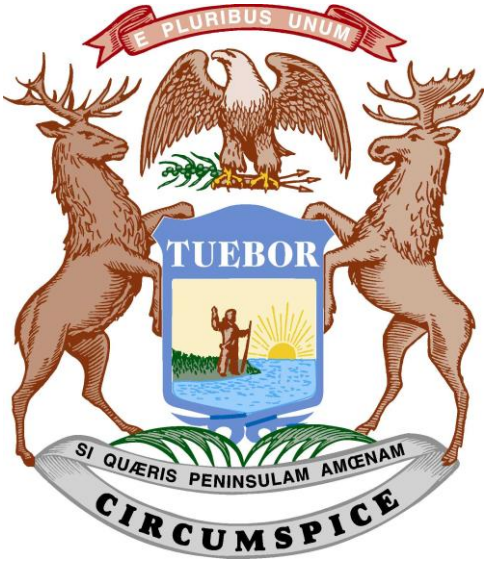
- The Great Recession may have a longer negative effect on confidence than assumed. In particular, the after effects could lead businesses and consumers to react more negatively to an economic slowdown or mild decline.

- Since the May 2017 Consensus Conference, the Federal Reserve has increased the target federal funds rate twice. Uncertainty surrounds the timing of the next (and subsequent) increases. Uncertainty also surrounds consumer and business reactions to any subsequent changes. In addition, uncertainty surrounds the magnitude, timing and macroeconomic impact of Fed reductions in its longer-term portfolio elements over the forecast horizon.

- International geopolitical tensions (and household and investor concerns about these tensions) continue to grow. Heightened geopolitical and military conflicts (and concerns about those conflicts) could boost oil prices and have a substantial negative impact on consumer and financial markets and the U.S. economy as a whole.

SECTION II

Economic Review



Economic Review
January 11, 2018

Current U.S. Economic Situation

Overall Economic Growth

The current U.S. economic expansion is one of the longest expansions, but also one of the slowest expansions on record.

The current U.S. economic expansion is over eight years old. According to the Institute for Supply Management, the overall U.S. economy expanded for its 102nd straight month in November 2017. **Real Gross Domestic Product (GDP)** has grown in all but two quarters since the end of the Great Recession.

Year-to-date, annual economic growth in 2017 is on pace to accelerate significantly from 2016 when growth recorded its slowest calendar year pace in the current expansion.

While slowing to 1.2 annualized growth in 2017Q1, economic growth accelerated to 3.1 percent in 2017Q2 and 3.2 percent in 2017Q3. As a result, average real GDP in 2017 through the first three quarters is up 2.2 percent from the average real GDP in the first three quarters of 2016. In contrast, average real GDP in 2016 through the first three quarters was up 1.4 percent and CY 2016 real GDP growth was 1.5 percent.

Employment

Overall Wage and Salary Employment

The current streak of month-to-month employment gains (87 months) is by far the longest on record.

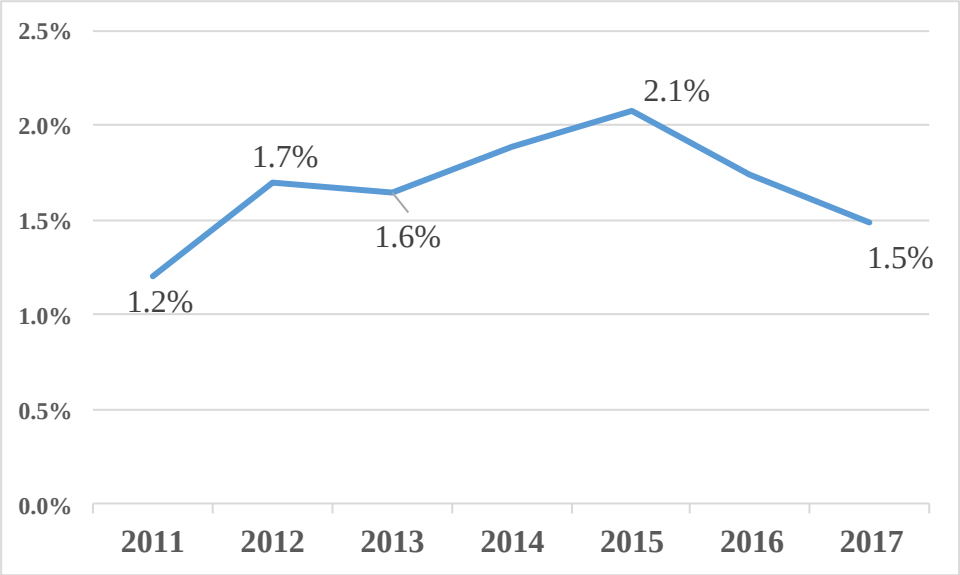
Year-over-year jobs growth has slowed over the past 2½ years.

Average monthly employment through November 2017 is up from 2016 and points to 2017 as the seventh straight year of calendar year employment growth in the current expansion.

U.S. wage and salary employment has continued rising since the May 2017 Consensus Conference. December 2017 marked the 87th consecutive increase from the prior month in national wage and salary employment. Consequently, at 147.4 million jobs, the December 2017 employment level represents the all-time high monthly U.S. employment level. Since the May 2017 Consensus Conference, December 2017 employment rose by 1.4 million jobs (an average of 169,000 jobs increase per month). Compared to a year ago, December 2017 employment was up by 2.1 million jobs (1.4 percent).

Calendar year 2017 represented the seventh straight year in which U.S. wage and salary employment increased. The overall annual U.S. employment level rose 1.2 percent in 2011, 1.7 percent in 2012, 1.6 percent in 2013, 1.9 percent in 2014, 2.1 percent in 2015, 1.7 percent in 2016 and 1.5 percent in 2017.

United States Wage and Salary Employment
Annual Percent Change



Source: Bureau of Labor Statistics, U.S. Department of Labor.

Unemployment Rate

In November 2017, the three-month average U.S. unemployment rate fell to 4.1 percent – the lowest three month average national unemployment rate in nearly 17 years. The average remained at 4.1 percent in December 2017.

In 2017, the U.S. unemployment rate fell 0.5 of a percentage point from 2016 to 4.4 percent. Thus, 2017 marks the seventh straight year of a declining national unemployment rate.

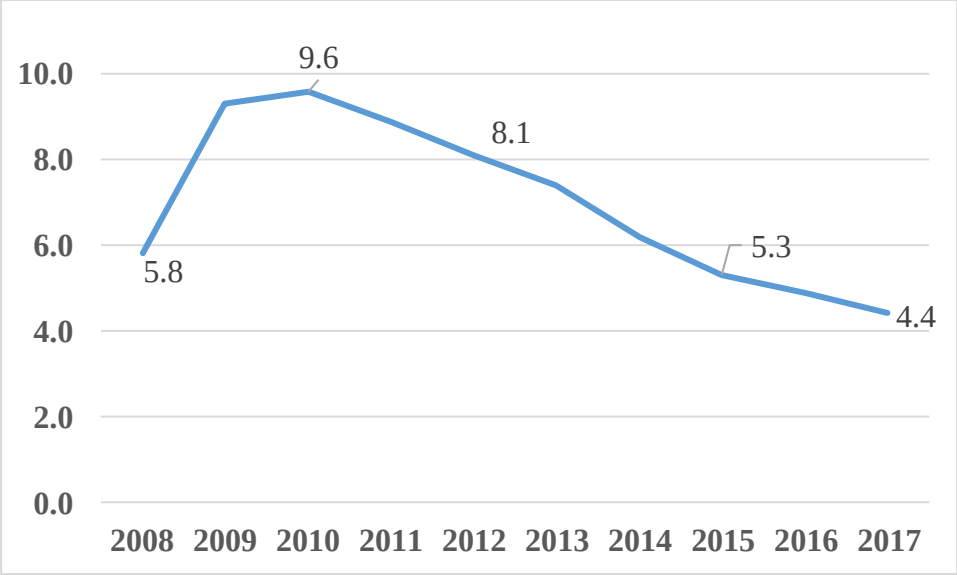
The four-week average of initial unemployment claims has been trending downward since early 2009. Hurricanes Harvey and Irma pushed the average up modestly in September 2017. However, the average then dropped each week through early November to its lowest level since March 1973 – when the U.S. labor force was 45 percent smaller than today. Most recently, the four-week average of initial unemployment claims rose slightly each week through the balance of November, fell in early December and rose in mid and late December.

At the time of the May 2017 Consensus Conference, the **U.S. unemployment rate** stood at 4.4 percent. The U.S. unemployment rate fluctuated from 4.3 to 4.4 percent between May 2017 and August 2017. The U.S. rate dropped to 4.2 percent in September. In October, the rate fell to 4.1

percent, where it remained in November and December. At 4.1 percent, the most recent monthly U.S. unemployment rate represented the lowest U.S. unemployment rate since December 2000. In December 2017, the three-month U.S. unemployment rate average also stood at 4.1 percent – the lowest three-month average since January 2001.

The annual U.S. unemployment rate has fallen in each of the past seven years. After peaking at a 28-year high of 9.6 percent in 2010, the national unemployment rate fell to 8.9 percent in 2011, 8.1 percent in 2012, 7.4 percent in 2013, 6.2 percent in 2014, 5.3 percent in 2015 and 4.9 percent in 2016. In 2017, the U.S. unemployment rate averaged 4.4 percent – the lowest annual U.S. unemployment rate in 17 years.

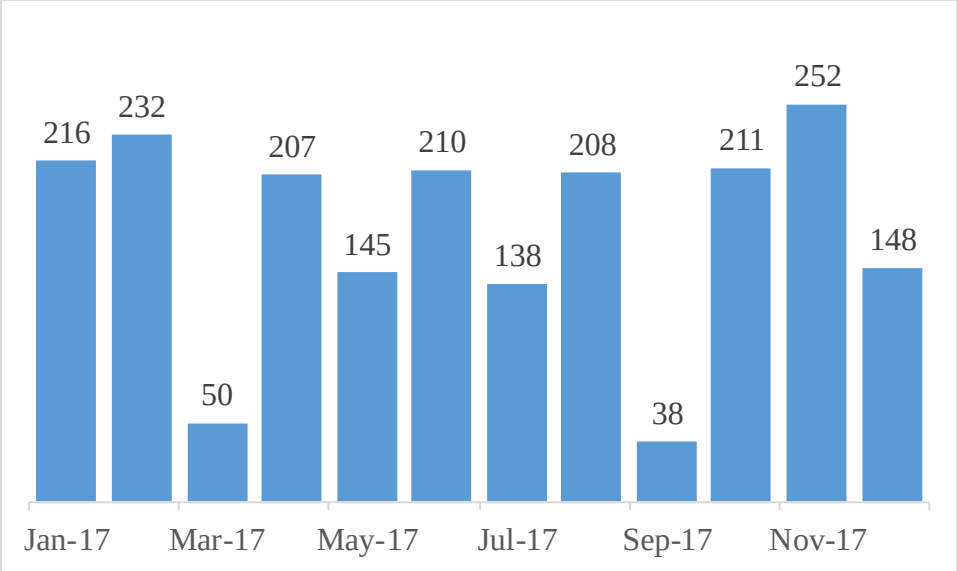
United States Unemployment Rate
2008-2017



Between the May 2017 Consensus Conference and late December 2017, the four-week average of seasonally adjusted **initial unemployment claims** fell from 243,000 to 241,750 -- a slight net decline of 1,250 initial claims. Between early May 2017 and late August 2017, the average fluctuated between 235,500 and 246,000. However, Hurricanes pushed the average up substantially in September 2017. As a result, the average rose to 277,000 in late September. The average then declined each week through early November – falling to 231,250. However, the average then rose over the next three weeks. Consequently, the average stood at 242,250 in the last week in November before dropping to 241,500 in first week in December. The average then rose each week over the balance of December.

The four-week average of initial unemployment claims has remained below 300,000 for 146 consecutive weeks – the longest streak of sub-300,000 readings since 1970, when the U.S. workforce and population were much smaller than currently. Over the past year (late December 2016 to late December 2017), the four-week average of seasonally adjusted initial unemployment claims fell a net 12,000. (U.S. Department of Labor).

U.S. Payroll Employment
2.1 Million Jobs Added in Past Year
(Monthly Change in Thousands)



Source: Bureau of Labor Statistics, U.S. Department of Labor.

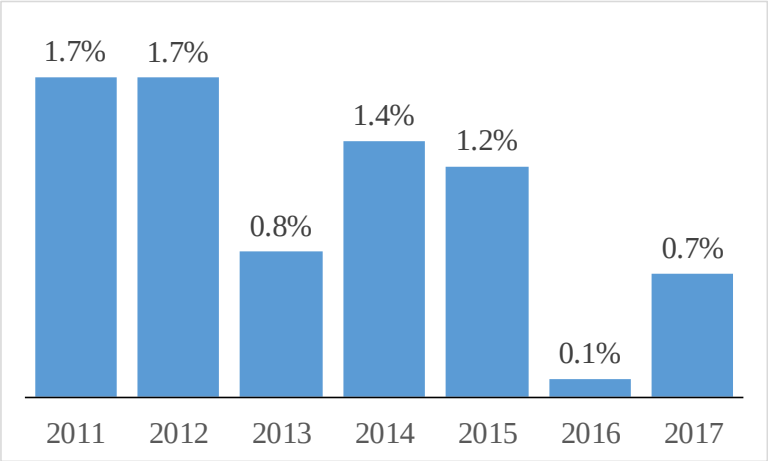
Sector Wage and Salary Employment

In 2017, construction sector employment rose 2.8 percent – marking the seventh straight annual increase in construction employment. The manufacturing sector employment grew 0.7 percent in 2017 to also mark that sector's seventh consecutive annual gain.

Manufacturing sector employment rose each calendar year from 2011 to 2015, with increases of 1.7 percent in both 2011 and 2012, 0.8 percent in 2013, 1.4 percent in 2014 and 1.2 percent in 2015. The sector's employment rose in 2016, but only slightly (0.1 percent). In 2017, manufacturing employment increased 0.7 percent.

Between April 2017 and December 2017, U.S. manufacturing employment rose a net 151,000 jobs. Over the past year (December 2016-December 2017), manufacturing employment has risen a net 196,000 jobs.

United States Manufacturing Employment Growth
2011-2017



Calendar year 2017 marked the seventh annual increase in **construction sector employment**. In 2017, construction employment was up 2.8 percent. Construction employment rose 0.3 percent in 2011, 2.0 percent in 2012, 3.7 percent in 2013, 5.0 percent in 2014, 5.0 percent in 2015 and 3.9 percent in 2016.

Compared to a year ago, December 2017 construction employment was up by 210,000 jobs (3.1 percent) – marking the 79th consecutive month that construction employment was up compared to a year ago. Over the past eight months, construction employment is up by a net 122,000 jobs.

Housing Market

House Construction and Sales

Housing starts have risen each year since falling to an all-time low in 2009. Starts have more than doubled from their all-time lows. Year-to-date, 2017 starts are up modestly from last year. Despite these gains over the past eight years, housing starts remain at historically low levels.

Throughout 2017, the National Association of Home Builders (NAHB) sentiment index remained considerably favorable with index readings consistently well above 50. Further, in 2017, the index never fell below 60 in and averaged 68 – the highest annual average since 1999.

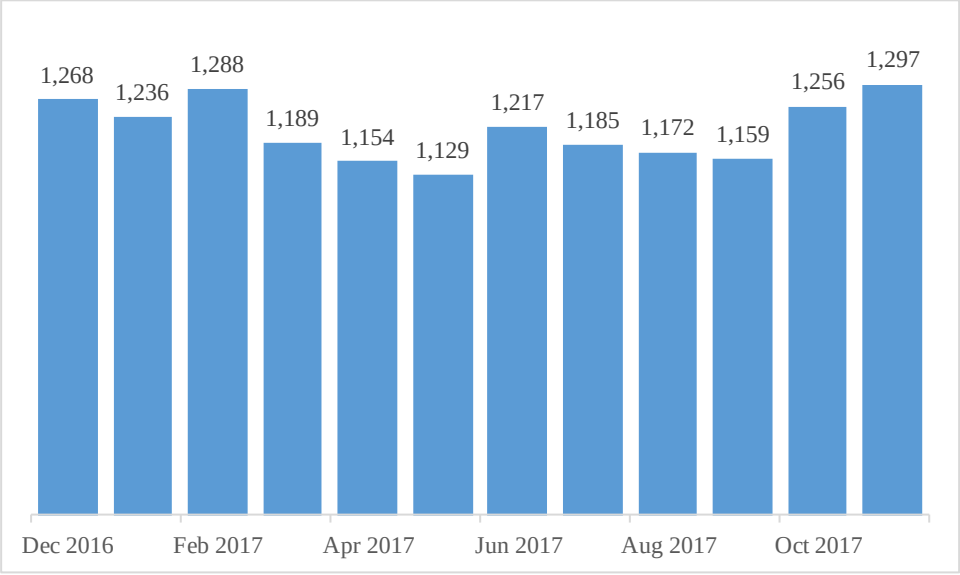
After falling to an all-time low in 2011, new home sales have risen each year. 2016 marked the fifth straight year of rising new home sales with sales almost double their record low level set in 2011. Year-to-date, 2017 new home sales are up 9.7 percent. However, new home sales remain historically low.

Between 2012 and 2016, existing home sales rose in four of the five years. However, existing home sales growth has slowed each year between 2015 and 2017 (year-to-date). After a modest decline in 2014, existing home sales increased 6.3 percent in 2015 but then grew only 3.8 percent in 2016. Year-to-date, 2017 sales are up 2.1 percent with annualized sales averaging 5.5 million units. However, existing home sales growth has been constrained by a declining inventory of homes for sale.

Calendar year **housing starts** have strengthened, but still remain at a historically low level. In each year from 2008-2013, housing starts totaled fewer than 1.0 million units. Prior to 2008, starts had never fallen below 1.0 million units in fifity years. However, after falling to a record low of 554,000 units in 2009, housing starts increased each year from 2010 to 2016. In 2014, total starts rose above 1.0 million units for the first year since 2007. Starts rose further in 2015, increasing to 1.1 million units and rose to 1.2 million units in 2016. Compared to the 2009 record low, calendar year 2016 housing starts were 111.9 percent higher. However, 2016 housing starts were 43.2 percent below the 2005 level (the highest level since 1972). 2016 starts were 14.4 percent lower than average housing starts in the 1990s (pre-boom).

November 2017 marked the 32nd straight month in which housing starts were above 1.0 million units at an annualized rate and also marked the 14th straight month in which annualized starts exceeded 1.1 million units. November 2017 recorded the highest annualized housing starts rate in CY 2017. Year-to-date through November, average 2017 annualized housing starts were up 3.3 percent (U.S. Census Bureau).

Annualized Housing Starts Remain Around Historically Low Levels



Source: U.S. Census Bureau. Seasonally adjusted annual rate (thousands).

At the time of the May 2017 Consensus Conference, the **National Association of Home Builders (NAHB) sentiment index** stood at 68. A reading above 50 indicates that more builders

viewed conditions as favorable compared with the number who viewed conditions as unfavorable. Between May 2017 and November 2017, the index fluctuated between 64 and 69. Most recently, in December 2017, the index rose to 74 – the index's highest monthly reading since July 1999. Further, in 2017, the NAHB Index averaged 68 – the highest average annual reading since 1999.

With **new home sales** totaling 561,000 units, 2016 marked the fourth straight year in which new home sales exceeded 400,000 units as well as the fifth straight year of increasing new home sales. In four of the five years of increasing sales, the percent gain exceeded 10.0 percent. Most recently, new home sales rose 12.0 percent in 2016. Compared to 2011 when new home sales fell to a record low, 2016 sales were up 83.3 percent. However, compared with new home sales in the 1990s (pre-boom), 2016 new home sales were down 19.7 percent. Year-to-date through November 2017, new home sales are up 9.7 percent.

Annualized seasonally adjusted new home sales have exceeded 500,000 units in each of the most recent 25 months (November 2015-November 2017). Most recently, after falling 10.0 percent from a year ago in July 2017 and declining 1.4 percent in August 2017, new home sales reported significant year-over-year increases in September (11.4 percent), October (8.1 percent) and November (26.6 percent). (U.S. Census Bureau).

In 2016, **existing home sales** rose 3.8 percent, following a 6.3 percent increase in 2015. Between August 2016 and August 2017, monthly existing home sales were up each month from the prior year. In September and October 2017, existing home sales were down from a year earlier – dropping 1.8 percent and 0.5 percent, respectively. However, November 2017 existing home sales were up 3.8 percent from the prior year. Further, November 2017 marked the 24th straight month in which annualized existing home sales have exceeded 5.0 million units. Further, at a seasonally adjusted annual rate of 5.81 million, the November 2017 sales rate represented the strongest reading since December 2006. Year-to-date through November, 2017 annualized existing home sales have averaged 5.5 million units – up 2.1 percent for a year ago. (National Association of Realtors). However, sales growth has been constrained by declining inventory of homes for sale. In November 2017, housing inventory was down 15.0 percent from a year ago at 1.67 million. Housing inventory has fallen year-over-year for 30 consecutive months. (National Association of Realtors)

House Prices

House prices have risen over the past 5-plus years with the Home Price Index and median home sales price setting new record highs.

- Between October 2016 and October 2017, the **Core Logic Home Price Index (HPI)** percent increased 7.0 percent – marking the 69th straight index increase. As of October 2017, the HPI is 0.9 percent higher than the pre-Great Recession peak set in April 2006.

- In 2016, the **Census Bureau's median new home sales price** reported its seventh straight annual price increase – rising 4.6 percent from 2015. Over the seven years, the

median new home sales price rose 42.0 percent – setting new record highs each year from 2013 and 2016. Year-to-date, the 2017 median new home sales price is up 4.0 percent.

- After rising 6.8 percent in 2015, the **median existing-house price** rose 5.1 percent in 2016. The median existing-house sale price rose 5.8 percent between November 2016 and November 2017 -- marking the 69th consecutive month of year-over-year price gains. (National Association of Realtors)

Foreclosures and Mortgage Rate

Most recently, numerous key stressors on the housing market (foreclosure filings, negative home equity properties and the share of seriously delinquent properties) have dropped substantially. In addition, homeowner real estate equity rose to new record highs in each of the first three quarters of 2017 and the homeowner equity rate has risen year-over-year in each of the past 25 quarters. At the same time, the 30-year mortgage rate remains near recent historic lows.

In the third quarter of 2017, **U.S. foreclosure filings** were down 35 percent from a year ago to their lowest level since 2006Q2. Filings were 31 percent below the pre-recession average over the period from 2006Q1 to 2007Q3. 2017Q3 represented the fourth consecutive quarter in which U.S. foreclosure activity was below the pre-recession average. (ATTOM Data Solutions, RealtyTrac)

In addition, ATTOM Data Solutions reports that the number of **U.S. properties seriously underwater**, where combined loan amount secured by the property was at least 25 percent higher than the property's estimated market value, were down by more than 1.4 million properties from 2016Q3 — the biggest year-over-year drop since 2015Q2.

In July 2017, the **share of all mortgages that were seriously delinquent** dropped to 1.9 percent, remaining near the lowest share in more than a decade. In addition, the July 2017 foreclosure inventory represented 0.7 percent of all homes with a mortgage – down from 0.9 percent in July 2016 and the lowest rate since July 2007, when the share was also 0.7 percent. (CoreLogic)

With a recovering real estate market and rising home prices, real estate equity has risen substantially. Between 2017Q1 to 2017Q3, inclusive, **homeowner real estate equity** rose to a new record high each quarter. Most recently, in 2017Q3, homeowner real estate equity rose to a record high $14.1 trillion. Compared to a year ago, 2017Q3 real estate equity was up $1.3 trillion (10.1 percent). At 58.5 points, the 2017Q3 **homeowner equity rate** was 22.4 points higher than its all-time low (2009Q1). Over the past year, the equity rate rose by 1.7 percentage points – marking the 25th straight quarter in which the rate was up from a year ago. (Federal Reserve Bank, *Flow of Funds Accounts of the United States*)

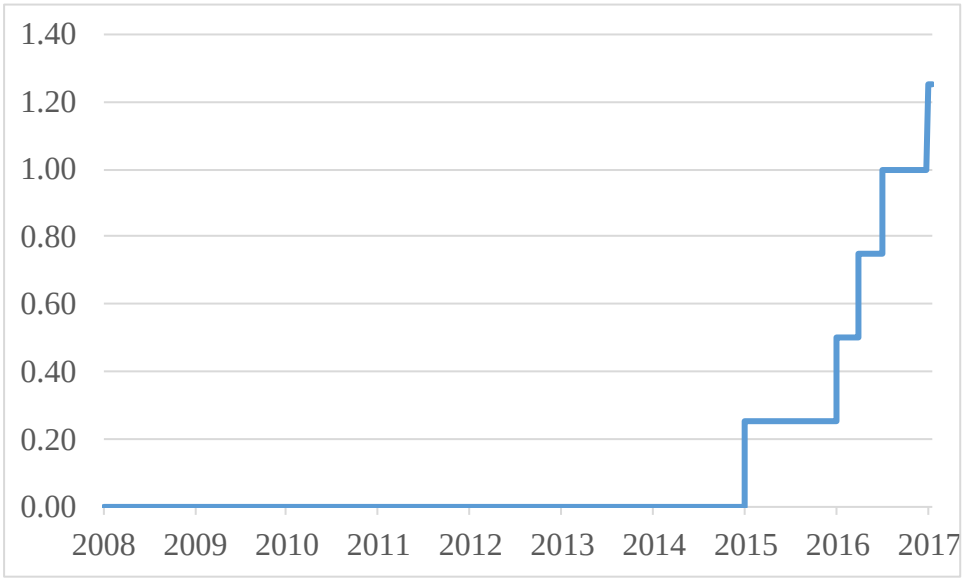
At the time of the May 2017 Consensus Conference, the **30-year fixed mortgage rate** stood at 4.05 percent. (FreddieMac). The rate fell in both May and June – dropping to 3.90 percent before rising to 3.97 percent in July. The rate then fell to 3.88 percent in August and to 3.81 percent in September. Most recently, the 30-year fixed mortgage rate rose to 3.90 percent in October and to 3.92 percent in November.

Monetary Policy

After maintaining the target federal funds rate range at a record low 0.00 to 0.25 percent for seven years (December 2008-December 2015), the Federal Open Market Committee (FOMC) raised the target range 25 basis points in December 2015. The FOMC left the target range unchanged for a year before raising the range an additional 25 basis points in December 2016. In 2017, the FOMC raised the range 25 basis points three times with the most recent increase at its December 2017 meeting. Moving forward, the FOMC has signaled future "gradual" interest rate increases with the "actual path of the federal funds rate" depending upon incoming data.

In October 2017, the Federal Reserve began a very gradual unwinding of the massive long-term securities holdings the Fed amassed in three rounds of quantitative easing between late 2008 and late 2014.

Federal Funds Interest Rate (lower limit)
2009-2018



Source: Board of Governors of the United States Federal Reserve System

In December 2015, the FOMC raised the target range 25 basis points to 0.25 percent to 0.50 percent. The December 2015 rate increase represented the Committee's first rate increase since June 2006. Faced with concerns surrounding domestic and international economies, the FOMC did not raise the target rate again until a year later. With inflation showing signs of accelerating, the domestic job market firming and domestic and international growth forecasts improving, the FOMC increased the target range for the federal funds rate an additional 25 basis points to 0.50 percent to 0.75 percent at the Committee's mid-December 2016 meeting.

After leaving the target range unchanged at its next meeting (January 31-February 01, 2017) the FOMC raised the target range 25 basis points to 0.75 percent to 1.00 percent at its March 2017 meeting. Similarly, the FOMC left the target range unchanged at its May 2017 meeting but then raised the target rate an additional 25 basis points to 1.00 to 1.25 percent at its June 2017 meeting. The FOMC then left the target range unchanged at each of its following three meetings (July 2017, September 2017 and October 2017). However, most recently at its mid-December 2017 meeting, the FOMC raised the target interest rate range by a 25 basis points to 1.25 percent to 1.50 percent.

As for the timing and magnitude of future rate increases, "The Committee expects that economic conditions will evolve in a manner that will warrant gradual increases in the federal funds rate; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data." (FOMC Statement, December 13, 2017).

At the December 2017 meeting, the Committee observed that, "Information received since the Federal Open Market Committee met in November indicates that the labor market has continued to strengthen and that economic activity has been rising at a solid rate." (December 2017 Statement)

The FOMC assented that year-over-year overall and core inflation slowed in 2017 and are running below the target two percent rate. However, the Committee still expects inflation "to stabilize around the Committee's 2 percent objective over the medium term." (December 2017 Statement) Further, at a press conference following the release of the FOMC's December statement, FOMC Chair Yellen stated that "We continue to believe that this year's surprising softness in inflation primarily reflects transitory developments that are largely unrelated to broader economic conditions."

The FOMC ended its quantitative easing program in October 2014. However, the FOMC continued, for three years, to reinvest all principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and to roll over all maturing Treasury securities at auction. In October 2017, the Committee initiated a balance sheet normalization program. Under the program, the FOMC directed the Federal Reserve's Desk to:

- roll over at auction the amount of principal payments from the Federal Reserve's holdings of Treasury securities maturing during each calendar month that exceeds $6 billion, and
- reinvest in agency mortgage-backed securities the amount of principal payments from the Federal Reserve's holdings of agency debt and agency mortgage-backed securities received during each calendar month that exceeds $4 billion.

At Janet Yellen's final press conference as Fed Chair, Yellen noted that "changing the target range for the federal funds rate is our primary means of adjusting the stance of monetary policy, and we do not foresee a need to alter our balance sheet normalization program." However, Yellen pointed out that the Fed stood ready "to resume reinvestments if a material deterioration in the economic outlook were to warrant a sizable reduction in the federal funds rate." The Fed's overall holdings are substantial with total Federal Reserve Bank credit totaling $4.5 trillion in mid-

October 2017 -- more than five times the amount that the Fed held directly before its quantitative easing program began. (Quarterly Report on Federal Reserve Balance Sheet Developments, November 2017)

Jerome Powell, a Fed Governor since 2012, will replace Janet Yellen as Fed Chair when Yellen's Chair appointment expires in February 2018. Powell's views on the current state of the U.S. economy and how to conduct monetary policy are very similar to Yellen's. Consequently, Powell's appointment likely signals continuity in monetary policy over the forecast horizon.

Fiscal Policy

In late December 2017, the House and Senate passed and the President signed the Tax Cuts and Jobs Act of 2017 (TCJA). The Congressional Budget Office and Joint Committee on Taxation estimate that the TCJA would reduce federal government revenues by $1.7 trillion and reduce federal outlays by $200 billion over the next ten years – increasing the deficit by $1.5 trillion over the next ten years. Many of the individual and pass-through tax cuts are temporary and will expire over time while the corporate tax cuts are permanent.

Individual and pass-through tax cut elements include

- Changes income ranges for the seven income tax brackets and lowers the tax rate for each tax bracket.
- Nearly doubles of the standard exemption.
- Eliminates the personal exemption.
- Lowers mortgage interest deduction balances from $1.0 million under current law to $750,000.
- Repeals the individual mandate of the Affordable Care Act starting in 2019.
- Increases the Alternative Minimum Tax exemption level.
- Doubles the taxable threshold for the estate tax.
- Provides a 20 percent deduction for pass-through taxes.

Corporate tax elements include

- Reduces corporate tax rate from 35 percent to 21 percent and reduces or eliminates some related business deductions.
- Eliminates corporate Alternative Minimum Tax.

To date, no legislation has been introduced to enact proposed new infrastructure spending. Uncertainty remains as to the content, size and timing of infrastructure legislation.

Averting a possible federal government shut-down, the U.S. House of Representative and Senate passed a continuing resolution in late December 2017 by votes of 231-188 and 66-32. The President then signed the continuing resolution. The resolution funds the federal government at current levels only through January 19, 2018 and delays consideration of several contentious issues into January 2018.

Inflation

Since 2009, overall personal consumption expenditures (PCE) price index inflation has been below the Federal Reserve's target 2.0 percent level in all but one year. Still more, core PCE index inflation has been below 2.0 percent in every year since 2009. Most recently, year-to-date, 2017 PCE price index inflation is 1.7 percent and PCE core price index inflation is 1.5 percent.

U.S. consumer price index inflation remains moderate. From 2013 to 2016, CPI inflation remained below 2.0 percent. Year-to-date through November, the 2017 U.S. CPI is up 2.1 percent.

Year-to-date through November, overall producer prices are up 2.3 percent – up significantly from a 0.9 percent decline in 2015 and a 0.5 percent gain in 2016. Year-to-date, core producer price inflation in 2017 was up 1.9 percent – up from a 0.7 percent gain in 2015 and a 1.2 percent increase in 2016.

Despite low unemployment rates, average hourly earnings continue to report modest growth.

Current oil and gasoline prices are up significantly from a year ago.

Between 2009 and 2016, the **personal consumption expenditures (PCE) price index**, which the Federal Reserve emphasizes in evaluating whether the U.S. economy is meeting the Fed's 2.0 percent inflation target, grew less than 2.0 percent each year except 2011. Still more, core PCE price index inflation, which excludes the direct impact of volatile food and energy prices, has stayed below 2.0 percent in each year since 2009. In 2016, the PCE price index rose 1.2 percent while the core PCE price index increased 1.8 percent. Year-to-date through November, the overall 2017 PCE price index has risen 1.7 percent while the core PCE price index has increased 1.5 percent. (Bureau of Economic Analysis)

Consumer prices declined 0.4 percent in 2009, but have risen each year since 2010. However, inflation, as measured by the overall **U.S. Consumer Price Index** (CPI), has remained moderate in recent years. Year-to-date through November, the 2017 overall CPI has risen 2.1 percent. In 2016, the CPI increased 1.3 percent after rising only 0.1 percent in 2015. Consumer prices rose 1.6 percent in 2014 after increasing 1.5 percent in 2013. Consumer prices rose 1.6 percent in 2010, 3.2 percent in 2011 and 2.1 percent in 2012. (U.S. Bureau of Labor Statistics).

In 2016, the **core consumer price index** (excluding food and energy) has also risen moderately in recent years. Year-to-date through November, the 2017 core CPI has risen 1.9 percent. In 2016, the core CPI rose 2.2 percent, after rising 1.8 percent in 2015. These increases follow annual core price inflation ranging between 1.0 percent and 2.1 percent from 2009 to 2014. (U.S. Bureau of Labor Statistics)

Producer prices rose 0.5 percent in 2016 after falling 0.9 percent in 2015. The 2015 decline followed increases of 1.9 percent in 2012, 1.3 percent in 2013 and 1.6 percent in 2014. Year-to-date through November, 2017 producer prices are up 2.3 percent. Year-over-year (y-o-y) growth

in producer prices accelerated to 2.0 percent in February 2017, 2.2 percent in March 2017 and 2.5 percent in April 2017. While moderating in mid-2017, year-over-year producer price inflation accelerated each month between July 2017 and November 2017. In November 2017, producer prices up 3.1 percent from last November – the fastest year-over-year growth in nearly six years.

Core producer prices rose 1.2 percent in 2016 after increasing 0.7 percent in 2015. The core producer price index increased 1.9 percent in 2012, rose 1.4 percent in 2013 and increased 1.8 percent in 2014. Year-to-date through November 2017, core producer prices were up 1.9 percent from 2016. Like overall producer prices, year-over-year core producer price inflation accelerated each month between July 2017 and October 2017. In October 2017, year-over-year core producer price inflation accelerated to 2.4 percent – the fastest year-over-year core price inflation in over 5 ½ years. Core producer prices were also up 2.4 percent between November 2016 and November 2017. (Bureau of Labor Statistics)

At the time of the May 2017 Consensus Revenue Estimating Conference, the price of oil averaged $49.33 per barrel– up $11.78 from a year earlier. The price of oil rose $1.73 per barrel in April 2017, but then declined in both May and June. In June, the price of oil stood at $45.18 – down a net $4.15 per barrel from March. However, the price of oil rose in each month between July 2017 and November 2017. In November 2017, the price of oil rose $5.06 per barrel from October and was up $10.98 per barrel from last November. Further, at $56.64 per barrel the November 2017 price of oil represented the highest monthly oil price since June 2015. (Federal Reserve Bank of St. Louis).

In November 2017, the price of regular gasoline equaled $2.56 per gallon and the three-month average stood at $2.57 per gallon. Compared to a year ago, the November 2017 price of gasoline was up 38 cents per gallon from a year earlier and the three-month average (September 2017-November 2017) was up 35 cents per gallon from a year ago. The price of a gallon of gasoline has risen from a year ago in each month between December 2016 and November 2017. In contrast, the three-month average was down from a year earlier in each month between September 2014 and November 2016. Year-to-date through November, the 2017 average price of gasoline was up 28 cents per gallon. (U.S. Energy Information Administration).

Oil Prices Up Significantly from Early 2016
But Down Sharply from 2014

Source: Federal Reserve Bank of St. Louis. Price per Barrel, West Texas Intermediate Oil.

Major Economic Indicators

Institute for Supply Management indices continued to indicate growth in the manufacturing sector (16 straight months) and non-manufacturing sectors (96 straight months) and as well as the overall economy (103 straight months).

After declining in 2015 and 2016, industrial production and capacity utilization in 2017 are both up modestly year-to-date through November.

Year-to-date through November 2017, both consumer and business sentiment are up from 2016.

After declining in calendar years 2015 and 2016, average new durable goods orders in 2017 through November are up 5.4 percent.

After slowing in mid-year 2017, the three-month average of retail sales has accelerated in recent months with year-over-year growth in November 2017 at a 5 ½ year high. Year-to-date through November, 2017 average retail sales are up 4.5 percent from 2016.

The ECRI weekly leading index growth rate fluctuated significantly in 2017. However, most recently, the rate has accelerated and indicates that the U.S. economy will grow at least through mid-2018. Likewise, the Conference Board index of leading indicators most recently sees continued U.S. growth at least through mid-2018.

Helped by double-digit growth since the May 2017 Consensus Conference, the stock market has increased substantially from last year.

In November 2017, the **ISM (Institute for Supply Management) manufacturing index, known as the PMI (Purchasing Management Index)** fell 0.5 points from October. However, the PMI rose 1.5 points in December 2017. At 59.7, the PMI remained above 50.0 for the 16th straight month. (A reading above 50.0 indicates an expanding sector.) Taken together, the PMI indicates continued manufacturing sector growth. The December 2017 PMI signaled an expanding *overall* economy for the 103rd consecutive month.

In November 2017, the **ISM non-manufacturing index (NMI)** fell 2.7 points from October to 57.4; the NMI fell an additional 2.5 points in December. In addition, the December 2017 NMI was down 0.7 of a point from last December. However, at 55.9, the December 2017 NMI signaled the 96th straight month of an expanding service sector.

In calendar year 2016, **industrial production** fell 1.2 percent after declining 0.7 percent in 2015. The two annual industrial production declines followed five straight years of annual production increases ranging between 2.0 percent and 5.5 percent. However, year-to-date through November, 2017 industrial production was up 1.4 percent.

In each month between April 2015 and November 2016, monthly industrial production was down from a year ago. However, in each of the most recent 10 months (February 2017-November 2017), industrial production was up from a year ago. Between November 2016 and November 2017, industrial production was up 3.4 percent – the largest year-over-year growth in three years. (Board of Governors of the Federal Reserve System)

After rising each year between 2010 and 2014, inclusive, the annual average **capacity utilization rate** fell 1.8 percentage points in 2015 and 1.1 percent points in 2016. However, year-to-date through November, the 2017 capacity utilization rate was up 0.7 percentage points.

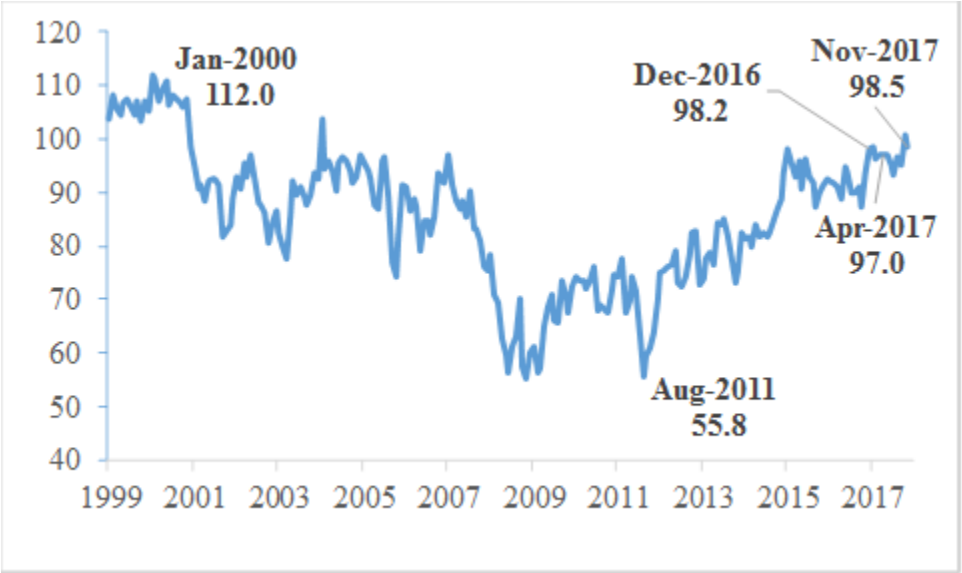
In each of the 22 months between February 2015 and November 2016, inclusive, the capacity utilization rate fell compared to a year ago. While rising from a year earlier in December 2016, the utilization rate was down year-over-year in both January 2017 and February 2017. However, the capacity utilization rate rose from a year earlier each month between March 2017 and November 2017, inclusive. In November 2017, the utilization rate was up 1.6 points from last November. (Board of Governors of the Federal Reserve System)

In each of the most recent 10 months (February 2017-November 2017), the **three-month moving average for new durable goods orders** has increased from the prior year. Year-over-year percent increases accelerated between February and April from 1.8 percent to 4.2 percent. The year-over-year increase slowed in May to 3.7 percent. However, increases then sped from 6.8 percent in June to 8.5 percent in August – the fastest year-over-year increase in slightly less than three years. The increase then slowed to 6.1 percent in September and to 5.3 percent in October before accelerating to 6.2 percent in November. Year-to-date through November, 2017 new durable goods orders are up 5.4 percent from the first 11 months in 2016. In contrast, the calendar year average of new durable goods orders declined in both 2015 (-4.6 percent) and 2016 (-1.7 percent). (U.S. Census Bureau)

Beginning in December 2009, the **three-month moving average for retail sales** has increased every month from the year-ago level. Over this period, the median y-o-y percent increase has been 4.3 percent. In each month between October 2016 and March 2017, the y-o-y increases in the average accelerated from 2.6 percent to 5.1 percent. After slowing in each month between April 2017 and August 2017 from 4.7 percent to 3.4 percent, the average has accelerated in each of the three most recent months (September 2017-November 2017, inclusive). In November 2017, the three-month average for retail sales was up 5.2 percent – the fastest year-over-year growth in 5 ½ years. Year-to-date through November, 2017 average retail sales are up 4.5 percent from the average sales in the first 11 months of 2016. The year-to-date 2017 retail sales percent increase is larger than any calendar year percent increase since 2013. (Census Bureau)

Between the January 2017 Consensus Conference and the May 2017 Conference, the **University of Michigan index of consumer sentiment** fell 1.2 points to 97.0 (December 2016-April 2017). The index rose slightly (0.1 of a point) in May 2017 but then fell in both June 2017 and July 2017 – dropping to 93.4 in July. The index then rose each month between August and October. In October 2017, the index increased to 100.7 – the index's highest reading since January 2004. The index fell 2.2 points in November 2017 to 98.5. However, year-to-date through November, the 2017 average sentiment index reading was up 5.6 points from last year.

Consumer Sentiment Trending Upward
Well Above August 2011 Trough



Source: University of Michigan Survey of Consumers.

After dropping to 50 (a neutral reading) in 2016Q3, the **Conference Board Measure of CEO Confidence Index** rose in each of the following two quarters. In 2016Q4, the Index increased sharply from 50 to 65 (reflecting substantially more positive than negative responses). The CEO Confidence Index then rose an additional three points in 2017Q1 to 68 – the Index's highest reading since 2004Q2. Most recently, the Index fell 7 points in 2017Q2 and dropped an

additional 2 points in 2017Q3. However, compared to a year ago, the 2017Q3 reading was still up 9 points. Further, year-to-date, the average 2017 reading is up 13 points.

Since the May 2017 Consensus Conference, the **Conference Board index of leading economic indicators (LEI)** has increased each month. In November 2017 (the most recent month now available), the index grew 0.4 percent after reporting an average gain of 0.47 percent over the prior six months (May 2017-October 2017). In its November 2017 LEI release, the Conference Board reported, "The U.S. LEI rose again in November, suggesting that solid economic growth will continue into the first half of 2018. In recent months, unemployment insurance claims have returned to pre-hurricane levels. In addition, improving financial indicators, new orders in manufacturing and historically high consumer sentiment have propelled the U.S. LEI even higher."

Stock prices have increased substantially since the May 2017 Consensus Conference. Between mid-May 2017 and the end of Decembrer 2017, the **stock market (Wilshire 5000)** rose 11.0 percent. Between the end of 2016 and the end of 2017, the Wilshire Index increased 18.6 percent.

Between the end of July 2015 and mid-March 2016, the **Economic Cycle Research Institute (ECRI) weekly leading index growth rate** was negative (pointing to an economic contraction in the near future). However, since the end of March 2016, the growth rate has been positive. Between late March 2016 and mid-September 2016, the growth rate trended faster – accelerating from 0.5 percent to 9.2 percent. The growth rate decelerated each week between mid-September 2016 and early November 2016 – slowing to 5.6 percent in early November. The growth rate then accelerated each week between mid-November 2016 and early-January 2017 in which the growth rate sped to 11.8 percent.

However between late January 2017 and early July 2017, the ECRI weekly leading index growth rate decelerated in all but one week with the rate slowing to 2.4 percent in early July 2017. The growth rate then accelerated for two weeks. However, the rate then slowed each week from early August 2017 and late September 2017 with the growth rate decelerating to 0.0 percent. In the final week of September 2017 and all weeks of October 2017, the growth rate accelerated with the rate speeding to 3.3 percent in late October. The growth rate then slowed in each week of November 2017 with the rate falling to 2.6 percent at the end of November. Most recently, in the each of the first two weeks of December 2017, the growth rate accelerated with the rate increasing to 3.5 percent in the second week of December 2017.

Vehicle Sales and Production

After rising to new record highs in 2015 and again in 2016, light vehicle sales fell in 2017. However, sales fell only slightly and, at 17.1 million units, 2017 light vehicle sales remained strong.

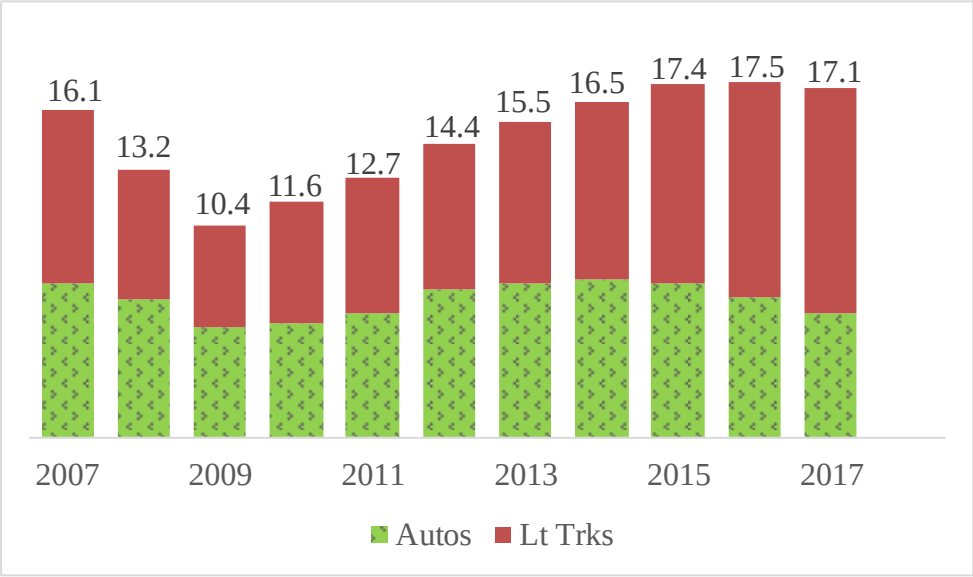
Light truck sales continue to account for more than 60.0 percent of light vehicle sales with 2017 light truck sales comprising 64.5 percent of light vehicle sales.

After rising each year between 2010 and 2016, year-to-date U.S. vehicle production through November strongly indicates that national vehicle production fell in 2017. Year-to-date, national production was down 7.8 percent in 2017.

The vehicle sector has shown substantial growth since 2010. **U.S. light vehicle sales** totaled slightly over 10.4 million units in 2009 – the worst annual sales year since 1982 when sales came in just under 10.4 million units. However, light vehicle sales grew each year between 2010 and 2016, inclusive. Sales rose to 11.6 million units in 2010, 12.7 million units in 2011, 14.4 million units in 2012, 15.5 million units in 2013 and 16.5 million units in 2014.

In 2015, light vehicle sales rose to a then record high of 17.40 million units – slightly exceeding the previous record of 17.35 million units set in 2000. In 2016, light vehicle sales rose – although slightly (0.4 percent) -- to a new record high: 17.46 million units. However, annual light vehicle sales fell in 2017 – marking the first calendar year sales decline since 2009. However, at 17.1 million units, light vehicle sales remained strong in 2017.

Light Vehicle Sales at Historically High Levels (millions of units)



In December 2017, light vehicle sales exceeded a 15.0 million unit annual rate for the 62nd straight month and exceeded a 16.0 million unit rate for the 46th consecutive month. Following eight straight months of a sales rate exceeding a 17.0 million unit rate between July 2016 and February 2017, the light vehicle sales rate dropped below 17.0 million units for six months (March 2017-August 2017). In September, boosted by replacement sales resulting from summer hurricanes, the light vehicle sales rate rose to 18.5 million units – the highest annualized sales rate since July 2005. While dropping modestly in October, light vehicle sales remained slightly above an 18.0 million unit rate. The sales rate dropped below 18.0 million units in November, but remained above 17.0 million units in both November and December.

Light truck sales share of the light vehicle sales market has continued to grow. Between 2013 and 2016, inclusive, the light truck sales share increased each year – rising a combined 10.8 percentage points over the four years. In 2015, the light truck sales share rose to a then record high of 56.8 percent – eclipsing the prior record high of 55.6 percent set in 2004. In 2016, the light truck sales share rose 3.9 percentage points to a new record high of 60.6 percent. In 2017, light truck sales share of light vehicle sales rose an additional 3.9 percentage points to yet another new record high of 64.5 percent. Further, December 2017 marked the 21st straight month in which light trucks have accounted for more than 60.0 percent of monthly light vehicle sales. While bringing vehicle makers higher profitability per unit, the record high light truck sales share exposes makers to greater downward risks from economic slowdowns and higher fuel prices.

U.S. vehicle production declined each year from 2003 to 2009. During these years, U.S. vehicle production decreased 6.5 million units or 53.2 percent. However, production increased each year between 2010 and 2016, inclusive. By 2016, production was up 113.8 percent from 2009. In 2016, national vehicle production was up 2.5 percent to 12.3 million units – its highest production level since 2000. However, year-to-date through November, U.S. vehicle production was down 7.8 percent in 2017.

Current Michigan Economic Conditions

Vehicle Production

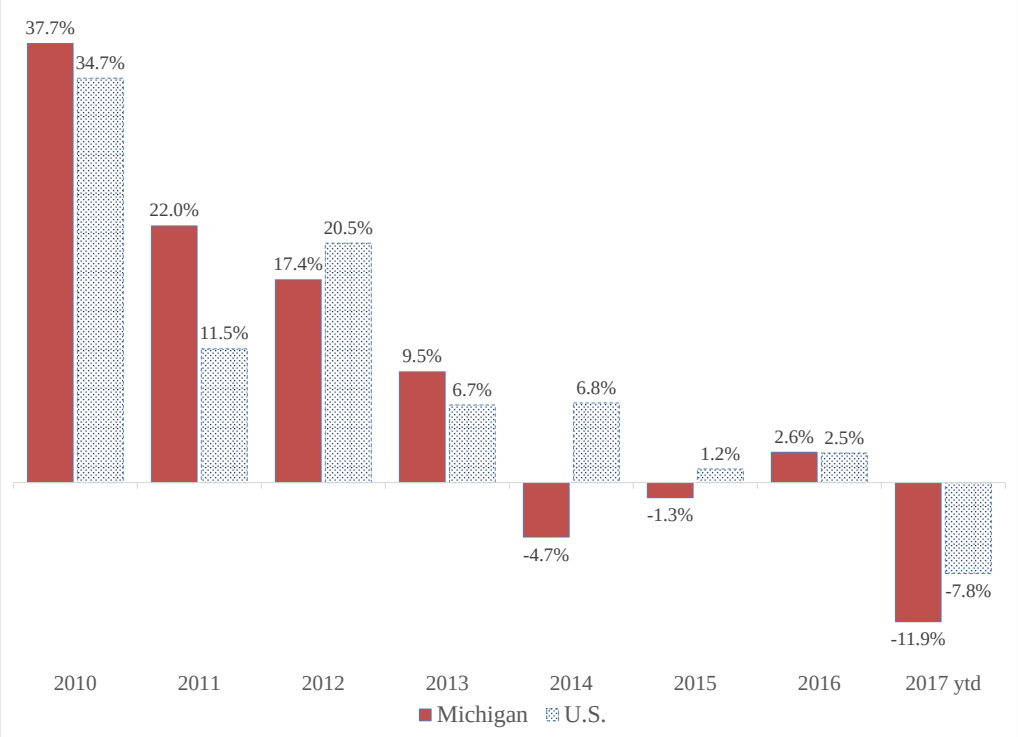
In 2016, Michigan vehicle production rose modestly. Year-to-date through November, vehicle production fell 11.9 percent in 2017.

In 2016, Michigan's share of U.S. vehicle production was unchanged from 2015. In 2017 year-to-date, Michigan's share of national vehicle production to 18.6 percent.

In 2013, **Michigan vehicle production** rose to 2.47 million units -- Michigan's highest vehicle production level since 2005. State vehicle production fell 4.7 percent in 2014 to 2.36 million units and dropped 1.3 percent in 2015 to 2.33 million units. In 2016, Michigan vehicle production rose 2.6 percent to 2.39 million units. However, year-to-date through November, 2017 average Michigan vehicle production was down 11.9 percent.

In 2013, **Michigan's share of U.S. vehicle production** rose to 22.3 percent. However, in 2014, the State's share of U.S. vehicle production fell 2.4 percentage points to 19.9 percent. In 2015, Michigan's share of national vehicle production fell an additional 0.5 of a percentage point to 19.4 percent, where it remained in 2016. Year-to-date through November, Michigan vehicle production accounted for 18.6 percent of U.S. vehicle production in 2017 – down 0.9 of percentage point from the State's share of national vehicle production in the first 11 months of 2016.

Year-to-date 2017 Michigan and U.S. Vehicle Production
Down from Year Ago



Automotive News and Michigan Department of Treasury.

Employment

Year-to-date, Michigan wage and salary employment in 2017 is up 1.6 percent – which would mark the seventh straight Michigan employment increase and represents the 16th fastest year-to-date growth among U.S. states.

Compared to employment at the end of the Great Recession, Michigan wage and salary employment is up 15.0 percent.

Year-to-date, Michigan manufacturing employment is up slightly in 2017 – which would mark the eighth straight Michigan manufacturing jobs increase. Michigan construction employment is up year-to-date in 2017 – which would mark the sector's seventh straight annual increase.

The Michigan unemployment rate has fallen each year since 2010. Michigan's unemployment rate has remained within 1.0 percentage of the U.S. unemployment rate since July 2014. Most recently, the November 2017 gap between the Michigan rate and the U.S. rate was +0.5 of a percentage point.

Michigan household employment has risen compared to a year ago each month between August 2011 and November 2017, inclusive.

Michigan's labor force has grown in each year since 2013.

Year-to-date through November, Michigan's 2017 unemployment rate averaged 4.5 percent -- only 0.1 of a percentage point above the U.S. unemployment rate.

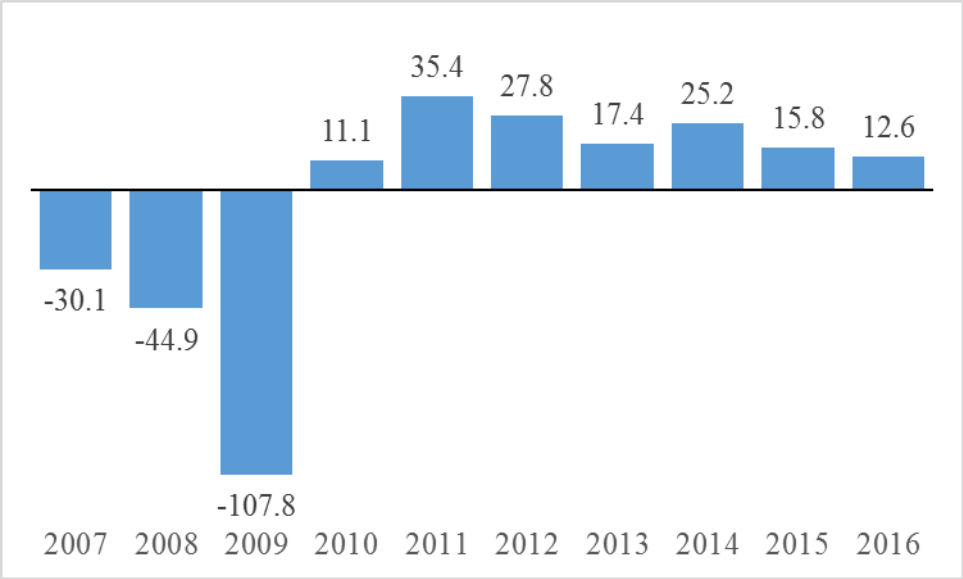
In 2016, **Michigan wage and salary employment** rose for a sixth straight year with 1.9 percent growth, ranking 14th among U.S. states. Year-to-date through November, 2017 Michigan wage and salary employment is up 1.6 percent, ranking 16th among U.S. states.

At 4.3 million jobs, 2016 Michigan wage and salary employment represented the State's highest employment level since 2006. Rising by a total of 462,000 jobs between 2010 and 2016, Michigan wage and salary employment increased 12.0 percent (the 16th fastest percent growth among U.S. states).

Over the first 11 months of 2017, Michigan employment rose from the prior month eight times. On net, Michigan employment has risen a net 45,400 jobs in the first 11 months of 2017. In November 2017, Michigan wage and salary employment was up by 46,300 jobs compared with November 2016 employment. The 46,300 jobs increase represents a 1.1 percent increase in employment between November 2016 and November 2017 – ranking 27th fastest among U.S. states.

Michigan's overall wage and salary employment has increased 15.0 percent **since the end of the Great Recession** (June 2009). The 15.0 percent growth represents the 14th strongest growth rate among all U.S. states.

Michigan Manufacturing Employment Change (thousands of jobs)



Source: Bureau of Labor Statistics, U.S. Department of Labor.

Manufacturing employment in Michigan increased each year from 2010 to 2016 with gains of 2.4 percent in 2010, 7.6 percent in 2011, 5.5 percent in 2012, 3.3 percent in 2013, 4.6 percent in 2014, 2.8 percent in 2015 and 2.1 percent in 2016. Over the past seven years, State manufacturing employment increased by 145,300 jobs. Thus, manufacturing employment accounted for 31.9 percent of the overall State employment increase over the past seven years, even while comprising only 11.8 percent of the overall *level* of base year 2009 Michigan wage and salary employment. In 2016, manufacturing employment accounted for 15.3 percent of the overall 2016 annual State wage and salary employment increase – down from the sector's 25.7 percent share of the overall increase in 2015.

Year-to-date through November, 2017 average Michigan manufacturing employment is up 0.7 percent from average sector employment in the first 11 months of 2016.

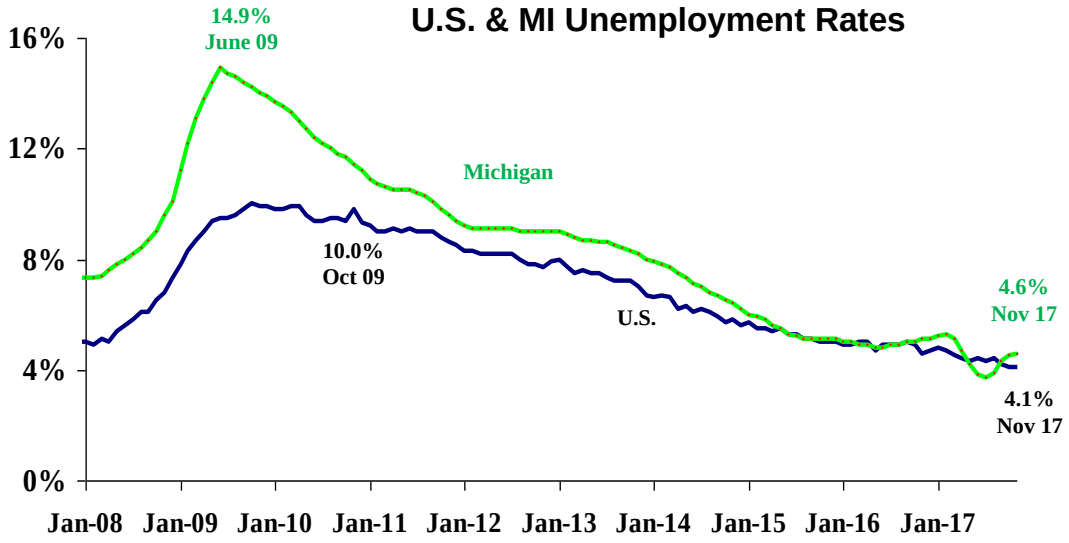
In the eight months since the May 2017 Consensus Conference (April 2017-November 2017), Michigan manufacturing employment, on net, rose by 3,300 jobs. Over the past year (November 2016-November 2017), Michigan manufacturing employment rose a net 2,700 jobs, accounting for only 5.8 percent of the overall 46,300 State net jobs gain over the past year.

Michigan construction employment has risen in each of the past six years with sector gains of 3.0 percent in 2011, 2.3 percent in 2012, 4.1 percent in 2013, 6.2 percent in 2014, 4.6 percent in 2015 and 4.9 percent in 2016. Year-to-date through November, 2017 average Michigan construction employment is up 4.8 percent from average sector employment in the first 11 months of 2016. In the eight months since the May 2017 Consensus Conference, State

construction employment has fallen by a net 500 jobs. Over the past year, Michigan construction employment rose a net 3,700 jobs (8.0 percent of the State's overall jobs gain).

In 2009, **Michigan's unemployment rate** rose to 13.7 percent – the State's highest rate since 1983 when the rate stood at 14.4 percent. However, in each year since 2010, the State's unemployment rate decreased. Over the past seven years, Michigan's unemployment rate dropped a combined 8.8 percentage points. In 2016, the Michigan unemployment rate fell 0.5 of a percentage point to 4.9 percent, the State's lowest annual unemployment rate since 2000. Year-to-date through November, Michigan's 2017 unemployment rate averaged 4.5 percent -- only 0.1 of a percentage point above the year-to-date 2017 average U.S. unemployment rate.

Michigan Unemployment Rate Change



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Source: MI Bureau of Labor Market Information and U.S. Bureau of Labor Statistics.

During the Great Recession (December 2007-June 2009), the **gap between Michigan's unemployment rate and the U.S. unemployment rate** rose to 5.4 percentage points. Within a year after the Great Recession, the gap shrank to 3.0 percentage points and within two years, the gap fell to 1.4 percentage points. The gap fluctuated around 1.0 percentage point between mid-2011 and mid-2014. Then, the gap decreased over the next year and by mid-2015, the gap fell to zero. Between May 2015 and May 2017, the gap fluctuated narrowly between -0.1 of a percentage point and +0.6 of a percentage point. In June 2017 the Michigan unemployment rate was lower than U.S. unemployment rate by 0.6 of a percentage point and remained in that range for July and August. In the three most recent months for which data are available, the Michigan unemployment rate was higher than the US level: +0.1 of a percentage point in September 2017, +0.4 of a percentage point in October 2017 and +0.5 of a percentage point in November 2017.

Michigan total household employment fell in each month between September 2005 and November 2009 with household employment falling a combined 581,500 persons (12.2 percent). Between December 2009 and June 2011, household employment changed little. However, between July 2011 and May 2017, total household employment trended upward and regained a

net 510,400 persons. Then, Michigan household employment fell from the prior month each month between June 2017 and October 2017, inclusive – falling a combined 46,700 persons. Most recently, employment rose by 10,500 persons in November 2017. In the eight months since the May 2017 Consensus Conference, Michigan household employment fell by 14,900 persons. However, since the Conference, monthly State household employment has continued to be up from a year ago. Thus, Michigan household employment has risen compared to a year ago each month between August 2011 and November 2017, inclusive.

Michigan's labor force fell every year between 2006 and 2012, inclusive. Over the seven years, the State's annual labor force dropped a combined 410,400 persons. However, in each of the most recent four years, the State's annual labor force increased with gains of 1.2 percent in 2013, 0.6 percent in 2014, 0.1 percent in 2015 and 1.7 percent in 2016. Taken together, calendar year labor force rose 164,100 persons (3.5 percent) over the four years. Year-to-date through November, 2017 Michigan average labor force rose 1.1 percent from 2016.

Between November 2016 and November 2017, **Michigan unemployment** fell 21,600 persons (8.8 percent). Compared to unemployment at the end of the Great Recession, November 2017 unemployment was down by 513,400 persons.

Housing Market

Michigan housing unit authorizations have risen each year since 2010. Year-to-date, Michigan housing authorizations are up 10.6 percent, compared with 6.8 percent growth nationally.

The share of mortgage properties underwater (negative equity) in Michigan is substantially higher than the national average.

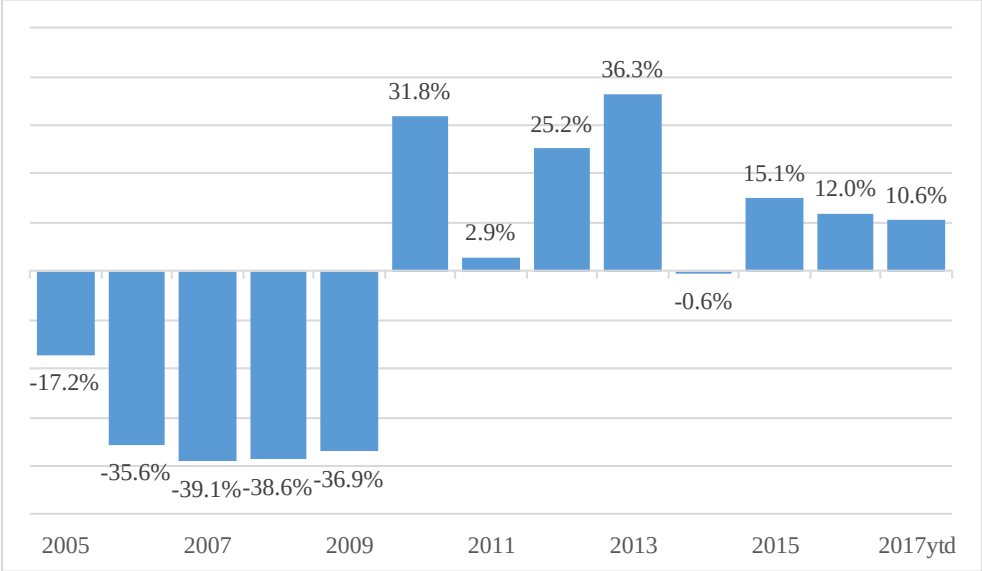
Despite not being one of the major participants in the housing boom, Michigan was hit disproportionately hard by the housing bust due to sharply declining employment. However, the State's housing market has seen signs of improvement in recent years.

Michigan housing unit authorizations increased each year since 2010. In 2010, 2012 and 2013, annual increases exceeded 25 percent. While State housing unit authorizations fell 0.6 percent 2014, State housing unit authorizations increased 15.1 percent in 2015. In 2016, Michigan housing unit authorizations increased 12.0 percent. Nationally, in 2016, authorizations increased only 2.0 percent after rising 12.4 percent in 2015.

From 2009 to 2016, Michigan authorizations rose 196.5 percent, compared with a 107.0 percent increase nationally. However, in 2016, Michigan authorizations were still 60.5 percent below the State's 1996-2005 annual average (51,688 units). Total U.S. authorizations in 2016 were 30.0 percent below the national average from 1996-2005. As a result, while accounting for an average of 3.0 percent of overall U.S. authorizations between 1996 and 2005, Michigan authorizations accounted for only 1.7 percent of U.S. authorizations in 2016. Year-to-date,

through October 2017, Michigan housing authorizations are up 10.6 percent, compared with 6.8 percent growth nationally. (Census Bureau)

Michigan Housing Unit Authorizations
Percent Change



Source: U.S. Census Bureau.

According to CoreLogic, **Michigan** recorded a 7.7 percent **year-over-year house price increase** between November 2016 and November 2017, compared to a 7.0 percent average increase nationally.

The **share of mortgage properties underwater (negative equity)** in Michigan is substantially higher than the national average. In 2017Q3, nationwide, 4.9 percent of residential properties with mortgages were underwater nationally. In Michigan, 6.2 percent of such properties were underwater – ranking Michigan 11th highest among U.S. states. (CoreLogic) Further, according to RealtyTrac, in 2017Q1, the Detroit metro area had the 7th highest share of seriously underwater homes among the 88 U.S. metro areas with a population of at least 500,000 people and with sufficient data available (17.1 percent).

Personal Income

Michigan annual personal income grew each year between 2010 and 2016. Most recently, Michigan personal income growth slowed from 5.5 percent growth in 2015 to 2.8 percent growth in 2016.

Michigan per capita personal income has risen each year since 2010. Michigan's 2.7 percent growth in per capita income in 2016 ranked 10th among U.S. states.

Each quarter between 2010Q2 and 2017Q3, Michigan wage and salary income rose from a year ago with increases ranging from 0.9 percent and 8.2 percent.

Through the first three quarters of the year, 2017 Michigan wages and salaries were up 2.8 percent (ranking 16th among U.S. states and matching national growth).

Through the first three quarters of the year, 2017 Michigan manufacturing wages and salaries were up 2.3 percent -- the 14th fastest increase among U.S. states and 0.6 of a percentage point faster than national growth of 1.7 percent.

Michigan annual personal income grew each year between 2010 and 2016. Michigan personal income increased 3.4 percent in 2010. In 2011, Michigan personal income growth accelerated to 6.2 percent before slowing to 3.6 percent in 2012 and 1.4 percent in 2013. However, in 2014, Michigan personal income growth accelerated to 4.3 percent. In 2015, Michigan personal income growth accelerated further, to 5.5 percent. However, Michigan personal income growth slowed substantially to 2.8 percent in 2016. Michigan's 2.8 percent income growth in 2016 ranked 18th among U.S. states. (Bureau of Economic Analysis)

Michigan per capita personal income, which controls for population, has also risen in each of the most recent seven years with increases of 3.6 percent in 2010, 6.2 percent in 2011, 3.5 percent in 2012, 1.3 percent in 2013, 4.1 percent in 2014, 5.5 percent in 2015 and 2.7 percent in 2016. Michigan's 2.7 percent growth in per capita income in 2016 ranked 10th among U.S. states.

Michigan's quarterly personal income grew from the prior year in all but one quarter (2013Q4) between 2010Q1-2017Q3 (the latest quarter for which data are available). Between 2014Q4 and 2015Q4, Michigan personal income year-over-year growth exceeded 5.0 percent. However, State personal income growth slowed substantially to 3.5 percent in 2016Q1. Michigan personal income growth slowed further in each of the following three quarters with growth slowing to 1.6 percent in 2016Q3. State year-over-year income growth accelerated to 3.3 percent in 2017Q1 but then slowed to 2.2 percent in 2017Q2 and to 2.1 percent in 2017Q3. Through the first three quarters of the year, 2017 Michigan personal income grew 2.5 percent from last year– ranking 25th among U.S. states and 0.3 of a percentage point slower than national growth.

Each quarter between 2010Q2 and 2017Q3, **Michigan wage and salary income** rose from a year ago with increases ranging from 0.9 percent and 8.2 percent. After slowing from 5.7 percent y-o-y growth in 2014Q4 to 4.3 percent in 2015Q1, Michigan wage and salary growth

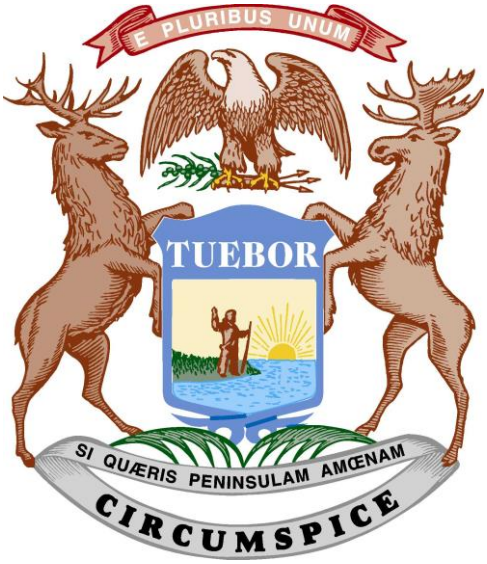
accelerated to 4.6 percent in 2015Q2, 5.0 percent in 2015Q3 and 6.4 percent in 2015Q4. In 2016Q1, Michigan wage and salary growth slowed to 4.4 percent. Michigan wages and salaries were up 4.6 percent in 2016Q2 and up 4.7 percent in 2016Q3. In 2016Q4, Michigan wage and salary y-o-y growth slowed substantially to 1.4 percent. Most recently, Michigan wage growth accelerated to 4.0 percent in 2017Q1 before slowing to 2.3 percent in 2017Q2 and to 2.0 percent in 2017Q3. Through the first three quarters of the year, 2017 Michigan wages and salaries were up 2.8 percent (ranking 16th among U.S. states and matching national growth).

After year-over-year declines in 12 straight quarters from 2007Q2 to 2010Q1, **Michigan manufacturing wages and salaries** recorded y-o-y increases in 14 straight quarters (2010Q2-2013Q3). Further, after a slight decline in 2013Q4 (-0.3 percent), Michigan manufacturing wages and salaries recorded positive growth in each of the following 11 quarters (2014Q1-2016Q3) with growth ranging between 3.6 percent and 8.8 percent. Most recently, after declining 2.8 percent in 2016Q4, Michigan manufacturing wages and salaries growth accelerated to 4.8 percent in 2017Q1 but then slowed to 1.0 percent in 2017Q2 before rising very slightly to 1.1 percent in 2017Q3. Through the first three quarters of the year, 2017 Michigan manufacturing wages and salaries were up 2.3 percent -- the 14th fastest increase among U.S. states and 0.6 of a percentage point faster than national growth of 2.0 percent.

Historically, manufacturing wages accounted for a substantially larger share of overall wage growth in Michigan compared with the U.S. overall. Along these lines, the manufacturing sector accounted for 21.3 percent of overall Michigan y-o-y wage growth in 2017Q1, compared with only 7.8 percent nationally. In 2017Q2, manufacturing wage growth accounted for 7.9 percent of overall Michigan wage growth, compared with 5.7 percent nationally. Most recently, the manufacturing sector accounted for 9.7 percent of overall Michigan wage and salary growth but only 4.8 percent nationally. In 2016Q4, Michigan manufacturing wages fell while overall Michigan wages rose. However, in the preceding 11 quarters (2014Q1-2016Q3), Michigan manufacturing wages' share of overall wage growth ranged between 14.2 percent and 24.4 percent. In contrast, nationally over these 11 quarters, the manufacturing sector's share of overall wage growth ranged between 2.8 percent and 10.4 percent.

SECTION III

Administration Economic Forecast



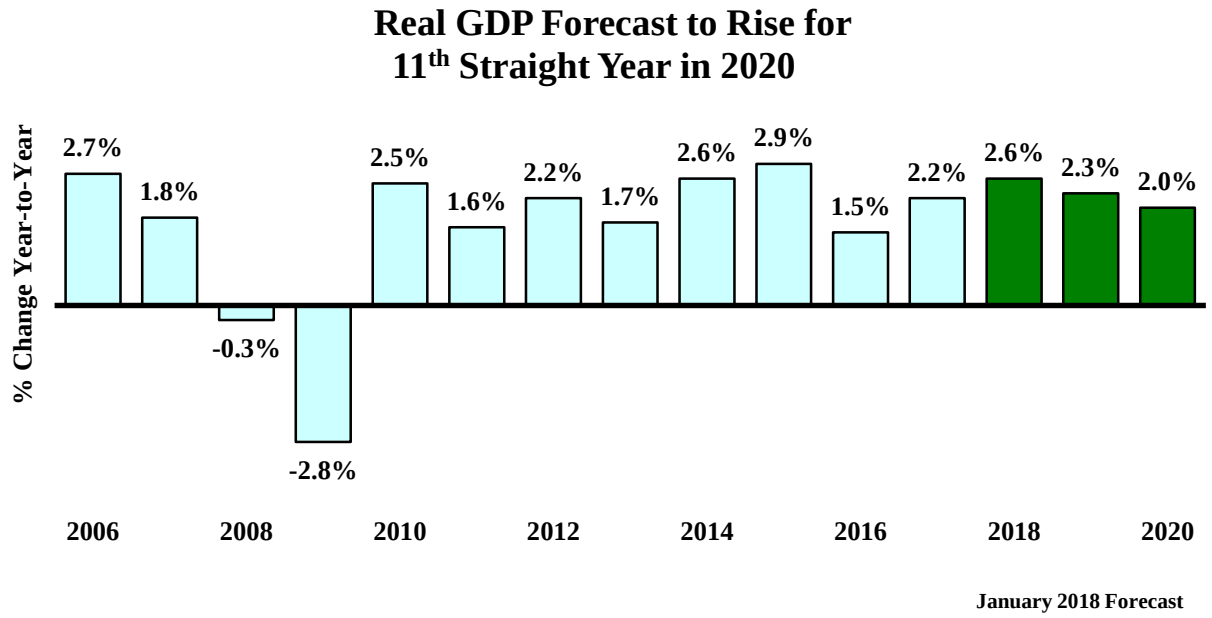
Administration Economic Forecast Summary

Table 1 (next page) provides a one-page summary table of the Administration forecast of the U.S. and Michigan economies.

2018, 2019 and 2020 U.S. Economic Outlook

Summary

Inflation adjusted GDP rose 1.5 percent in 2016, marking the seventh straight year of annual growth. Real GDP increased an estimated 2.2 percent in 2017 and is expected to increase 2.6 percent in 2018, 2.3 percent in 2019 and 2.0 percent in 2020.



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, January 2018.

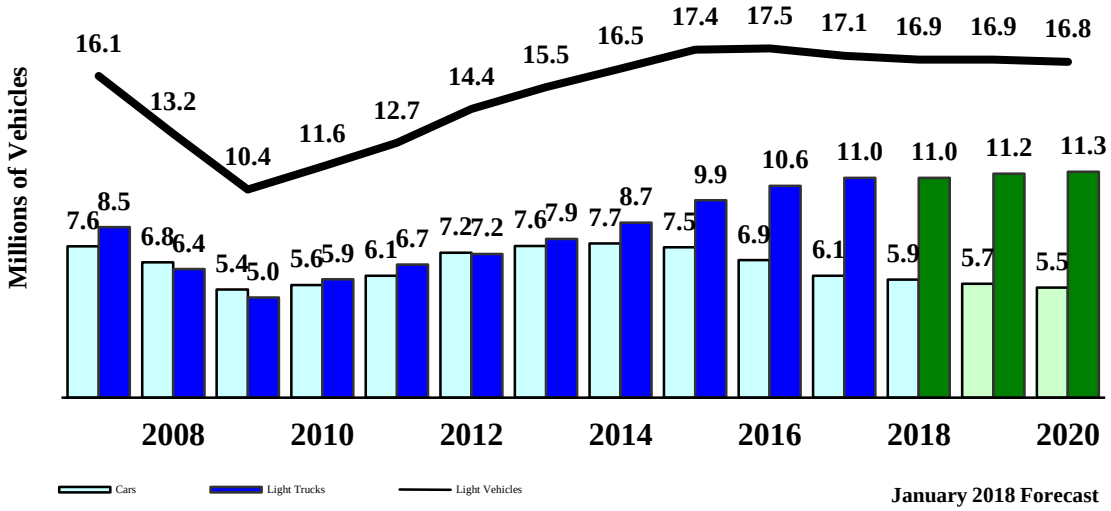
In 2016, annual **light vehicle sales** rose to a new record high of 17.46 million units. In 2017, light vehicle sales fell to 17.1 million units. Light vehicle sales are expected to change little over the forecast and total 16.9 million units in 2018 and in 2019, and fall slightly to 16.8 million units in 2020.

Table 1
Administration Economic Forecast

January 2018

	Calendar 2016 Actual	Calendar 2017 Forecast	Percent Change from Prior Year	Calendar 2018 Forecast	Percent Change from Prior Year	Calendar 2019 Forecast	Percent Change from Prior Year	Calendar 2020 Forecast	Percent Change from Prior Year
United States									
Real Gross Domestic Product (Billions of Chained 2009 Dollars)	$16,716	$17,084	2.2%	$17,528	2.6%	$17,931	2.3%	$18,290	2.0%
Implicit Price Deflator GDP (2009 = 100)	111.4	113.3	1.7%	115.2	1.7%	117.5	2.0%	120.1	2.2%
Consumer Price Index (1982-84 = 100)	240.007	244.545	1.9%	248.166	1.5%	253.214	2.0%	258.893	2.2%
Consumer Price Index - Fiscal Year (1982-84 = 100)	238.939	243.841	2.1%	247.061	1.3%	251.890	2.0%	257.436	2.2%
Personal Consumption Deflator (2009 = 100)	110.8	112.6	1.6%	114.3	1.5%	116.5	1.9%	118.9	2.1%
3-month Treasury Bills Interest Rate (percent)	0.3	0.9		1.5		2.0		2.4	
Unemployment Rate - Civilian (percent)	4.9	4.4		4.2		4.0		4.0	
Wage and Salary Employment (millions)	144.306	146.443	1.5%	148.640	1.5%	150.570	1.3%	152.230	1.1%
Housing Starts (millions of starts)	1.174	1.202	2.4%	1.301	8.3%	1.327	2.0%	1.348	1.6%
Light Vehicle Sales (millions of units)	17.5	17.1	-2.1%	16.9	-1.2%	16.9	0.0%	16.8	-0.6%
Passenger Car Sales (millions of units)	6.9	6.1	-11.6%	5.9	-3.3%	5.7	-3.4%	5.5	-3.5%
Light Truck Sales (millions of units)	10.6	11.0	4.1%	11.0	0.0%	11.2	1.8%	11.3	0.9%
Big 3 Share of Light Vehicles (percent)	42.7	42.2		42.2		42.4		42.6	
Michigan									
Wage and Salary Employment (thousands)	4,326	4,386	1.4%	4,426	0.9%	4,474	1.1%	4,532	1.3%
Unemployment Rate (percent)	4.9	4.3		4.3		4.4		4.4	
Personal Income (millions of dollars)	$439,361	$452,981	3.1%	$472,006	4.2%	$493,719	4.6%	$517,417	4.8%
Real Personal Income (millions of 1982-84 dollars)	$197,762	$200,287	1.3%	$205,412	2.6%	$210,236	2.3%	$215,374	2.4%
Wages and Salaries (millions of dollars)	$222,823	$230,622	3.5%	$239,155	3.7%	$249,677	4.4%	$261,163	4.6%
Detroit Consumer Price Index (1982-84 = 100)	222.167	226.166	1.8%	229.785	1.6%	234.840	2.2%	240.241	2.3%
Detroit CPI - Fiscal Year (1982-84 = 100)	221.137	225.517	2.0%	228.697	1.4%	233.431	2.1%	238.777	2.3%

Vehicle Sales Fall Slightly Over Forecast



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, January 2018.

The **U.S. unemployment rate** has fallen in each of the past seven years with the unemployment rate dropping from a near post-World War II record high 9.6 percent in 2010 to 4.4 percent in 2017. The U.S. rate is forecast to fall to 4.2 percent in 2018 and to decline to 4.0 percent in 2019. In 2020, the national unemployment rate is expected to remain unchanged at 4.0 percent.

U.S. wage and salary employment rose 1.7 percent in 2016 and increased 1.5 percent in 2017. U.S. employment is forecast to increase 1.5 percent in 2018, 1.3 percent in 2019 and 1.1 percent in 2020. U.S. wage and salary employment in 2014 rose above the previous national peak employment level set in 2007. The U.S. employment level then rose to a new record annual high in 2015 and again in 2016 and in 2017. With forecasted increases in 2018, 2019 and 2020, calendar year 2020 national employment is expected to be 10.3 percent above the pre-2014 peak employment level.

U.S. consumer price inflation slowed sharply to 0.1 percent in 2015 and then accelerated to a 1.3 percent rate in 2016. In 2017, the overall price level inflation is estimated to have accelerated to 1.9 percent. Inflation is forecast to slow to 1.5 percent in 2018 and then accelerate to 2.0 percent in 2019 and to 2.2 percent in 2020. The personal consumption price deflator inflation rate is projected to accelerate from 1.6 percent in 2017 to 2.1 percent in 2020.

In 2016, the **short-term Treasury bill rate** rose to 0.3 percent. As a result of increases in the federal funds rate, the short-term Treasury bill rate is estimated to have increased to 0.9 percent in 2017. The Treasury bill rate is forecast to rise to 1.5 percent in 2018, 2.0 percent in 2019 and 2.4 percent in 2020 – which would be the highest short-term Treasury bill rate since 2007, when the rate stood at 4.4 percent.

Corporate interest rates fell to 3.7 percent in 2016 from 3.9 percent in 2015. In 2017, the Aaa bond rate is estimated to have risen to 3.8 percent. After rising to 4.0 percent in 2018, the corporate rate is projected to increase to 4.3 percent in 2019 and 4.5 percent in 2020.

The **30-year fixed mortgage rate** dropped to 3.9 percent in 2015 and fell to 3.65 percent in 2016. Mortgage rates rose to an estimated 4.0 percent in 2017 and are forecast to increase to 4.8 percent in 2019 and 5.0 percent in 2020.

Throughout the forecast horizon, the housing market is expected to strengthen and housing starts are forecast to increase each year. Consequently, **housing starts** in 2020 (1.35 million units) are expected to be 12.1 percent higher than estimated starts in 2017. Nevertheless, 2020 starts will remain well below the average 1.7 million annual starts in the ten years before the housing bust.

Assumptions

After falling an estimated 0.2 percent in 2017, **real (inflation-adjusted) federal government expenditures** are forecast to rise 0.3 percent in calendar year (CY) 2018, increase 0.2 percent in CY 2019 and then fall 0.1 percent in CY 2020.

In 2016, **oil prices** per barrel averaged $43 per barrel – down more than 50 percent from average oil prices just two years earlier in 2014. In 2017, oil prices rose to an estimated average $49 per barrel, where they are forecast to stay in 2018. Oil prices are then expected to rise to $52 per barrel in 2019 and rise to $57 per barrel in 2020.

After having held the **federal funds rate** near zero since December 2008, the Fed raised the federal funds rate 25 basis points in late 2015. The Fed next increased the federal fund rate an additional 25 basis points in December 2016. In 2017, the Fed increased interest rates by 25 basis three times (March, June and December). The Fed is expected to raise the federal funds rate by 25 basis points twice in each of the three forecast years (2018, 2019 and 2020). As a result, the federal funds rate is assumed to rise from a 1.25-1.50 percent range percent in late 2017 to 2.75-3.00 percent range in late 2020.

The level of **real state and local government expenditures** is expected to increase in each year of the three-year forecast horizon. Real state and local government expenditures are expected to rise 0.8 percent in 2018, 1.2 percent in 2019 and 1.0 percent in 2020.

Rest-of-world growth is projected to equal 1.9 percent in 2018. The growth rate is then expected to slow slightly to 1.8 percent in 2019 and then return to 1.9 percent in 2020.

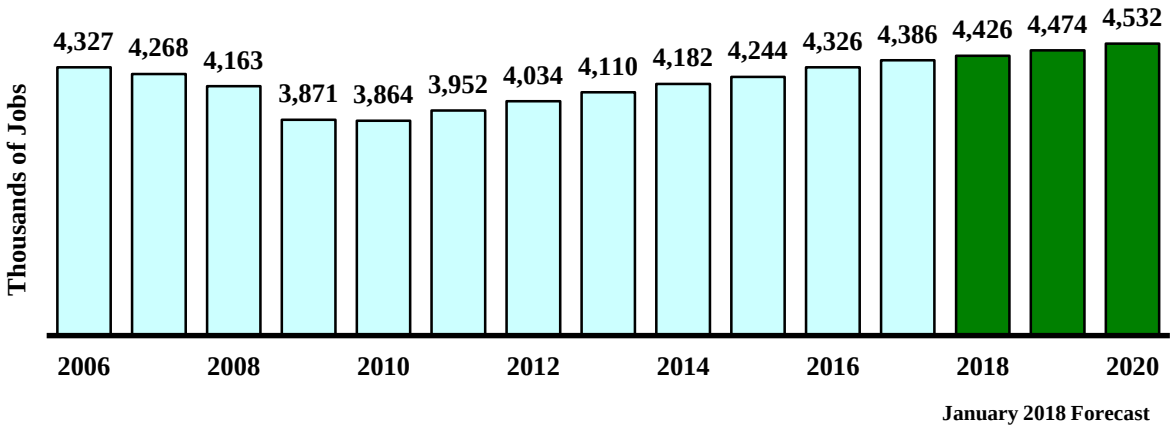
2018, 2019 and 2020 Michigan Economic Outlook

Following ten straight annual declines from 2001 to 2010, **Michigan wage and salary employment** reported its seventh straight annual employment increase in 2017. In 2017, Michigan employment increased an estimated 1.4 percent. State employment is forecast to grow (although more slowly) in each of the next three years: 0.9 percent in 2018, 1.1 percent in 2019 and 1.3 percent in 2020. At 4.53 million jobs, the forecasted Michigan wage and salary employment level in 2020 would represent the State's highest employment level since 2001. However, forecasted 2020 Michigan employment would remain 144,000 jobs (3.1 percent) below the State's peak annual employment set in 2000 (4.7 million jobs).

In 2016, **Michigan private non-manufacturing employment** rose 65,600 jobs. Private non-manufacturing employment gained an estimated 45,600 jobs in 2017 and is forecast to gain 39,000 jobs in 2018, 51,200 jobs in 2019 and 52,700 jobs in 2020.

In 2016, **State manufacturing employment** rose 2.1 percent. Michigan manufacturing employment growth slowed to an estimated 0.9 percent in 2017. State manufacturing employment is projected to decline 1.2 percent in 2018, fall 0.6 percent in 2019 and drop 0.1 percent in 2020. Consequently, Michigan manufacturing employment is forecast to decline a cumulative 10,900 jobs over three years of the forecast.

Michigan Wage and Salary Employment Continues to Rise



Source: Michigan Department of Labor and Economic Growth, U.S. Bureau of Labor Statistics and January 2018 Administration Forecast.

Michigan transportation equipment employment increased 4.4 percent in 2015. The sector's employment grew 3.3 percent in 2016. In 2017, transportation equipment employment is estimated to have risen 0.6 percent. The sector's employment is then projected to decrease 2.0 percent in 2018, fall 0.8 percent in 2019 and then rise 0.2 percent in 2020. Forecasted 2020

transportation equipment employment of 176,000 jobs remains down 47.5 percent from the sector's CY 2000 peak employment of 335,300 jobs.

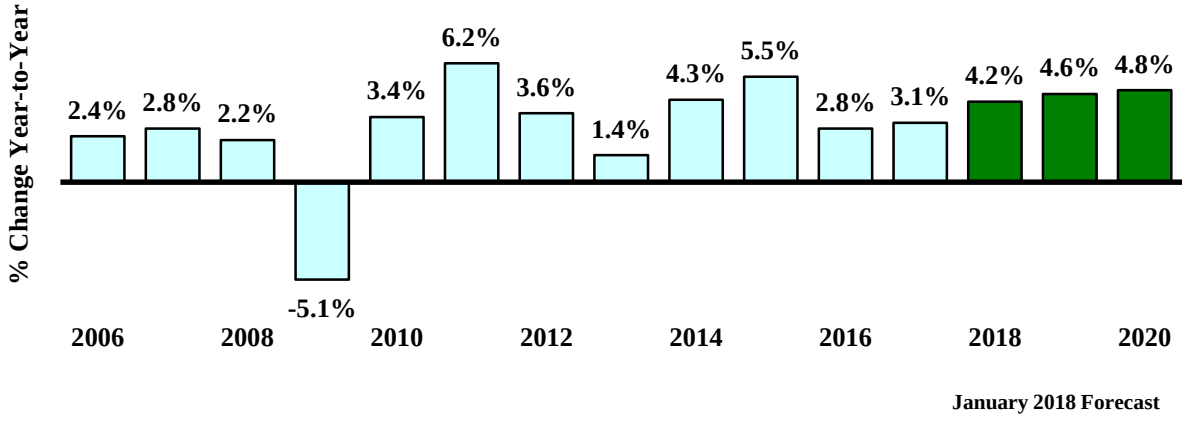
The **Michigan unemployment rate** dropped to 4.9 percent in 2016 from 5.4 percent in 2015. In 2017, the State's rate fell to an estimated 4.3 percent in 2017. In 2018, the rate is projected to remain unchanged at 4.3 percent. In 2019, the Michigan unemployment rate is forecast to rise to 4.4 percent, where the rate is projected to stay in 2020.

In 2016, **Michigan wages and salaries** rose 3.8 percent. Wages and salaries growth slowed slightly to an estimated 3.5 percent in 2017. However, wages and salaries growth is forecast to accelerate in each year of the forecast with increases of 3.7 percent in 2018, 4.4 percent in 2019 and 4.6 percent in 2020. **Michigan personal income** rose 2.8 percent in 2016 and increased an estimated 3.1 percent in 2017. State personal income is forecast to rise 4.2 percent in 2018, 4.6 percent in 2019 and 4.8 percent in 2020.

The overall price level, as measured by the **Detroit CPI**, increased 1.0 percent in 2014, but declined 1.4 percent in 2015, marking the first year of annual deflation since 2009 and the largest annual Detroit CPI index percent decline since 1939. The overall price level rose 1.6 percent in 2016. In 2017, the Detroit CPI is estimated to have increased 1.8 percent. Over the forecast horizon, the overall price level is projected to rise each year with increases of 1.6 percent in 2018, 2.2 percent in 2019 and 2.3 percent in 2020.

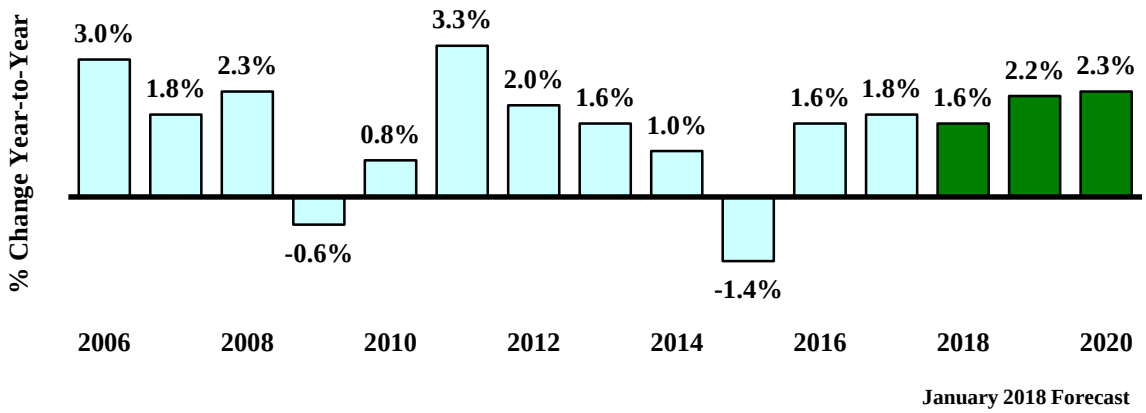
Real (inflation adjusted) Michigan personal income grew 1.2 percent in 2016 and is estimated to have grown 1.3 percent in 2017. In 2018, real Michigan personal income growth is forecast to accelerate to 2.6 percent, before slowing to 2.3 percent in 2019. In 2020, real Michigan personal income growth is forecast to accelerate slightly to 2.4 percent.

Michigan Personal Income Reports Solid Growth



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, January 2018.

Consumer Prices Forecast to Record Faster Growth
Detroit CPI



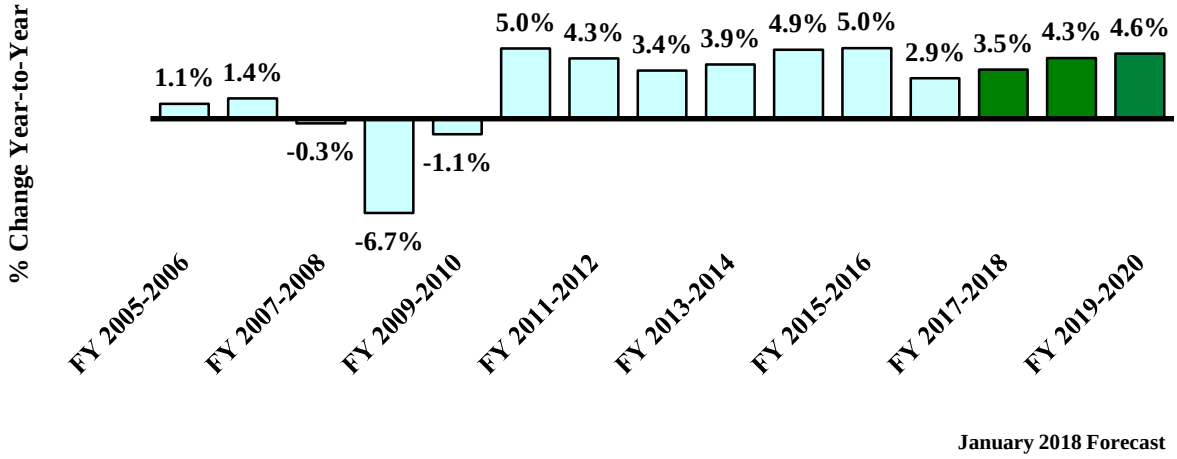
Source: U.S. Bureau of Labor Statistics and Administration Forecast, January 2018.

Fiscal Year Economics

Michigan's largest taxes are the individual income tax ($11.4 billion in FY 2017) and sales and use taxes ($9.1 billion). Income tax withholding is the largest income tax component of the income tax. Withholding ($9.3 billion) is most affected by growth in wages and salaries. **Michigan wages and salaries** rose 3.9 percent in FY 2014, increased 4.9 percent in FY 2015 and rose 5.0 percent in FY 2016. In FY 2017, State wages and salaries growth slowed to an estimated 2.9 percent. Over the forecast horizon, Michigan wages and salaries growth is projected to accelerate to 3.5 percent in FY 2018, 4.3 percent in FY 2019 and 4.6 percent in FY 2020.

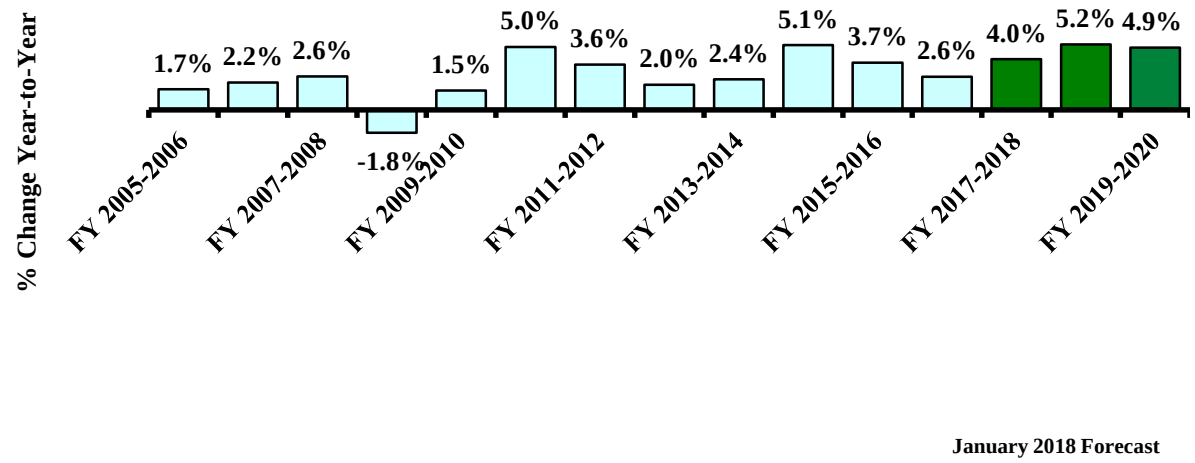
Sales and use taxes depend primarily on **Michigan disposable (after tax) income** and inflation. Having risen 3.7 percent in fiscal year 2016, disposable income increased an estimated 2.6 percent in FY 2017. Disposable income is projected to increase 4.0 percent in FY 2018, 5.2 percent in FY 2019 and 4.9 percent in FY 2020. Prices, as measured by the **Detroit CPI**, fell 1.2 percent in FY 2015, increased 1.0 percent in FY 2016 and then rose 2.0 percent in FY 2017. The Detroit CPI is forecast to rise 1.4 percent in FY 2018, to increase 2.1 percent in FY 2019 and to rise 2.3 percent in FY 2020.

Michigan Wages and Salaries to Report Moderate Growth
Basis for Income Tax Withholding Collections



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, January 2018.

Michigan Disposable Income Increases
Basis for Sales and Use Tax Collections



Source: Research Seminar in Quantitative Economics, University of Michigan, and Administration Forecast, January 2018.

Forecast Risks

As with any economic forecast, the current recovery faces some risks.

Consumer and Economic Sentiment. Compared with pre-November 2016 election levels, consumer sentiment and business sentiment are up considerably. Higher sentiment is the result of higher expectations for U.S. macroeconomy and increased expectations of the enactment of federal government fiscal legislation that will substantially improve economic and financial conditions. To the extent to which these higher expectations are disappointed, sentiment could drop sharply and, in turn, weaken the macroeconomy.

International Economies and Geopolitical Tensions. Europe's ongoing economic recovery may weaken unexpectedly. In addition, Chinese economic growth may slow substantially. International geopolitical and military tensions have broadened and continue to heighten -- along with concerns about those tensions' impact on the U.S. economy.

Fiscal Policy. As of the end of 2017, Congress passed and the President has signed one major package of fiscal legislation: corporate and individual tax reform. In late December 2017, Congress passed and the President signed tax reform legislation package that would result around a $1.5 trillion reduction in federal revenues over the next ten years– excluding effects from macroeconomic feedback. Risks surrounding the tax reform package include the size of the simulative macroeconomic impact of the legislation and that stimulation's impact on inflation as well as size of the ultimate impact of the package on the federal debt. Higher inflation from the package' simulative impact on the one hand and a greater impact on the federal debt on the other hand both risk higher interest rates. Higher interest rates, in turn, would result in slower economic growth.

Substantial uncertainty surrounds the size, composition and timing of any other fiscal legislation that might be enacted over the forecast horizon – including legislation to repeal and replace the Affordable Care Act and legislation to enact major infrastructure spending. In addition, risk surrounds the economic impact of possible international trade actions (including possible major changes to current international trade agreements or the imposition of new tariffs on U.S. imports – which might lead to retaliatory trade actions by other nations against the U.S).

Oil Prices. Two major uncertainties surround oil price's impact on the U.S. and Michigan economies:

- The direction and magnitude of changes in oil prices. Over the forecast horizon, oil prices are projected to rise gradually from the upper $40 per barrel range to the upper $50 per barrel range. Geopolitical concerns, increased demand, or a major supply disruption could raise oil prices well above the assumed range. In addition, stronger/weaker foreign economies than predicted will raise/lower oil prices from the assumed price levels.

- The net impact of oil price's more immediate impact on capital investment and financial markets and oil price's impact on consumer spending and household

investment. Lower oil prices have increased household discretionary income and consumer sentiment, but in general have not boosted consumer spending. As oil prices remain low, consumers are expected to spend more of their gasoline savings. If this does not occur, economic growth will be slower than expected.

Monetary Policy. While indicating that only gradual rate increases will be warranted, the Fed has indicated that its future actions will be highly data dependent and thus uncertainty surrounds the timing and size of future rate increases. On the one hand, there is concern that the Fed will raise rates too quickly and risk stalling economic growth. To the extent to which inflation remains below the Fed's target 2.0 percent rate, deflation and its contractionary impacts remain a concern. There is also some concern that the Fed will raise rates too slowly and risk "overheating" financial/economic markets. Finally, uncertainty surrounds households' and businesses' reactions to future Fed actions -- especially given the great length of time over which interest rates have been extremely low.

In October 2017, the FOMC began a program to reduce very gradually the Fed's massive holdings of agency debt and agency mortgage-backed securities accumulated during several rounds of quantitative easing. Given the FOMC's most recent statement, the Committee seems unlikely to make any dramatic departure from its gradual reduction of its longer-term holdings. Nevertheless, uncertainty surrounds the magnitude, timing and macroeconomic impact of Fed's reduction of its longer-term holdings. In addition, the Fed has explicitly left open the possibility that it might initiate another round of quantitative easing if economic conditions warrant.

Housing Market. Projected 2020 housing starts are 15 percent higher than 2016 starts. If the housing market fails to grow as forecasted, the U.S. and Michigan economies would be weaker than expected. Higher than expected mortgage rates could severely curtail housing market growth. However, despite the projected increases, forecasted 2020 starts total 1.3 million units – significantly below average starts in the ten years prior to the housing bust (1.7 million units). A stronger than forecasted housing market would boost the overall economy.

Great Recession. The Great Recession did serious damage to household and corporate balance sheets and psyches and significantly tightened credit conditions. In particular, the after effects could lead businesses and consumers to react more negatively to an economic slowdown or mild decline than before the Great Recession.

Light Vehicle Sales. According to the forecast, light vehicle sales remain at historically high levels in 2017, 2018 and 2019. As a result, there is likely more downside risk to the vehicle forecast than upside risk. In addition, light trucks' historically large share of light vehicle sales likely heightens the severity of the negative impact higher oil prices and a weaker economy will have on light vehicle sales.

SECTION IV

Administration
Revenue Estimates

Administration Revenue Estimates
January 11, 2018

Revenue Estimate Overview

The revenue estimates presented in this section consist of baseline revenues, revenue adjustments, and net revenues. Baseline revenues provide an estimate of the effects of the economy on tax revenues. For these estimates, FY 2017 is the base year. Any non-economic changes to the taxes occurring in FY 2018, FY 2019 and FY 2020 are not included in the baseline estimates. Non-economic changes are referred to in the tables as "tax adjustments". The net revenue estimates are the baseline revenues adjusted for tax adjustments.

This treatment of revenue is best illustrated with an example. Suppose tax revenues are $10.0 billion in a given year, and that based on the economic forecast, revenues are expected to grow by 5.0 percent per year. Baseline revenue would be $10.0 billion in Year 1, $10.5 billion in Year 2, and $11.0 billion in Year 3. Assume a tax rate cut is in place that would reduce revenues by $100 million in Year 1, $200 million in Year 2, and $300 million in Year 3. If Year 1 is the base year, the revenue adjustments for Year 1 would be $0 since the tax cut for this year is included in the base. The revenue adjustments for Year 2 would be $100 million, and the revenue adjustments for Year 3 would be $200 million, since the revenue adjustments are compared to the base year.

In the example above, the baseline revenues would be $10.0 billion, $10.5 billion, and $11.0 billion, for Years 1 through 3, respectively. The revenue adjustments would be $0 in Year 1, $100 million in Year 2, and $200 million in Year 3. The $200 million in Year 3 represents the tax cuts since Year 1. Net revenue would be $10.0 billion in Year 1, $10.4 billion in Year 2, and $10.8 billion in Year 3.

The following revenue figures are presented on a Consensus basis. Generally speaking, the Consensus estimates do not include certain one-time budget measures, such as withdrawals from the Budget Stabilization Fund, the sale of buildings, and so on. The figures also do not include constitutional revenue sharing payments to local governments from the sales tax. In addition, the estimates only include enacted legislation and do not include the effects of any proposed changes. The School Aid Fund estimates consist of taxes plus the transfer from the State Lottery Fund.

FY 2017 Revenue Outlook

FY 2017 GF-GP revenue is estimated to be $10,192.3 million, a 1.7 percent increase compared to FY 2017. The FY 2017 GF-GP revenue estimate is $81.0 million above the May 2017 Consensus estimate. SAF revenue is forecast to be $12,685.1 million; representing a 4.7 percent increase compared to FY 2016. The FY 2017 SAF estimate is $75.2 million above the May 2017 Consensus estimate (see Table 2).

Table 2

FY 2016-17 Preliminary Final Revenue Estimates

(millions)

	Preliminary FY 2017 Amount	Growth	Change from May 2017 Consensus
General Fund - General Purpose			
Baseline Revenue	$11,060.2	0.7%	---
Tax Cut Adjustments	($867.9)		---
Net Resources	$10,192.3	1.7%	$81.0
School Aid Fund			
Baseline Revenue	$12,732.1	4.5%	---
Tax Cut Adjustments	($47.0)		---
Net Resources	$12,685.1	4.7%	$75.2
Combined			
Baseline Revenue	$23,792.3	2.7%	---
Tax Cut Adjustments	($914.9)		---
Net Resources	$22,877.4	3.3%	$156.2

Prepared By: Office of Revenue and Tax Analysis, Michigan Department of Treasury

FY 2018 Revenue Outlook

FY 2018 GF-GP revenue is estimated to be $10,353.4 million, a 1.6 percent increase compared to FY 2017. The FY 2018 GF-GP revenue estimate is $55.2 million below the May 2017 Consensus estimate. SAF revenue is forecast to be $13,105.9 million; representing a 3.3 percent increase compared to FY 2017. The FY 2018 SAF estimate is $135.4 million above the May 2017 Consensus estimate (see Table 3).

Table 3

FY 2017-18 Administration Revenue Estimates

(millions)

	Administration January 11, 2018		Change from May 2017
	Amount	Growth	Consensus
General Fund - General Purpose			
Baseline Revenue	$11,463.1	3.6%	---
Tax Cut Adjustments	($1,109.7)	---	---
Net Resources	$10,353.4	1.6%	($55.2)
School Aid Fund			
Baseline Revenue	$13,110.5	3.0%	---
Tax Cut Adjustments	($4.6)	---	---
Net Resources	$13,105.9	3.3%	$135.4
Combined			
Baseline Revenue	$24,573.6	3.3%	---
Tax Cut Adjustments	($1,114.3)	---	---
Net Resources	$23,459.3	2.5%	$80.2

Prepared By: Office of Revenue and Tax Analysis, Michigan Department of Treasury

FY 2019 Revenue Outlook

FY 2019 GF-GP revenue is estimated to be $10,396.4 million, a 0.4 percent increase compared to FY 2018. The FY 2019 GF-GP revenue estimate is $93.1 million below the May 2017 Consensus estimate. SAF revenue is forecast to be $13,468.1 million; representing a 2.8 percent increase compared to FY 2018. The FY 2019 SAF estimate is $137.6 million above the May 2017 Consensus estimate (see Table 4).

Table 4

FY 2018-19 Administration Revenue Estimates

(millions)

	Administration January 11, 2018		Change from May 2017
	Amount	Growth	Consensus
General Fund - General Purpose			
Baseline Revenue	$11,824.6	3.2%	---
Tax Cut Adjustments	($1,428.2)	---	---
Net Resources	$10,396.4	0.4%	($93.1)
School Aid Fund			
Baseline Revenue	$13,455.9	2.6%	---
Tax Cut Adjustments	$12.2	---	---
Net Resources	$13,468.1	2.8%	$137.6
Combined			
Baseline Revenue	$25,280.5	2.9%	---
Tax Cut Adjustments	($1,416.0)	---	---
Net Resources	$23,864.5	1.7%	$44.4

Prepared By: Office of Revenue and Tax Analysis, Michigan Department of Treasury

FY 2020 Revenue Outlook

FY 2020 GF-GP revenue is estimated to be $10,458.9 million, a 0.6 percent increase compared to FY 2019. SAF revenue is forecast to be $13,818.1 million; representing a 2.6 percent increase compared to FY 2019 (see Table 5).

Table 5

FY 2019-20 Administration Revenue Estimates

(millions)

	Administration January 11, 2018	
	Amount	**Growth**
General Fund - General Purpose		
Baseline Revenue	$12,157.5	2.8%
Tax Cut Adjustments	($1,698.6)	---
Net Resources	$10,458.9	0.6%
School Aid Fund		
Baseline Revenue	$13,813.7	2.7%
Tax Cut Adjustments	$4.4	---
Net Resources	$13,818.1	2.6%
Combined		
Baseline Revenue	$25,971.2	2.7%
Tax Cut Adjustments	($1,694.2)	---
Net Resources	$24,277.0	1.7%

Prepared By: Office of Revenue and Tax Analysis, Michigan Department of Treasury

Constitutional Revenue Limit

Article IX, Section 26, of the Michigan Constitution establishes a limit on the amount of revenue State government can collect in any given fiscal year. The revenue limit for a given fiscal year is equal to 9.49 percent of the State's personal income for the calendar year prior to the year in which the fiscal year begins. For example, FY 2016 revenue is compared to CY 2014 personal income. If revenues exceed the limit by less than 1 percent, the State may deposit the excess into the Budget Stabilization Fund (BSF). If the revenues exceed the limit by more than 1 percent, the excess revenue is refunded to taxpayers.

FY 2016 revenues were $8.1 billion below the revenue limit. State revenues will also be well below the limit for FY 2017 through FY 2020. FY 2017 revenues are expected to be $8.6 billion below the limit, FY 2018 revenues $8.9 billion below the limit, FY 2019 revenues $9.3 billion below the limit, and FY 2020 revenues $10.2 billion below the limit (See Table 6).

Table 6

Administration Revenue Limit Calculation

(millions)

	FY 2016 Final June 2017	FY 2017 Admin Jan 2018	FY 2018 Admin Jan 2018	FY 2019 Admin Jan 2018	FY 2020 Admin Jan 2018
Revenue Subject to Limit	$30,188.4	$31,689.6	$32,761.0	$33,653.0	$34,589.4
Revenue Limit	**CY 2014**	**CY 2015**	**CY 2016**	**CY 2017**	**CY 2017**
Personal Income	$403,726	$424,807	$439,361	$452,981	$472,006
Ratio	9.49%	9.49%	9.49%	9.49%	9.49%
Revenue Limit	$38,313.6	$40,314.2	$41,695.4	$42,987.9	$44,793.4
Amount Under (Over) Limit	**$8,125.2**	**$8,624.6**	**$8,934.4**	**$9,334.9**	**$10,204.0**

Budget Stabilization Fund Calculation

The Management and Budget Act contains provisions for calculating a recommended deposit or withdrawal from the BSF. The calculation looks at personal income net of transfer payments. The net personal income figure is adjusted for inflation. The change in this figure for the calendar year determines whether a pay-in or pay-out is recommended. If the formula calls for a deposit into the BSF, the deposit is made in the next fiscal year. If the formula calls for a withdrawal, the withdrawal is made during the current fiscal year.

If real personal income grows by more than 2 percent in a given calendar year, the fraction of income growth over 2 percent is multiplied by the current fiscal year's GF-GP revenue to determine the pay-in for the next fiscal year. If real personal income declines, the percentage deficiency under zero is multiplied by the current fiscal year's GF-GP revenue to determine the

withdrawal available for the current fiscal year. If the change in real personal income is between 0 and 2 percent, no pay-in or withdrawal is indicated.

Real calendar year personal income for Michigan is expected to increase 1.1 percent in 2017. Thus, the formula has no pay-in for FY 2018 (See Table 7). In 2018, real calendar year personal income for Michigan is forecast to increase 2.6 percent, so the formula calls for a pay-in for FY 2019 of $62.1 million (See Table 8). In 2019, real calendar year personal income for Michigan is forecast to increase 2.8 percent, so the formula calls for a pay-in of $83.2 million in FY 2020 (See Table 9). Based on the personal income numbers, there is no pay-out in FY 2020 (See Table 10).

Table 7

Budget and Economic Stabilization Fund Calculation Based on CY 2017 Personal Income Growth Administration Calculation

	CY 2016	CY 2017
Michigan Personal Income	$ 439,961 (1)	$ 452,981 (1)
less Transfer Payments	$ 93,520 (1)	$ 95,699 (1)
Income Net of Transfers	$ 346,441	$ 357,282
Detroit CPI	2.204 (2)	2.249 (2)
for 12 months ending	(June 2016)	(June 2017)
Real Adjusted Michigan Personal Income	$ 157,192	$ 158,896
Change in Real Adjusted Personal Income		1.1%
Between 0 and 2%		0.0%
GF-GP Revenue Fiscal Year 2016-2017		$ 10,192.3

	FY 2017-2018
BSF Pay-In Calculated for FY 2018	NO PAY-IN
	FY 2016-2017
BSF Pay-Out Calculated for FY 2017	NO PAY-OUT

Notes:

(1) Personal Income and Transfer Payments, Administration Forecast, January 2018.

(2) Detroit Consumer Price Index, Administration Forecast, January 2018.

Table 8

Budget and Economic Stabilization Fund Calculation Based on CY 2018 Personal Income Growth Administration Calculation

	CY 2017	CY 2018
Michigan Personal Income	$ 452,981 [1]	$ 472,006 [1]
less Transfer Payments	$ 95,699 [1]	$ 100,561 [1]
Income Net of Transfers	$ 357,282	$ 371,445
Detroit CPI	2.249 [2]	2.279 [2]
for 12 months ending	(June 2017)	(June 2018)
Real Adjusted Michigan Personal Income	$ 158,896	$ 163,011
Change in Real Adjusted Personal Income		2.6%
Excess over 2%		0.6%
GF-GP Revenue Fiscal Year 2017-2018		$ 10,353.4

	FY 2018-2019
BSF Pay-In Calculated for FY 2019	$ 62.1
	FY 2017-2018
BSF Pay-Out Calculated for FY 2018	NO PAY-OUT

Notes:

[1] Personal Income and Transfer Payments, Administration Forecast, January 2018.

[2] Detroit Consumer Price Index, Administration Forecast, January 2018.

Table 9

Budget and Economic Stabilization Fund Calculation Based on CY 2019 Personal Income Growth Administration Calculation

	CY 2018	CY 2019
Michigan Personal Income	$ 472,006 [1]	$ 495,135 [1]
less Transfer Payments	$ 100,561 [1]	$ 105,890 [1]
Income Net of Transfers	$ 371,445	$ 389,245
Detroit CPI	2.279 [2]	2.323 [2]
for 12 months ending	(June 2018)	(June 2019)
Real Adjusted Michigan Personal Income	$ 163,011	$ 167,588
Change in Real Adjusted Personal Income		2.8%
Excess over 2%		0.8%
GF-GP Revenue Fiscal Year 2018-2019		$ 10,396.4

	FY 2019-2020
BSF Pay-In Calculated for FY 2020	$ 83.2
	FY 2018-2019
BSF Pay-Out Calculated for FY 2019	NO PAY-OUT

Notes:

[1] Personal Income and Transfer Payments, Administration Forecast, January 2018.

[2] Detroit Consumer Price Index, Administration Forecast, January 2018.

Table 10

Budget and Economic Stabilization Fund Calculation Based on CY 2020 Personal Income Growth Administration Calculation

	CY 2019	CY 2020
Michigan Personal Income	$ 495,135 [1]	$ 519,396 [1]
less Transfer Payments	$ 105,890 [1]	$ 110,761 [1]
Income Net of Transfers	$ 389,245	$ 408,635
Detroit CPI	2.323 [2]	2.376 [2]
for 12 months ending	(June 2019)	(June 2020)
Real Adjusted Michigan Personal Income	$ 167,588	$ 171,997
Change in Real Adjusted Personal Income		2.6%
Excess over 2%		0.6%
GF-GP Revenue Fiscal Year 2019-2020		$ 10,458.9

	FY 2019-2020
BSF Pay-Out Calculated for FY 2020	NO PAY-OUT

Notes:

[1] Personal Income and Transfer Payments, Administration Forecast, January 2018.

[2] Detroit Consumer Price Index, Administration Forecast, January 2018.

School Aid Fund Revenue Adjustment Factor

The School Aid Fund (SAF) revenue adjustment factor for the next fiscal year is calculated by dividing the sum of current year and subsequent year SAF revenue by the sum of current year and prior year SAF revenue. For example, the FY 2018 SAF revenue adjustment factor is calculated by dividing the sum of FY 2017 and FY 2018 SAF revenue by the sum of FY 2016 and FY 2017 SAF revenue. The SAF revenue totals are adjusted for any change in the rate and base of the SAF taxes. The year for which the adjustment factor is being calculated is used as the base year for any tax adjustments. For FY 2019, the SAF revenue adjustment factor is calculated to be 1.0280 (See Table 11). For FY 2020, the SAF revenue adjustment factor is calculated to be 1.0265 (See Table 12).

Table 11

Administration School Aid Revenue Adjustment Factor

For Fiscal Year 2019

	FY 2017	FY 2018	FY 2019
Baseline SAF Revenue	$12,732.1	$13,110.5	$13,455.9
Balance Sheet Adjustments	($47.0)	($4.6)	$12.2
Net SAF Estimates	$12,685.1	$13,105.9	$13,468.1
Subtotal Adjustments to FY 2019 Base	$59.2	$16.8	$0.0
Baseline Revenue on a FY 2019 Base	$12,744.3	$13,122.7	$13,468.1

School Aid Fund Revenue Adjustment Calculation for FY 2019

Sum of FY 2017 & FY 2018	$12,744.3	+	$13,122.7	=	$25,867.0
Sum of FY 2018 & FY 2019	$13,122.7	+	$13,468.1	=	$26,590.8

FY 2019 Revenue Adjustment Factor	**1.0280**

Note: Factor is calculated off a FY 2019 base year.

Table 12

Administration School Aid Revenue Adjustment Factor

For Fiscal Year 2020

	FY 2018	FY 2019	FY 2020
Baseline SAF Revenue	$13,110.5	$13,455.9	$13,813.7
Balance Sheet Adjustments	($4.6)	$12.2	$4.4
Net SAF Estimates	$13,105.9	$13,468.1	$13,818.1
Subtotal Adjustments to FY 2020 Base	$9.0	($7.8)	$0.0
Baseline Revenue on a FY 2020 Base	$13,114.9	$13,460.3	$13,818.1

School Aid Fund Revenue Adjustment Calculation for FY 2020

Sum of FY 2018 & FY 2019	$13,114.9	+	$13,460.3	=	$26,575.2
Sum of FY 2019 & FY 2020	$13,460.3	+	$13,818.1	=	$27,278.4

FY 2020 Revenue Adjustment Factor	**1.0265**

Note: Factor is calculated off a FY 2020 base year.

Revenue Detail

The estimated tax and revenue totals include the effects of all enacted tax changes. The revenue totals by tax are presented separately for GF-GP and for the SAF (See Tables 12 and 13). Tax totals for the income, sales, use, CIT/MBT, tobacco and casino taxes for all funds are also included (See Table 14).

Table 13

Administration General Fund General Purpose Revenue Detail

(millions)

	FY 2018		FY 2019		FY 2020	
	Amount	**Growth**	**Amount**	**Growth**	**Amount**	**Growth**
GF-GP Tax Amounts						
Income Tax	$7,081.1	5.2%	$6,989.0	-1.3%	$7,045.4	0.8%
Sales	$1,269.7	3.8%	$1,307.6	3.0%	$1,343.9	2.8%
Use	$552.1	-6.7%	$564.3	2.2%	$554.1	-1.8%
Cigarette	$185.6	-0.5%	$183.7	-1.0%	$183.9	0.1%
Beer & Wine	$52.5	2.7%	$53.5	1.9%	$54.5	1.9%
Liquor Specific	$55.2	0.9%	$55.8	1.0%	$56.3	1.0%
Single Business Tax	$0.0	NA	$0.0	NA	$0.0	NA
Insurance Co. Premium	$409.9	10.6%	$415.1	1.3%	$424.7	2.3%
CIT/MBT	$252.3	-37.1%	$337.2	33.7%	$309.5	-8.2%
Telephone & Telegraph	$34.0	-4.5%	$34.0	0.0%	$33.5	-1.5%
Oil & Gas Severance	$25.8	9.8%	$27.7	7.4%	$28.9	4.3%
Essential Services Assess.	$90.1	7.3%	$94.2	4.6%	$100.0	6.2%
Penalties and Interest	$116.0	2.8%	$118.2	1.9%	$120.6	2.0%
Corporate Income	$0.0	0.0%	$0.0	0.0%	$0.0	0.0%
Railroad/Car Loaning	$2.0	0.0%	$2.0	0.0%	$2.0	0.0%
Enhanc. Enforce/ACS	($148.0)	-0.1%	($150.0)	1.4%	($152.0)	1.3%
Other Balance Sheet	$0.0	0.0%	$0.0	0.0%	$0.0	0.0%
GF-GP Other Taxes	($30.0)	NA	($29.8)	-0.7%	($29.4)	-1.3%
Total GF-GP Taxes	$9,978.3	2.4%	$10,032.3	0.5%	$10,105.3	0.7%
GF-GP Non-Tax Revenue						
Federal Aid	$10.0	16.3%	$10.0	0.0%	$10.0	0.0%
From Local Agencies	$0.1	NA	$0.1	0.0%	$0.1	0.0%
From Services	$7.0	32.1%	$7.0	0.0%	$7.0	0.0%
From Licenses & Permits	$12.5	-38.7%	$12.5	0.0%	$12.5	0.0%
Miscellaneous	$8.0	-67.3%	$8.0	0.0%	$8.0	0.0%
Driver Responsibility Fees	$43.5	-33.6%	$25.5	-41.4%	$8.0	-68.6%
Interfund Interest	$4.5	45.2%	$5.5	22.2%	$6.5	18.2%
Liquor Purchase	$226.0	2.1%	$231.0	2.2%	$237.0	2.6%
Charitable Games	$5.0	-58.0%	$5.0	0.0%	$5.0	0.0%
Transfer From Escheats	$58.5	-36.2%	$59.5	1.7%	$59.5	0.0%
Other Non Tax	$0.0	0.0%	$0.0	0.0%	$0.0	0.0%
Total Non Tax	$375.1	-17.1%	$364.1	-2.9%	$353.6	-2.9%
Total GF-GP Revenue	$10,353.4	1.6%	$10,396.4	0.4%	$10,458.9	0.6%

Table 14

Administration School Aid Fund Revenue Detail

	FY 2018		FY 2019		FY 2020	
	Amount	**Growth**	**Amount**	**Growth**	**Amount**	**Growth**
School Aid Fund						
Income Tax	$2,831.2	4.1%	$2,923.2	3.2%	$3,011.1	3.0%
Sales Tax	$5,857.5	3.2%	$6,028.4	2.9%	$6,194.6	2.8%
Use Tax	$545.1	10.1%	$565.5	3.7%	$575.1	1.7%
Liquor Excise Tax	$54.8	1.5%	$55.4	1.0%	$55.9	1.0%
Cigarette & Tobacco	$354.6	-0.6%	$349.3	-1.5%	$348.8	-0.1%
Other Tobacco	$0.0	0.0%	$0.0	0.0%	$0.0	0.0%
State Education Tax	$2,017.6	2.7%	$2,072.1	2.7%	$2,134.6	3.0%
Real Estate Transfer	$328.0	3.4%	$337.0	2.7%	$345.0	2.4%
Industrial Facilities Tax	$39.5	9.7%	$40.5	2.5%	$41.0	1.2%
Casino (45% of 18%)	$111.6	-1.4%	$113.3	1.5%	$117.3	3.6%
Commercial Forest	$3.3	-5.7%	$3.3	0.0%	$3.3	0.0%
Other Spec Taxes	$25.0	3.3%	$25.0	0.0%	$25.0	0.0%
Subtotal Taxes	$12,168.2	3.5%	$12,512.9	2.8%	$12,851.7	2.7%
Lottery Transfer	$937.7	1.5%	$955.2	1.9%	$966.4	1.2%
Total SAF Revenue	$13,105.9	3.3%	$13,468.1	2.8%	$13,818.1	2.6%

Table 15

Administration Major Tax Totals

	FY 2018		FY 2019		FY 2020	
	Amount	**Growth**	**Amount**	**Growth**	**Amount**	**Growth**
Major Tax Totals (Includes all Funds)						
Income Tax	$9,913.1	4.9%	$10,063.0	1.5%	$10,382.3	3.2%
Sales Tax	$8,048.7	3.2%	$8,282.9	2.9%	$8,513.7	2.8%
Use Tax	$1,097.2	1.0%	$1,129.8	3.0%	$1,129.2	-0.1%
CIT/MBT	$252.3	-37.1%	$337.2	33.7%	$309.5	-8.2%
Cigarette and Tobacco	$941.8	-0.4%	$931.4	-1.1%	$924.1	-0.8%
Casino Tax	$111.6	1.6%	$113.3	1.5%	$115.0	1.5%