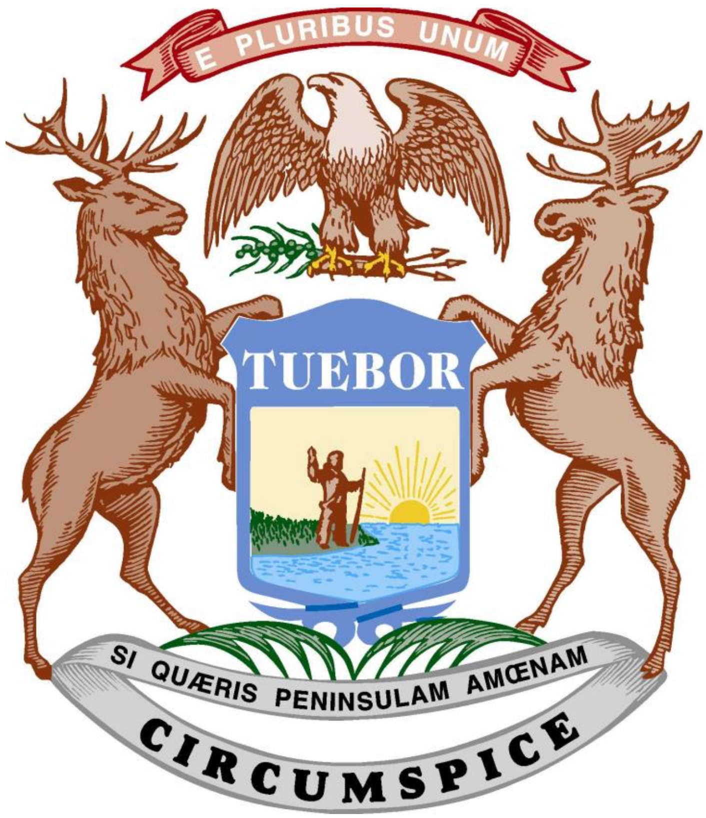
Administration Estimates Michigan Economic and Revenue Outlook



FY 2016-17, FY 2017-18 and FY 2018-19

Michigan Department of Treasury
Nick A. Khouri, State Treasurer

Office of Revenue and Tax Analysis
Eric Bussis, Director
Andrew Lockwood, Senior Economist
Thomas Patchak-Schuster, Senior Economist
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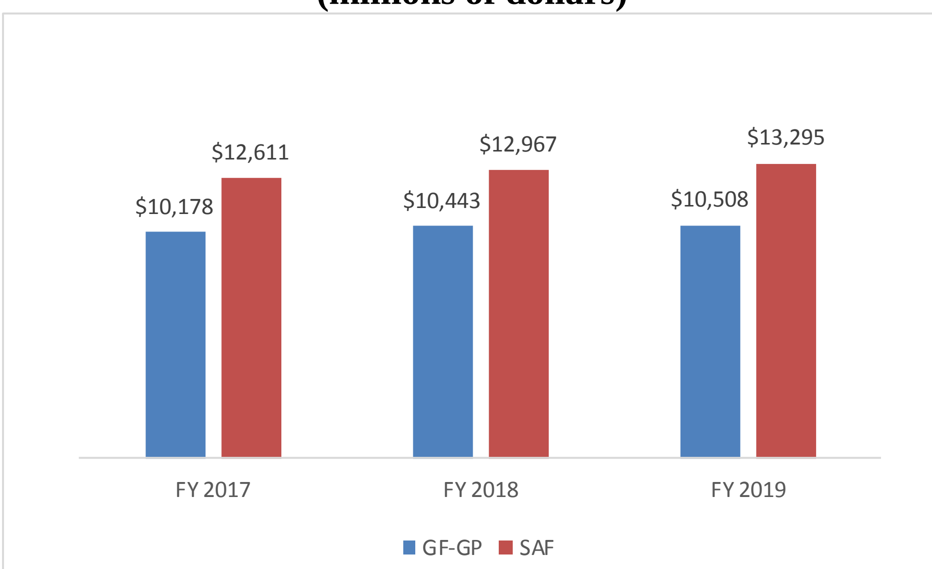
Revenue Review and Outlook

- FY 2017 GF-GP revenue is forecast to increase 1.6 percent to $10,178.1 million, down $112.0 million from the January 2017 Consensus estimate. FY 2017 SAF revenue is forecast to increase 4.1 percent to $12,611.3 million, up $154.3 million from the January 2017 Consensus estimate.

- FY 2018 GF-GP revenue is forecast to increase 2.6 percent to $10,443.2 million, down $79.5 million from the January 2017 Consensus estimate. FY 2018 SAF revenue is forecast to increase 2.8 percent to $12,966.9 million, up $183.8 million from the January 2017 Consensus estimate.

- FY 2019 GF-GP is forecast to increase 0.6 percent to $10,507.6 million, down $81.7 million January 2017 Consensus estimate. FY 2019 SAF revenue is forecast to increase 2.5 percent to $13,294.6 million, up $163.1 million from the January 2017 Consensus estimate.

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



2017, 2018 and 2019 U.S. Economic Outlook

- Real GDP rose 2.4 percent in 2014 and increased 2.6 percent in 2015. In 2016, real GDP grew 1.6 percent. Economic growth is forecast to accelerate to 2.3 percent in 2017 and in 2018. In 2019, growth is projected to slow slightly to 2.1 percent.

- U.S. wage and salary employment rose 1.9 percent in 2014. In 2015, U.S. employment grew 2.1 percent – the fastest annual growth since 2000. U.S. employment growth slowed to 1.7 percent in 2016. In 2017, national employment growth is expected to remain at 1.7 percent before slowing to 1.2 percent in 2018 and then decelerating slightly to 1.0 percent in 2019.

- The U.S. unemployment rate has declined in each of the past six years. Most recently, the national unemployment rate fell 0.9 of a percentage point to 5.3 percent in 2015 and dropped 0.4 of a point to 4.9 percent in 2016. The national unemployment rate is forecast to fall to 4.6 percent in 2017 and 4.4 percent in 2018. The national unemployment rate is projected to remain unchanged at 4.4 percent in 2019.

- 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 an 5.6 percent in 2016. Housing starts are forecast to rise 8.4 percent in 2017, 5.3 percent in 2018 and 1.3 percent in 2019. In 2019, starts are expected to total 1.36 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 17.40 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. Over the forecast horizon, light vehicle sales are projected to remain at historically high levels of 17.0 million units in 2017, 16.7 million units in 2018 and 16.6 million units in 2019.

- 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 projected to accelerate to 2.5 percent, and then slow to 1.9 percent in 2018. In 2019, consumer prices are forecast to increase 2.1 percent.

2017, 2018 and 2019 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. Michigan employment is forecast to rise 1.5 percent in 2017, 0.9 percent in 2018 and 1.0 percent in 2019.

- 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. The Michigan unemployment rate is forecast to rise 0.2 of a percentage point to 5.1 percent in 2017, remain unchanged at 5.1 percent in 2018 and then fall to 4.9 percent in 2019.

- 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 4.8 percent in 2014, grew 5.1 percent in 2015 and increased an 4.9 percent in 2016. Michigan wages and salaries are forecast to rise 3.6 percent in 2017, 4.1 percent in 2018 and 4.2 percent in 2019.

- 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. Income increased 3.4 percent in 2010 and rose 6.2 percent in 2011. Personal income increased 3.6 percent in 2012 and rose 1.4 percent in 2013. Michigan personal income increased 4.6 percent in both 2014 and 2015. In 2016, Michigan personal income increased 3.6 percent. In 2017, Michigan personal income is forecast to rise 3.7 percent. Michigan income is projected to increase 4.6 percent in 2018 and to rise 4.7 percent in 2019.

- On a fiscal year basis, Michigan disposable income rose 4.3 percent in FY 2015 and increased 4.1 percent in FY 2016. Disposable income is forecast to grow 3.6 percent in FY 2017, 4.7 percent in FY 2018 and 4.9 percent in FY 2019. Wages and salaries increased 4.8 percent in FY 2015 and rose 5.6 percent in FY 2016. Wages and salaries are forecast to increase 3.8 percent in FY 2017, 3.8 percent in FY 2018 and 4.2 percent in FY 2019.

Forecast Risks

- Substantial uncertainty surrounds the timing, composition and impact of the 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, may 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 still 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.

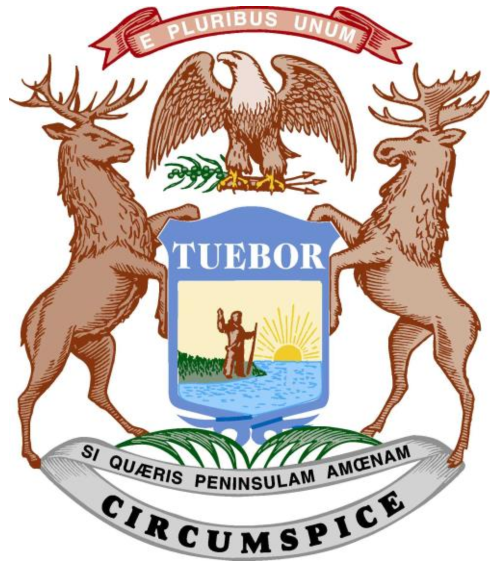
- The Great Recession may have a longer negative effect on confidence than assumed. In particular, the after effects could lead businesses and consumers to react more negatively to an economic slowdown or mild decline than before the Great Recession.

- Since the January 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
May 17, 2017

Current U.S. Economic Situation

Overall Economic Growth

The current U.S. economic expansion is nearly eight years old. According to the Institute for Supply Management, the overall U.S. economy expanded for its 95th straight month in April 2017. **Real Gross Domestic Product (GDP)** has grown in all but two quarters since the end of the Great Recession. While growing at an annual rate below 1.5 percent in each of the prior three quarters (2015Q4-2016Q2), real GDP growth accelerated sharply to a 3.5 percent annual rate in 2016Q3. However, real GDP growth slowed to a 2.1 percent annual rate in 2016Q4 and slowed further to 0.7 percent in 2017Q1.

Employment

U.S. wage and salary employment has continued rising since the May 2016 Conference. April 2017 marked the 79th consecutive increase from the prior month in national wage and salary employment. Consequently, at 146.1 million jobs, the April 2017 employment level represents the all-time high monthly U.S. employment level. Compared to December 2016 (the last month available prior to the January 2017 Conference), April 2017 employment was up by 738,000 jobs (an average of 185,000 jobs increase per month). Compared to a year ago, April 2017 employment was up by 2.2 million jobs (1.6 percent). However, the 1.6 percent year-over-year increase represents the second slowest year-over-year percent increase since August 2011.

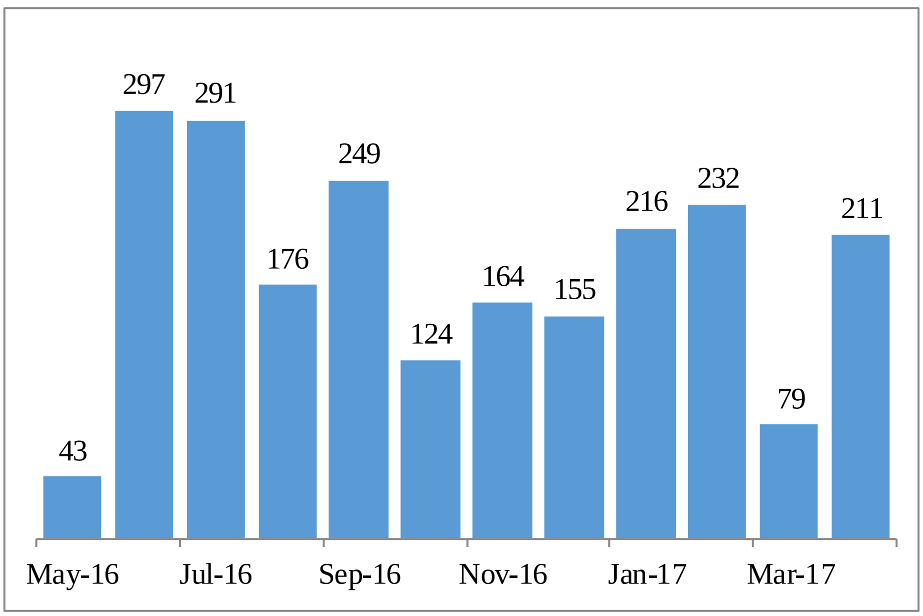
Calendar year 2016 represented the sixth straight year in which U.S. wage and salary employment has increased. The overall annual U.S. employment level rose 1.2 percent in 2011, 1.7 percent in 2012, 1.6 percent in 2013, 1.9 percent in 2014, 2.1 percent in 2015 and 1.7 percent in 2016.

In December 2016 (the most recent month of data available prior to the January 2017 Consensus Conference), the **U.S. unemployment rate** stood at 4.7 percent. The U.S. unemployment rate rose to 4.8 percent in January 2017 before returning to 4.7 percent in February. The national rate declined to 4.5 percent in March. In April, the U.S. unemployment rate fell to 4.4 percent – the lowest national unemployment rate since May 2001.

The annual U.S. unemployment rate has fallen in each of the past six 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 and 5.3 percent in 2015. In 2016, the U.S. unemployment rate fell to 4.9 percent – the lowest national unemployment rate in nine years. In 2016, the **U.S. labor force** rose 1.3 percent – the largest percent increase in the US workforce since 2006.

Between late December 2016 (the most recent period for which unemployment claims data were available for the January 2017 Consensus Conference) and late April 2017, the four-week average of seasonally adjusted **initial unemployment claims** fell from 253,750 to 243,000 -- a decline of 10,750 initial claims. In six of the first eight weeks of 2017, the average declined from the prior week. As a result, in late February, the average dropped to 239,750 – the lowest four-week average since mid-July 1973. However, the average rose in three of the four weeks in March. In late March, the average rose to 254,500 – slightly higher than year-end 2016 level of 253,750. The average then fell in four of the five reporting weeks in April. Consequently, the average dropped a net 11,500 in April and fell to 243,000 by the end of the month. The four-week average of initial unemployment claims has remained below 300,000 for 111 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 April 2016 to late April 2017), the four-week average of seasonally adjusted initial unemployment claims fell a net 20,000. (U.S. Department of Labor).

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



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

Manufacturing sector employment rose each calendar year between 2011 and 2015, inclusive, 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 also rose in 2016, but only slightly (0.1 percent).

Between December 2016 and April 2017, U.S. manufacturing employment rose 53,000 jobs. Over the past year (April 2015-April 2016), manufacturing employment has risen a net 40,000 jobs.

Calendar year 2016 marked the sixth annual increase in **construction sector employment**. 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, April 2017 construction employment was up by 173,000 jobs (2.6 percent) – marking the 71st consecutive month that construction employment was up compared to a year ago. Over the past four months, construction employment is up by 94,000 jobs. However, increases in January and February accounted for nearly all of the four month increase. In the past two months, construction employment has risen by only 6,000 jobs.

Housing Market

House Construction and Sales

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 since at least 1959. 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).

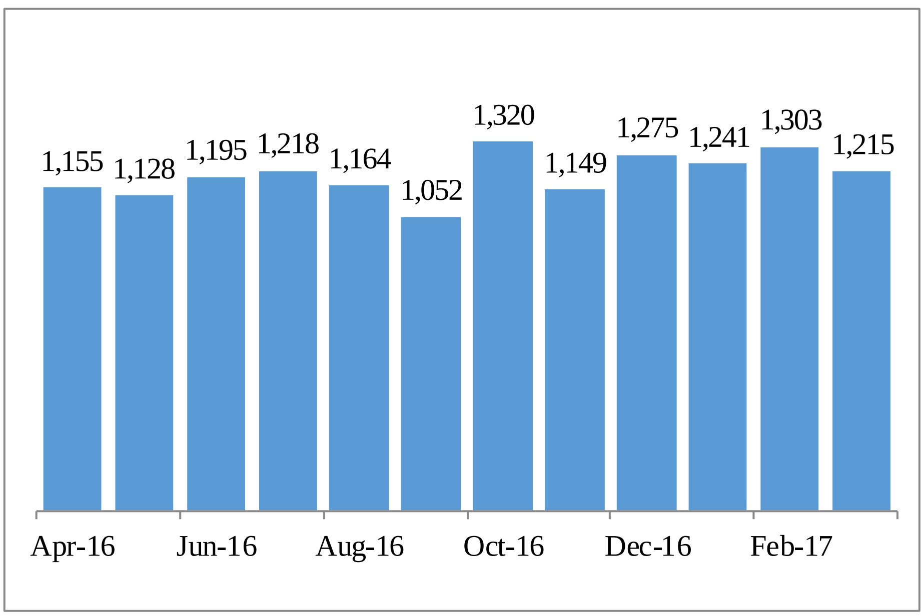
March 2017 marked the 24th straight month in which housing starts were above 1.0 million units at an annualized rate and also marked the fourth straight month in which annualized starts exceeded 1.2 million units – the first such streak since August 2007. Further, in each of the four most recent months available (December 2016-March 2017), housing starts were up compared to a year earlier. In March 2017, starts were 9.2 percent higher than a year ago. However, annualized starts of 1,215,000 in March 2017 did represent the lowest starts level among the four most recent months. (U.S. Census Bureau).

In December 2016 (the last month of data available at the January 2017 Consensus Conference), the **National Association of Home Builders (NAHB) sentiment index** stood at 70 – the index's highest reading in over ten years. A reading above 50 indicates that more builders viewed conditions as favorable compared with the number who viewed conditions as unfavorable. December 2016 sentiment reading was revised down slightly to 69. Further, the index fell to 67 in January 2017 and dropped to 65 in February 2017. The index did rise in March 2017 to 71 – the index's highest reading since June 2005 -- but then dropped to 68 in April 2017.

With **new home sales** totaling 560,000 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 11.8 percent in 2016. Compared to 2011 when new home sales fell to a record low, 2016 sales were up 83.0 percent. However, compared with new home sales in the 1990s (pre-boom), 2016 new home sales were down 19.8 percent. Annualized seasonally adjusted new home sales have exceeded 500,000 units in each of the most recent 17 months (November 2015-March 2017). In addition, with 15.6 percent year-over-year sales growth, March 2017 marked the 11th month of double-digit year-over-year increases out of the most recent 12 months. (U.S. Census Bureau).

In 2016, **existing home sales** rose 3.8 percent, following a 6.3 percent increase in 2015. In February 2015, annualized existing home sales rose above 5.0 million units, where they remained through October 2015. Annualized existing home sales fell below 5.0 million units in November 2015, but then rose above 5.0 million units in December 2015 and have remained above the 5.0 million unit threshold through March 2017. Further, March 2017 marked the 15th out of the most recent 16 months in which existing home sales were up from a year earlier. In March 2017, existing home sales were up 5.9 percent from March 2016. (National Association of Realtors).

Annualized Housing Starts Remain Around Historically Low Levels



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

House Prices

House prices have grown in recent months.

- Between March 2016 and March 2017, the **Core Logic Case-Shiller National Home Price Index** (including distressed sales) increased 7.1 percent –marking the 62nd consecutive month of national year-over-year growth. Excluding distressed sales, home prices rose 5.9 percent. Overall home prices rose 1.6 percent between February 2017 and

March 2017. The March 2017 home price index level is only 2.8 percent below its 2006 peak. While noting that "the national increase is no longer posting double-digits," Core Logic projects that the home price index will rise to a new record high in the second half of 2017.

- In 2016, the **Census Bureau's median new home sales price** reported its seventh straight annual price increase – rising 6.7 percent from 2015. Over the seven years, the median new home sales price rose 45.9 percent. At $316,200, the 2016 annual median price represents the highest annual median new home sale price on record. Most recently, the median new home price rose slightly (1.2 percent) between March 2016 and March 2017 to $315,100.

- In 2016, the **median existing-house price** rose 5.1 percent from 2015. The median existing-house sale price rose 6.8 percent between March 2016 and March 2017 -- marking the 61st consecutive month of year-over-year price gains. (National Association of Realtors)

Foreclosures and Mortgage Rate

In the first quarter of 2017, U.S. foreclosure filings were down 19 percent from a year ago to their lowest level since 2006Q3. Filings were 16 percent below the pre-recession average over the period from 2006Q1 to 2007Q3. March 2017 marked the 18th straight month of year-over-year decline in overall U.S. foreclosure activity. Further, in March 2017, **foreclosure starts** were down from the prior year for the 21st consecutive month. Compared to last March, foreclosure starts were down 24 percent. (RealtyTrac)

In December 2016, there were 21,000 **completed foreclosures** in the U.S. December 2016 completed foreclosures were down 39.8 percent from a year ago. Further, in December 2016, the **share of all mortgages that were seriously delinquent** dropped to 2.6 percent, the lowest share since June 2007. Through December 2016, the **number of loans in the foreclosure process** has fallen from a year ago for 62 straight months. In addition, the December 2016 foreclosure inventory represented 0.8 percent of all homes with a mortgage – down from 1.2 percent in December 2015. (CoreLogic)

In 2016Q4, **homeowner real estate equity** rose to its highest level since 2006Q1. Compared to a year ago, 2016Q4 real estate equity was up $1.3 trillion (10.9 percent). At 57.8 points, the 2016Q4 homeowner equity rate was 21.8 points higher than its all-time low (2009Q1). Over the past year, the equity rate rose by 2.0 percentage points – marking the 22nd straight quarter in which the rate was up from a year ago. (Federal Reserve Bank, *Flow of Funds Accounts of the United States*).

In calendar year 2016, the average 30-year fixed mortgage rate fell by 0.20 of a percentage point from 2015 to 3.65 percent In November 2016, the last month for which a monthly average mortgage rate was available prior to the January 2017 Consensus Conference, the **30-year fixed mortgage rate** stood at 3.77 percent. However, the mortgage rate rose sharply in December –

rising to 4.20 percent. Over the first three months of 2017, the monthly rate varied little – ranging from 4.15 percent to 4.20 percent. In April, the 30-year rate fell to 4.05 percent. However, April 2017 marked the fifth straight month in which the mortgage rate remained above 4.00 percent, following 16 consecutive months in which the rate had been below 4.00 percent. (FreddieMac).

Monetary Policy

In December 2008, the Federal Open Market Committee (FOMC) lowered the target range for the federal funds rate to 0.00 to 0.25 percent (a record low range). The Committee maintained the 0.00 to 0.25 percent range for seven straight years.

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 the 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.

At its next meeting (January 31, 2017-February 01, 2017) the FOMC left the federal funds rate target range unchanged at 0.50 percent to 0.75 percent, However, the Fed did raise the target range 25 basis points to 0.75 percent to 1.00 percent at its March 2017 meeting. Most recently, at its early May 2017 meeting, the FOMC left the target range unchanged.

As for the timing and magnitude of future rate increases, "The Committee expects that economic conditions will evolve in a manner that will warrant only 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, May 2017).

At the May 2017 meeting, the Committee observed that, "Information received since the Federal Open Market Committee met in March indicates that the labor market has continued to strengthen even as growth in economic activity slowed." The FOMC noted that slow growth in early 2017 was "likely to be transitory." (May 2017 Statement)

While noting that inflation had moved closer to the FOMC's 2 percent long-run objective, the Committee pointed out that the core inflation rate "declined in March and inflation continued to run somewhat below 2 percent." (May 2017 Statement)

While ending its quantitative easing program in October 2014, the FOMC continues to reinvest principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and to roll over maturing Treasury securities at auction. In its May 2017 statement, the FOMC indicated that it would continue reinvesting and rolling over securities "until normalization of the federal fund rate is well under way." Doing so, the

Committee stated, "should help maintain accommodative financial conditions." The Fed's overall holdings are substantial with total Federal Reserve Bank credit totaling $4.4 trillion in mid-April 2017 -- more than five times the amount that the Fed held directly before its quantitative easing program began.

The May 2017 FOMC Meeting minutes will not be released until May 24. However, the March 2017 FOMC Meeting minutes provide insights into the timing and manner of likely FOMC actions aimed at unwinding the Fed's reinvestment policy:

> Provided that the economy continued to perform about as expected, most participants anticipated that gradual increases in the federal funds rate would continue and judged that a change to the Committee's reinvestment policy would likely be appropriate later this year.

In the March 2017 meeting's minutes, the majority of the FOMC stressed the importance of communicating its future actions regarding its reinvestment policy to the public clearly and well ahead of time: Still more, "Many participants emphasized that reducing the size of the balance sheet should be conducted in a passive and predictable manner."

Fiscal Policy

To date, there has been an attempt to pass one major fiscal policy act through Congress: the repeal and replacement of the Affordable Care Act. In April, the votes needed to pass health care policy legislation through the House of Representatives could not be garnered. In early May, with amendments, a bill to repeal key elements of the Affordable Care Act passed the House by a narrow margin (217-213). However, the bill faces substantial uncertainty in the Senate.

In late April, the Executive laid out, in broad brush, a federal tax reform proposal. The proposal includes a dramatic reduction in the top corporate tax rate from 35 percent to 15 percent. The plan would also lower the top individual income tax rate for proprietor, partnership and other pass-through income to 15 percent. However, the plan would only lower the top rate on other individual income sources from 39.6 percent to 35 percent. The bill proposes lower individual income tax brackets at 10 percent and 25 percent as well as doubling the standard deduction. However, the proposal did not specify the tax brackets' income ranges. The proposal would also repeal the alternative minimum tax and the estate tax. Tax reform legislation faces substantial challenges. Key among the challenges is the legislation's negative impact on the federal deficit. As a means to lessen the plan's impact on the federal deficit, the proposal would repeal many itemized income tax deductions (including the state and local taxes deduction). The mortgage interest and charitable giving deductions would be retained.

In order to pass the tax plan in the Senate with just a simple majority, the tax plan must comply with legislative procedures that prohibit any tax plan that increases the federal debt after 10 years. The restriction could lead to making some or all of the tax cuts temporary in order to limit the plan's long-run budget impact. Substantial uncertainty surrounds any bills proposed to enact the proposal's reform elements including any bills' content and prospects for passage – along with disagreements as to the bills' impact on the U.S. macroeconomy and the federal deficit.

To date, no legislation has been introduced to enact a proposed $1 trillion in new infrastructure spending (which would have a substantial impact on the overall economy). While, the House's passage of legislation repealing key elements of the Affordable Care Act, in some measure, allows House leadership to move onto infrastructure spending legislation, substantial uncertainty remains as to the content and timing of infrastructure legislation.

Averting a possible federal government shut-down, the legislature passed and the President signed, in early May 2017, a bipartisan government-wide omnibus spending bill funding the U.S. government through the end of the fiscal year (September 30, 2017).

Inflation

In November 2016 (the most recent month of data available prior to the January 2017 Consensus Revenue Estimating Conference), the price of oil averaged $45.66 per barrel– up $3.22 from a year earlier. Since November 2016, the price of oil has risen. At $51.97, the December 2016 price of oil rose $6.31 per barrel from November 2016 and was up $14.78 per barrel from December 2015. The price of oil rose only slightly compared to a month earlier in January 2017 and in February 2017. However, the price of oil was up $20.82 between January 2016 and January 2017. In February 2017, at $53.47, the price of oil was up $23.15 from a year earlier. At $49.33 per barrel, the March 2017 price of oil fell $4.14 per barrel from February 2017, but was up $11.78 from last March. (Federal Reserve Bank of St. Louis).

In April 2017, the price of regular gasoline equaled $2.42 and the three-month average stood at $2.35. Compared to a year ago, the April 2017 price of gasoline was up 30 cents from a year earlier and the three-month average (February 2017-April 2017) was up 40 cents from a year ago. In contrast, in 2016, the three month average was down from a year earlier in each of the first 11 months of 2016. (U.S. Energy Information Administration).

In recent years and months, price inflation has remained mild but did accelerate in 2016 after decelerating substantially in 2015.

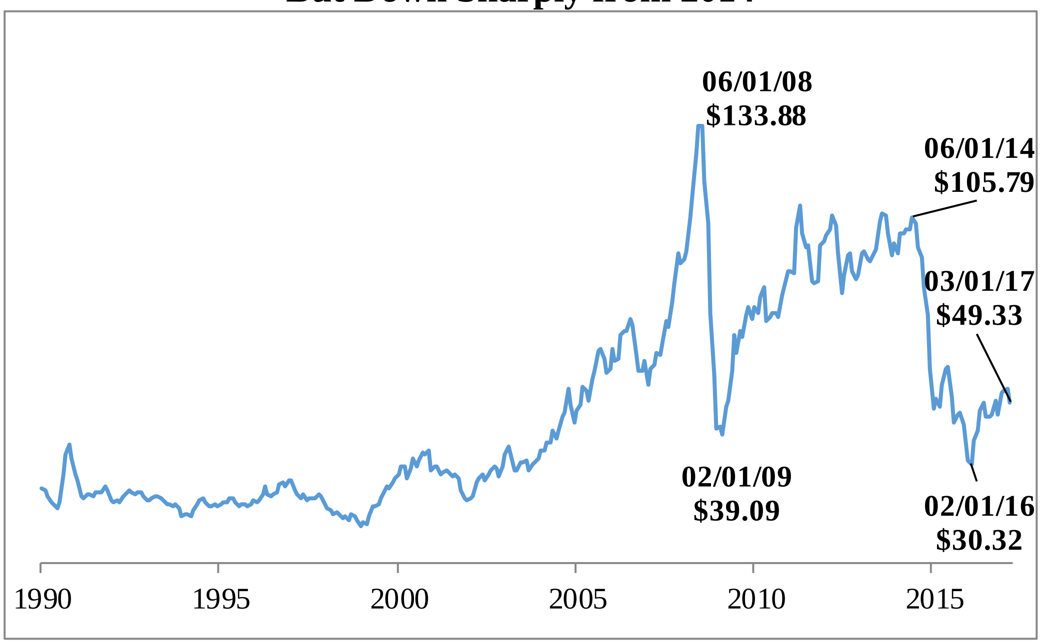
The **personal consumption expenditures price index**, which the Federal Reserve emphasizes in evaluating whether the U.S. economy is meeting the Fed's 2.0 percent inflation target, has remained below 2.0 percent each year since 2009 except 2011. However, core PCE price index inflation, which excludes 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 1.1 percent while the core PCE price index increased 1.7 percent. (Bureau of Economic Analysis).

In 2016, consumer prices, as measured by the **U.S. Consumer Price Index**, increased 1.3 percent after increasing only 0.1 percent in 2015. Consumer prices declined 0.4 percent in 2009, but have risen each year since 2010. Consumer prices rose 1.6 percent in 2010, 3.2 percent in 2011, 2.1 percent in 2012, 1.5 percent in 2013 and 1.6 percent in 2014. (U.S. Bureau of Labor Statistics)

In 2016, the **core consumer price index** (excluding food and energy) was up 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 0.4 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. 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-over-year (y-o-y) growth in producer prices accelerated to 2.2 percent in February 2017 and to 2.3 percent in March 2017. Prior to February 2017, producer price year-over-year growth had not exceeded 2.0 since May 2014. Further, the 2.3 percent increase in March represented the fastest producer price y-o-y growth in five years. Core producer prices were up 1.5 percent in February 2017 and 1.6 percent in March 2017. (Bureau of Labor Statistics)

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

In April 2017, the **ISM (Institute for Supply Management) manufacturing index, known as the PMI (Purchasing Management Index)** fell 2.4 points from March, However, at 54.8, the PMI remained above 50.0 for the eighth straight month and for the 13th out the most recent 14 months. (A reading above 50.0 indicates an expanding sector.) Taken together, the PMI indicates continued manufacturing sector growth but at a slowing pace. The April 2017 PMI signaled an expanding *overall* economy for the 95th consecutive month.

In April 2017, the ISM **non-manufacturing index (NMI)** rose 2.3 points from March to 57.5 and was up 1.8 points from last April. In addition, April 2017 marked the 88th 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. In each month between April 2015 and November 2016, monthly industrial production was down from a year ago. However, in three of the four most recent months (December 2016, February 2017 and March 2017), industrial production was up from a year ago. In January 2017, industrial production was little changed from a year ago (-0.01 percent). (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. In each of the 22 months between February 2015 and November 2016, inclusive, the capacity utilization rate fell compared to a year ago. The rate has fluctuated over the four most recent months. In December 2016, the rate gained 0.4 of a point compared to a year earlier. However, the rate then fell compared to a year ago in both January 2017 and February 2017. In March 2017, the utilization rate rose 0.7 of a point from a year earlier.

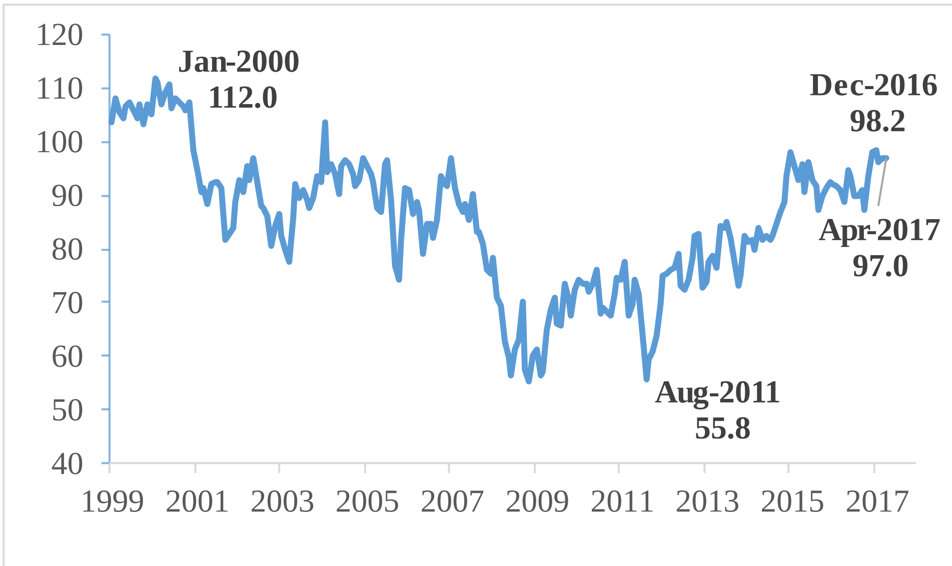
In three of the four months of data released since the January 2017 Consensus Conference, the **three-month moving average for new durable goods orders** has increased from the prior year. The average was up 0.5 percent in December 2016, but then fell 0.2 percent in January 2017. However, the average increased 2.3 percent between February 2016 and February 2017 and rose 3.4 percent between March 2016 and March 2017. March's 3.4 percent increase represented the largest year-over-year percentage increase in the three-month average since October 2014.

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. Further, in each month between August 2016 and March 2017 (the most recent month of data available), the y-o-y increases in the average have accelerated from 2.5 percent to 5.4 percent – the largest y-o-y percent increase in the three-month average since May 2012.

Between the May 2016 Consensus Conference and the January 2017 Conference, the **University of Michigan index of consumer sentiment** rose 9.2 points to 98.2 (April 2016-December 2016). The index rose slightly in January 2017 to 98.5 – the index's highest reading since January 2004. However, the index fell to 96.3 in February. The index rose slightly in March 2017 and in April

2017. The April 2017 index reading (97.0) was down 1.2 points since December 2016 (the last month of data available prior to the January 2017 Conference). However, the April 2017 sentiment index reading was up 8.0 points from a year ago.

Consumer Sentiment Trending Upward
Well Above August 2011 Trough



Source: University of Michigan Survey of Consumers.

After dropping to 50 (a neutral reading) in the last quarter for which data were available prior to the January 2017 Consensus Conference, the **Conference Board Measure of CEO Confidence Index** rose in each of the two newly available 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.

Since November 2016, the latest month for which data were available for the January 2017 Consensus Conference, the **Conference Board index of leading economic indicators (LEI)** has increased each month with a 0.6 percent increase both in December 2016 and in January 2017, a 0.5 percent rise in February 2017 and a 0.4 percent increase in March 2017. In its March 2017 LEI release, the Conference Board reported, "The March increase and upward trend in the U.S. LEI point to continued economic growth in 2017, with perhaps an acceleration later in the year if consumer spending and investment pick up."

Stock prices have increased since the January 2017 Consensus Conference. Between the end of December 2016 and the end of April 2017, the **stock market (Wilshire 5000)** rose 6.2 percent. Between the end of 2015 and 2016, the Wilshire Index increased 10.7 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 9.1 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 accelerated between mid-November 2016 and late-January 2017 in which the growth rate sped to 12.0 percent. However since late January 2017, the growth rate has decelerated with the rate slowing to 5.4 percent in late April 2017. Recent positive, but slowing, growth points to continued, but moderating, gains in the near future.

Vehicle Sales and Production

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, in 2010, sales rose to 11.6 million units and, in 2011, light vehicle sales increased to 12.7 million units. Sales grew to 14.4 million units in 2012 and rose to 15.5 million units in 2013. In 2014, light vehicle sales rose to 16.4 million units. 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.

In April 2017, light vehicle sales exceeded a 15.0 million unit annual rate for the 54th straight month and exceeded a 16.0 million unit rate for the 38th consecutive month. However, following six straight months of a sales rate exceeding a 17.0 million unit rate between September 2016 and February 2017, vehicle sales fell to a 16.5 million unit rate in March 2017. In April, the rate rose to 16.8 million units. Year-to-date through April 2017, the light vehicle sales rate has averaged 17.1 million units – down 1.5 percent compared with the 17.3 million units sales rate over the first four months of 2016.

Light truck sales share of the light vehicle sales market has continued to grow. Over the past four years, the light truck sales share has 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. 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. Year-to-date through April 2017, light truck sales have comprised 63.6 percent of light vehicle sales. Further, April 2017 marked the 13th straight month in which light trucks have accounted for more than 60.0 percent of monthly light vehicle sales.

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. Production began to increase again in 2010 and 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. In the first quarter of 2017 (January 2017-March 2017), U.S. vehicle production was up 1.1 percent from U.S. production in the first quarter of 2016.

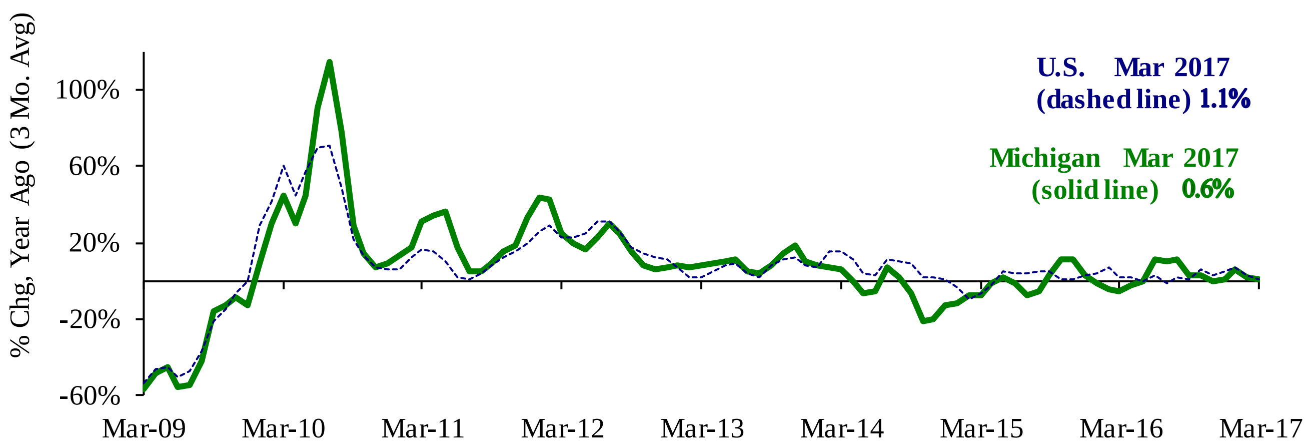
Current Michigan Economic Conditions

Vehicle Production

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. Most recently, Michigan vehicle production spanning January 2017-March 2017 was little changed from State production during January 2016-March 2016 (0.6 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. In the first quarter of 2017, Michigan vehicle production accounted for 18.6 percent of U.S. vehicle production – little changed from 2016Q1 when Michigan accounted for 18.7 percent of national vehicle production, but down substantially from two years earlier when Michigan comprised 20.2 percent of U.S. vehicle production.

Michigan and U.S. Vehicle Production Little Changed from Year Ago



Source: Automotive News and Michigan Department of Treasury.

Employment

In 2016, **Michigan wage and salary employment** rose for a sixth straight year with 1.9 percent growth, ranking 14th 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).

In March 2017, Michigan wage and salary employment was up by 79,800 jobs compared with March 2016 employment. The 79,800 jobs increase represents a 1.9 percent increase in employment between March 2016 and March 2017 – ranking 13th fastest among U.S. states.

Michigan's overall wage and salary employment has increased 14.1 percent **since the end of the Great Recession** (June 2009). The 14.1 percent growth represents the 14th strongest growth rate among all U.S. states.

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.

In the four months newly available since the January 2017 Consensus Conference (December 2016-March 2017), Michigan manufacturing employment, on net, fell by 300 jobs. Over the past year (March 2016-March 2017), Michigan manufacturing employment rose a net 3,300 jobs, accounting for only 4.1 percent of the overall 79,800 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. In the four months since the January 2017 Consensus Conference, State construction employment has risen by a net 4,100 jobs. Over the past year, Michigan construction employment rose a net 10,000 jobs (12.5 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 between 2010 and 2016, inclusive, 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. In March 2017, the Michigan unemployment rate of 5.1 percent was down 0.2 of a percentage point from February 2017 but was up 0.2 of a percentage point from March 2016.

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 percent between mid-2011 and mid-2014. The gap decreased over the next year and by mid-2015, the gap fell to zero. Between

May 2015 and February 2016, the Michigan unemployment rate equaled or was within 0.1 of a percentage point of the U.S. unemployment rate. In March 2016, the Michigan unemployment rate was 0.1 of a percentage point *lower* than the national rate. In all but one month between March 2016 and June 2016, inclusive, the Michigan unemployment rate was 0.1 of a percentage point lower than the national rate. In July 2016 and August 2016, the gap equaled zero. Since September 2016, the Michigan unemployment rate has exceeded the U.S. unemployment rate Between November 2016 and March 2017, the Michigan unemployment rate has been between 0.4 of a percentage point and 0.6 of a percentage point higher than the U.S. rate. In March 2017, the Michigan unemployment rate exceeded the U.S. unemployment rate by 0.6 of a percentage point.

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 March 2017, total household employment trended upward and regained a net 489,000 persons. Michigan’s monthly total household employment has been up compared to a year earlier each month since August 2011. March 2017 household employment was up by 95,000 persons from March 2016. More than half of the year-over-year gain occurred in the three most recent months (January 2017-March 2017) during which household employment rose by 50,000 persons.

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. Michigan’s labor force has risen from the prior month each month since April 2015. Compared to a year ago, March 2017 Michigan labor force was up 107,200 persons (2.2 percent). Michigan’s monthly labor force has been up compared to a year earlier in each month since September 2015.

Between March 2016 and March 2017, **Michigan unemployment** rose 12,300 persons (5.2 percent). Compared to unemployment at the end of the Great Recession, March 2017 unemployment was down by 489,100 persons.

<u>Housing Market</u>

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 have increased in each of the past seven years. In 2010, 2012 and 2013, annual increases exceeded 25 percent. While State housing unit authorizations rose just 0.5 percent 2014, State housing unit authorizations increased 15.1 percent in 2015. Most recently in 2016, State housing unit authorizations increased 23.0 percent. Nationally, in 2016, authorizations increased only 0.6 percent after rising 12.4 percent in 2015.

From 2009 to 2016, Michigan authorizations rose 225.8 percent, compared with a 104.2 percent increase nationally. However, in 2016, Michigan authorizations were still 56.6 percent below the State's 1996-2005 annual average (51,688 units). Total U.S. authorizations in 2015 were 30.9 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 1.9 percent of U.S. authorizations in 2016. Year-to-date, through March 2017, Michigan housing authorizations are up 0.9 percent, compared with 11.1 percent growth nationally. (Census Bureau)

According to CoreLogic, **Michigan** recorded a 6.9 percent **year-over-year house price increase** between March 2016 and March 2017, compared to a 7.1 percent average increase nationally.

According to CoreLogic, Michigan saw the 2nd largest year-over-year percent decline in **inventory of foreclosure homes** (32.3 percent) between December 2015 and December 2016. Michigan had the second highest number of **completed foreclosures** in calendar year 2016 with 30,000 completed foreclosures. However, in December 2016, Michigan had the 6th smallest ***percent*** **of homes in foreclosure**.

The **share of mortgage properties underwater (negative equity)** in Michigan is substantially higher than the national average. In 2016Q4, nationwide, 6.2 percent of residential properties with mortgages were underwater nationally. In Michigan, 8.8 percent of such properties were underwater – ranking Michigan 10th highest among the fifty states. (CoreLogic) Further, according to RealtyTrac, the Detroit metro area had the seventh 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 has grown 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 4.6 percent. In 2015, Michigan personal income also grew 4.6 percent. Michigan personal income growth slowed to 3.6 percent in 2016. Michigan's 3.6 percent income growth in 2016 ranked 19th 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, 4.4 percent in 2014, 4.6 percent in 2015 and 3.5 percent in 2016. Michigan's 3.5 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 between 2010Q1-2016Q4 (the latest quarter available). However, the State's personal income growth, after accelerating to 4.8 percent in 2015Q4 slowed in each of the most recent four quarters. In 2016Q4, Michigan quarterly personal income growth slowed to 3.2 percent, ranking 25th among

U.S. states. In 2016Q4, Michigan quarterly personal income year-over-year growth was 0.5 of a percentage point slower national growth of 3.7 percent.

Each quarter between 2010Q2 and 2016Q4, **Michigan wage and salary income** rose from a year ago with increases ranging from 0.9 percent and 8.2 percent. After slowing from 5.6 percent y-o-y growth in 2014Q4 to 4.1 percent in 2015Q1, Michigan wage and salary growth accelerated to 4.5 percent in 2015Q2, 5.1 percent in 2015Q3 and 6.5 percent in 2015Q4. In 2016Q1, Michigan wage and salary growth slowed to 5.3 percent. In each of the first two quarters of 2016, wages and salaries were up 5.4 percent compared with a year earlier. Most recently in 2016Q4, Michigan wage and salary y-o-y growth slowed to 3.7 percent. Michigan's 2016Q4 y-o-y wage and salary growth ranked 23rd among the 50 states. Nationally, wage and salary income rose 4.0 percent between 2015Q4 and 2016Q4.

After year-over-year declines in 12 straight quarters from 2007Q2 to 2010Q1, **Michigan manufacturing wages and salaries** recorded y-o-y increases in 26 of the most recent 27 quarters (2010Q2-2016Q4). Between 2010Q2 and 2016Q4, Michigan manufacturing wages outpaced overall U.S. manufacturing sector wages in 22 of the most recent 28 quarters. However, in 2016Q4, most recently, national manufacturing wages and salaries growth of 2.3 percent outpaced Michigan manufacturing wages and salaries growth of 1.0 percent.

Historically, manufacturing wages accounted for a substantially larger share of overall wage growth in Michigan compared with the U.S. overall. Most recently, in 2016Q4, the manufacturing sector accounted for only 4.9 percent of overall Michigan y-o-y wage growth, compared with 6.0 percent nationally. In contrast, in the prior 11 quarters (2014Q1-2016Q3), the Michigan manufacturing sector's share of overall wage and salary growth ranged between 14.4 percent and 24.6 percent. Over these same 11 quarters, the U.S. manufacturing sector wages and salaries share of overall national wage and salary growth ranged between 5.7 percent and 10.2 percent.

SECTION III

Administration Economic Forecast

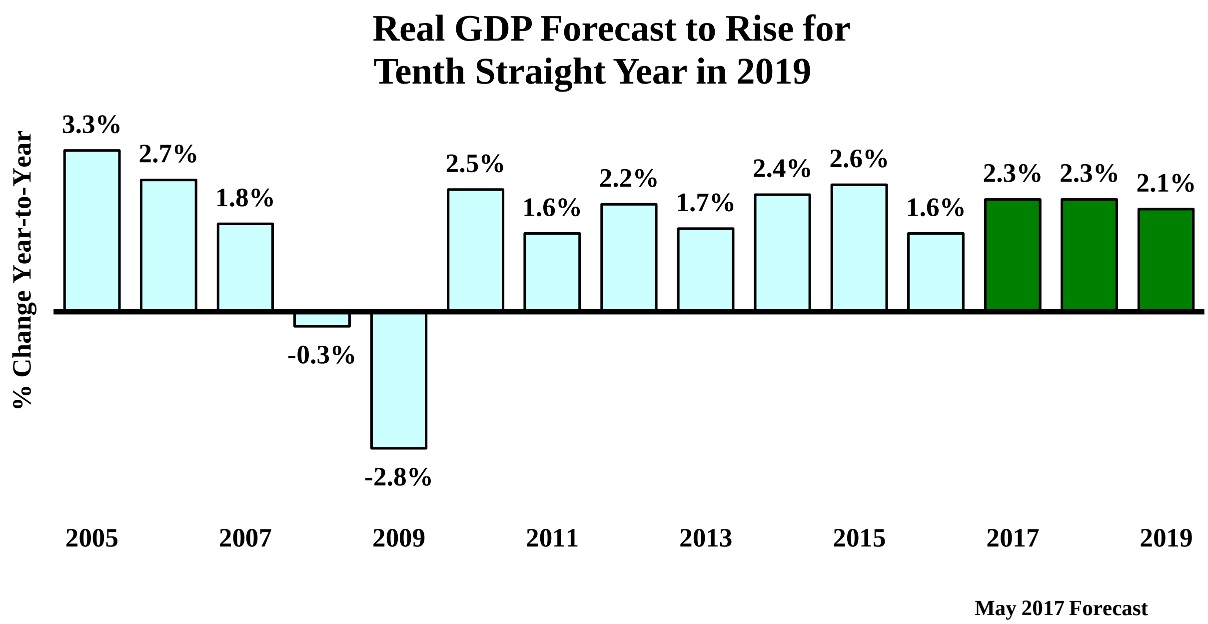
Administration Economic Forecast Summary

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

2017, 2018 and 2019 U.S. Economic Outlook

Summary

Inflation adjusted GDP rose 1.6 percent in 2016, marking the seventh straight year of annual growth. Real GDP is expected to increase 2.3 percent in 2017, 2.3 percent in 2018 and 2.1 percent in 2019.



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, May 2017.

In 2016, annual **light vehicle sales** rose – although slightly – to a new record high of 17.46 million units. Light vehicle sales are expected to fall over the forecast, but remain at historically high levels of 17.0 million units in 2017, 16.7 million units in 2018 and 16.6 million units in 2019.

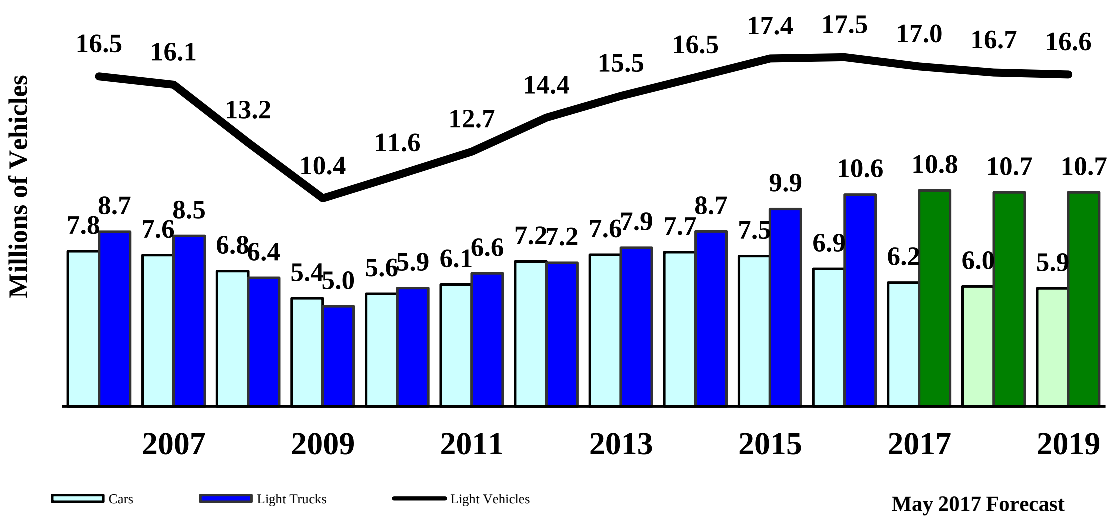
Table 1

Adminstration Economic Forecast

May 2017

	Calendar 2015 Actual	Calendar 2016 Actual	Percent Change from Prior Year	Calendar 2017 Forecast	Percent Change from Prior Year	Calendar 2018 Forecast	Percent Change from Prior Year	Calendar 2019 Forecast	Percent Change from Prior Year
United States									
Real Gross Domestic Product (Billions of Chained 2009 Dollars)	$16,397	$16,662	1.6%	$17,045	2.3%	$17,437	2.3%	$17,803	2.1%
Implicit Price Deflator GDP (2009 = 100)	110.0	111.4	1.3%	113.7	2.0%	116.1	2.1%	118.7	2.2%
Consumer Price Index (1982-84 = 100)	237.017	240.007	1.3%	246.046	2.5%	250.684	1.9%	256.043	2.1%
Consumer Price Index - Fiscal Year (1982-84 = 100)	236.742	238.939	0.9%	244.677	2.4%	249.478	2.0%	254.652	2.1%
Personal Consumption Deflator (2009 = 100)	109.5	110.7	1.1%	112.8	1.9%	114.9	1.9%	117.2	2.0%
3-month Treasury Bills Interest Rate (percent)	0.05	0.3		0.9		1.6		2.1	
Aaa Corporate Bonds Interest Rate (percent)	3.9	3.7		4.2		4.4		4.5	
Unemployment Rate - Civilian (percent)	5.3	4.9		4.6		4.4		4.4	
Wage and Salary Employment (millions)	141.843	144.306	1.7%	146.760	1.7%	148.520	1.2%	150.010	1.0%
Housing Starts (millions of starts)	1.112	1.174	5.6%	1.272	8.4%	1.339	5.3%	1.356	1.3%
Light Vehicle Sales (millions of units)	17.4	17.5	0.4%	17.0	-2.7%	16.7	-1.8%	16.6	-0.6%
Passenger Car Sales (millions of units)	7.5	6.9	-8.2%	6.2	-10.1%	6.0	-3.2%	5.9	-1.7%
Light Truck Sales (millions of units)	9.9	10.6	6.9%	10.8	2.2%	10.7	-0.9%	10.7	0.0%
Big 3 Share of Light Vehicles (percent)	43.6	42.7		43.6		43.8		44.1	
Michigan									
Wage and Salary Employment (thousands)	4,244	4,326	1.9%	4,390	1.5%	4,430	0.9%	4,474	1.0%
Unemployment Rate (percent)	5.4	4.9		5.1		5.1		4.9	
Personal Income (millions of dollars)	$424,807	$440,292	3.6%	$456,583	3.7%	$477,586	4.6%	$500,032	4.7%
Real Personal Income (millions of 1982-84 dollars)	$194,237	$198,181	2.0%	$201,043	1.4%	$206,607	2.8%	$211,562	2.4%
Wages and Salaries (millions of dollars)	$214,703	$225,281	4.9%	$233,391	3.6%	$242,960	4.1%	$253,164	4.2%
Detroit Consumer Price Index (1982-84 = 100)	218.706	222.167	1.6%	227.107	2.2%	231.157	1.8%	236.352	2.2%

Vehicle Sales Fall Slightly Over Forecast



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, May 2017.

The **U.S. unemployment rate** has fallen in each of the past six years with the unemployment rate dropping from a near post-World War II record high 9.6 percent in 2010 to 4.9 percent in 2016. The U.S. rate is forecast to fall to 4.6 percent in 2017 and to decline to 4.4 percent in 2018. In 2019, the national unemployment rate is expected to remain unchanged at 4.4 percent.

U.S. wage and salary employment rose 1.7 percent in 2016. U.S. employment is forecast to increase 1.7 percent in 2017, 1.2 percent in 2018 and 1.0 percent in 2019. 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. With forecasted increases in 2017, 2018 and 2019, calendar year 2019 national employment is expected to be 8.7 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 forecast to accelerate to 2.5 percent before slowing to 1.9 percent in 2018 and then accelerating slightly to 2.1 percent in 2019. The personal consumption price deflator inflation rate is projected to accelerate from 1.1 percent in 2016 to 2.0 percent in 2019.

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 forecast to average 0.9 percent in 2017, 1.6 percent in 2018 and 2.1 percent in 2019 – 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 forecast to rise to 4.2 percent. After rising to 4.4 percent in 2018, the corporate rate is projected to increase to 4.5 percent in 2019.

The **30-year fixed mortgage rate** dropped to 3.9 percent in 2015 and fell to 3.65 percent in 2016. Mortgage rates are forecast to rise to 4.4 percent in 2017, 4.8 percent in 2018 and 5.0 percent in 2019.

Throughout the forecast horizon, the housing market is expected to strengthen and housing starts are forecast to increase each year. Consequently, **housing starts** in 2019 (1.36 million units) are expected to be 15.5 percent higher than starts in 2016. Nevertheless, 2019 starts will remain well below the average 1.7 million annual starts in the ten years before the housing bust.

<u>Assumptions</u>

The forecast expects **real (inflation-adjusted) federal government expenditures** to increase 0.8 percent in calendar year (CY) 2017, rise 1.3 percent in CY 2018 and then grow 1.3 percent in CY 2019.

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. Oil prices are expected to rise to an average of $55 per barrel in 2017 and increase to an average of $57 per barrel in 2018. In 2019, oil prices are projected to rise to $59 per barrel.

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 March 2017, the Fed increased the federal funds rate another 25 basis points. The Fed left the federal funds rate unchanged in May 2017. However, the Fed is assumed to raise the target rate an additional 25 basis points twice over the second half of 2017. The Fed is then expected to raise the federal funds rate an additional 25 basis points twice in 2018 and three times in 2019. As a result, the federal funds rate is assumed to rise from 0.75 percent in early 2017 to 2.50 percent in late 2019.

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 0.5 percent in 2017, 0.7 percent in 2018 and 1.4 percent in 2019.

The **savings rate** is assumed to fall from 5.9 percent in 2016 to 5.6 percent in 201. However, the savings rate is then assumed to rise to 6.1 percent in 2018 and 6.9 percent in 2019.

Rest-of-world growth is projected to equal 1.9 percent in 2017. The growth rate is then expected to accelerate to 2.0 percent in 2018 and 2.2 percent in 2019.

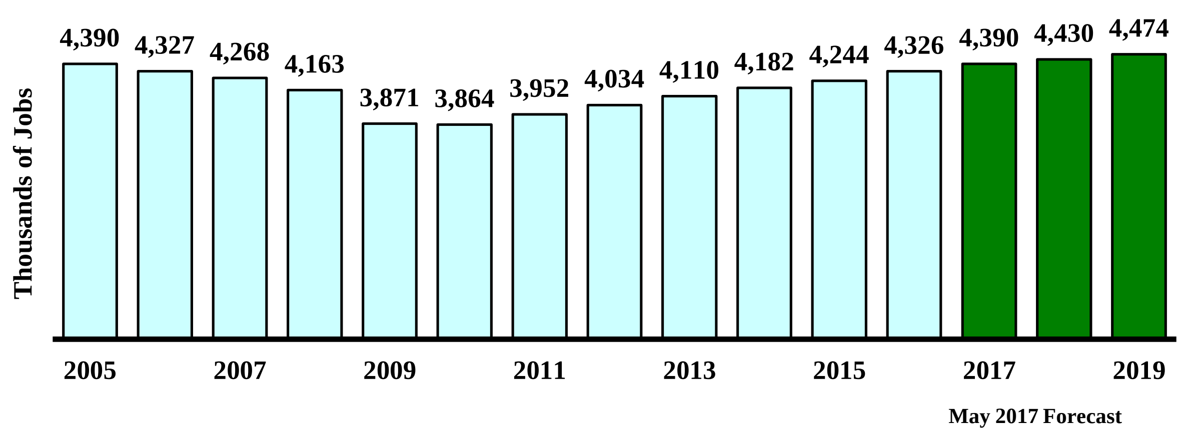
2017, 2018 and 2019 Michigan Economic Outlook

Following ten straight annual declines between 2001 and 2010, inclusive, **Michigan wage and salary employment** reported its sixth straight annual employment increase in 2016. In 2016, Michigan employment increased 1.9 percent. State employment is forecast to grow (although more slowly) in each of the next three years: 1.5 percent in 2017, 0.9 percent in 2018 and 1.0 percent in 2019. At 4.5 million jobs, the forecasted Michigan wage and salary employment level in 2019 would represent the State's highest employment level since 2002. However, forecasted 2019 Michigan employment would remain 201,400 jobs (4.3 percent) below the State's peak annual employment set in 2000 (4.7 million jobs).

In 2015, **Michigan private non-manufacturing employment** rose 47,000 jobs. Private non-manufacturing employment gained a net 65,600 jobs in 2016 and is forecast to gain 59,300 jobs in 2017, 42,600 jobs in 2018 and 45,400 jobs in 2019.

In 2015, **State manufacturing employment** rose 2.8 percent. Michigan manufacturing employment growth slowed to 2.1 percent in 2016. State manufacturing employment is projected to decline 0.3 percent in 2017, fall 0.9 percent in 2018 and drop 0.4 percent in 2019. Consequently, Michigan manufacturing employment is forecast to decline a cumulative 9,700 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 May 2017 Administration Forecast.

Michigan transportation equipment employment increased 4.4 percent in 2015. The sector's employment grew 3.4 percent in 2016. In 2017, transportation equipment employment is forecast to rise 1.0 percent. The sector's employment is then projected to decrease 0.8 percent in 2018 before rising 0.1 percent in 2019. Forecasted 2019 transportation equipment employment of 180,100 jobs remains down 46.3 percent from the sector's CY 2000 peak employment of 335,300 jobs.

The **Michigan unemployment rate** dropped substantially to 5.4 percent in 2015 from 7.3 percent in 2014. In 2016, the State's rate fell to 4.9 percent in 2016. In 2017, the rate is projected to rise slightly to 5.1 percent. The Michigan unemployment rate is then forecast to remain unchanged at 5.1 percent in 2018. In 2019, the State rate is projected to fall to 4.9 percent.

In 2015, **Michigan wages and salaries** rose 5.1 percent. Wages and salaries growth slowed slightly to 4.9 percent in 2016. Wages and salaries are forecast to rise each year of the forecast with increases of 3.6 percent in 2017, 4.1 percent in 2018 and 4.2 percent in 2019.

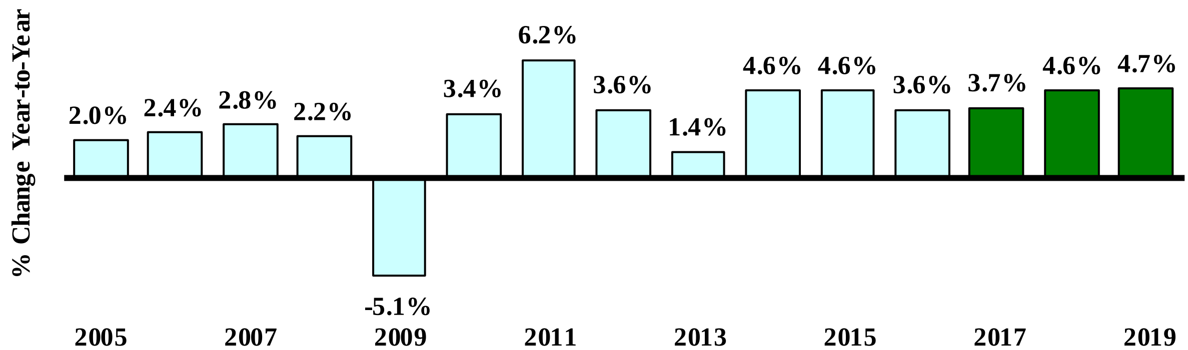
In 2015, **Michigan personal income** rose 4.6 percent and increased 3.6 percent in 2016. State personal income is forecast to rise 3.7 percent in 2017, 4.6 percent in 2018 and 4.7 percent in 2019.

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. Over the forecast horizon, the overall price level is projected to rise each year with increases of 2.2 percent in 2017, 1.8 percent in 2018 and 2.2 percent in 2019.

In 2016, **real (inflation adjusted) Michigan personal income** grew 2.0 percent in 2016. Real Michigan personal income growth is forecast to slow to 1.4 percent in 2017, accelerate to 2.8 percent in 2018 and then slow to 2.4 percent in 2019.

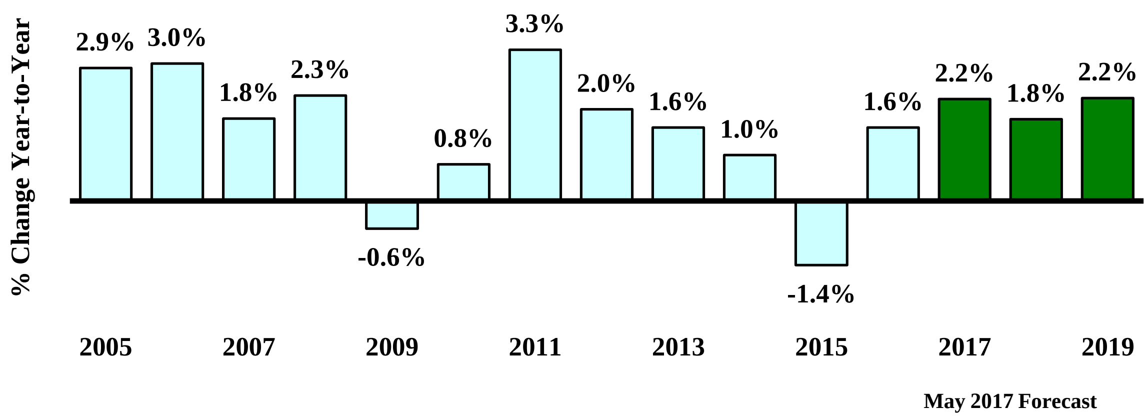
Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, May 2017.

Michigan Personal Income Reports Solid Growth



May 2017 Forecast

Consumer Prices Forecast to Record Faster Growth
Detroit CPI



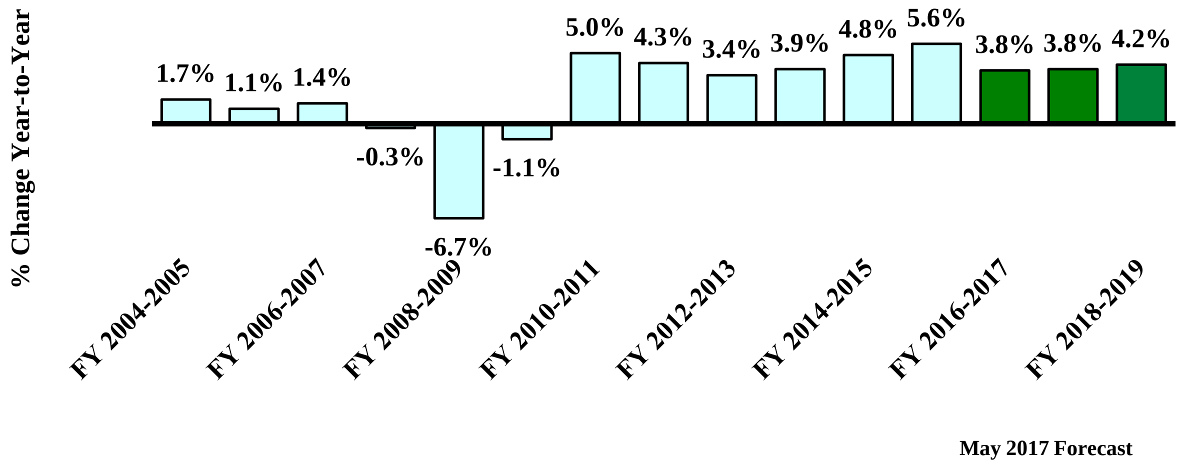
Source: U.S. Bureau of Labor Statistics and Administration Forecast, May 2017.

Fiscal Year Economics

Michigan's largest taxes are the individual income tax ($11.2 billion in FY 2016) and sales and use taxes ($8.8 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 4.8 percent in FY 2015 and rose 5.6 percent in FY 2016. State wages and salaries are forecast to increase 3.8 percent in FY 2017, 3.8 percent in FY 2018 and 4.2 percent in FY 2019.

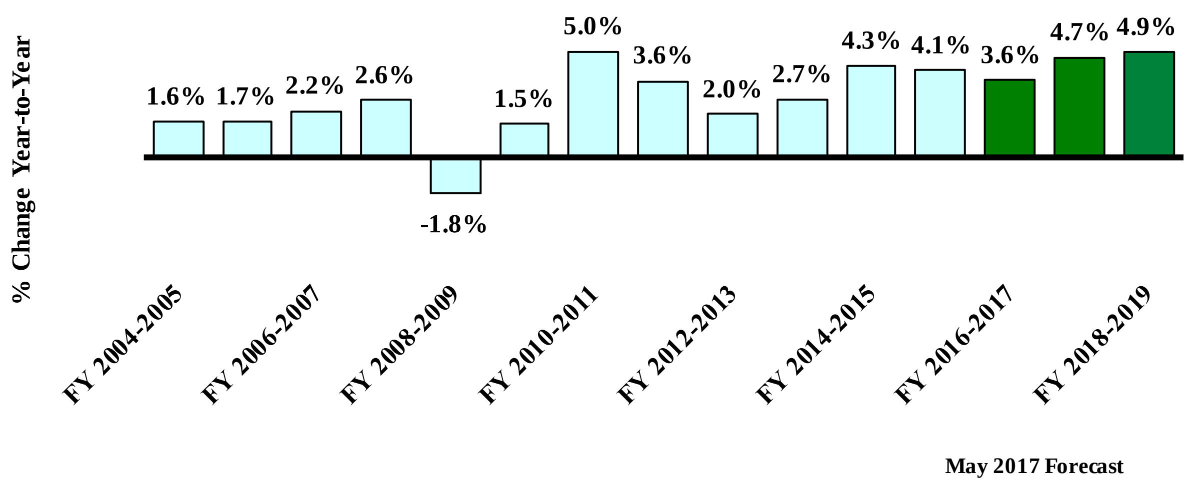
Sales and use taxes depend primarily on **Michigan disposable (after tax) income** and inflation. Having risen 4.3 percent in fiscal year 2015, disposable income increased 4.1 percent in FY 2016. Disposable income is projected to increase 3.6 percent in FY 2017, 4.7 percent in FY 2018 and 4.9 percent in FY 2019. Prices, as measured by the **Detroit CPI**, fell 1.2 percent in FY 2015 and then increased 1.0 percent in FY 2016. The Detroit CPI is forecast to rise 2.2 percent in FY 2017, to increase 1.8 percent in FY 2018 and to rise 2.1 percent in FY 2019.

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, May 2017.

Michigan Disposable Income Increases
Basis for Sales and Use Tax Collections



Source: Research Seminar in Quantitative Economics, University of Michigan, and Administration Forecast, May 2017.

Forecast Risks

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

Consumer and Economic Sentiment. Compared with pre-November 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. Substantial uncertainty surrounds the composition and timing of any fiscal legislation that might be enacted over the forecast horizon – including legislation to repeal and replace the Affordable Care Act, legislation to reform corporate and individual income tax reform 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 mid $40 per barrel range to the mid $60 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. In December 2016, the Fed raised the federal funds rate by 0.25 of a percentage point -- a full year after the Fed's first rate increase since the Great Recession. At its following meeting in January 2017, the Fed left the federal funds rate target unchanged. However, the Fed did raise the target range by 25 basis points at its March 2017 meeting. The Fed then left the target range unchanged at its May 2017 meeting.

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.

The FOMC continues to reinvest principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and continues to roll over maturing Treasury securities at auction. Given the FOMC's most recent statement, the Committee is unlikely to make any substantial changes in its level of holdings over the forecast horizon. Nevertheless, uncertainty surrounds the magnitude, timing and macroeconomic impact of Fed's reduction in its holdings.

Housing Market. Projected 2019 starts are 16 percent higher than 2016 housing 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 2019 starts total 1.4 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 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. In addition, the recent accelerating decline in used car prices has reduced used car prices to their lowest level since 2010. Lower used car prices make leases less profitable.

SECTION IV

Administration
Revenue Estimates

Administration Revenue Estimates
May 17, 2017

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 2016 is the base year. Any non-economic changes to the taxes occurring in FY 2017, FY 2018 and FY 2019 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 $10,178.1 million, a 1.6 percent increase compared to FY 2016. The FY 2017 GF-GP revenue estimate is $112.0 million below the January 2017 Consensus estimate. SAF revenue is forecast to be $12,611.3 million; representing a 4.1 percent increase compared to FY 2016. The FY 2017 SAF estimate is $154.3 million above the January 2017 Consensus estimate (see Table 2).

Table 2

FY 2016-17 Administration Revenue Estimates

(millions)

	Administration May 17, 2017		Change fron Jan 2017
	Amount	**Growth**	**Consensus**
General Fund - General Purpose			
Baseline Revenue	$11,236.9	2.4%	---
Tax Policy Adjustments	($1,058.8)		---
Net Resources	$10,178.1	1.6%	($112.0)
School Aid Fund			
Baseline Revenue	$12,610.4	3.5%	---
Tax Policy Adjustments	$0.9		---
Net Resources	$12,611.3	4.1%	$154.3
Combined			
Baseline Revenue	$23,847.3	3.0%	---
Tax Policy Adjustments	($1,057.9)		---
Net Resources	$22,789.4	3.0%	$42.3

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 $10,443.2 million, a 2.6 percent increase compared to FY 2017. The FY 2018 GF-GP revenue estimate is $79.5 million below the January 2017 Consensus estimate. SAF revenue is forecast to be $12,966.9 million; representing a 2.8 percent increase compared to FY 2017. The FY 2018 SAF estimate is $183.8 million above the January 2017 Consensus estimate (see Table 3).

Table 3

FY 2017-18 Administration Revenue Estimates

(millions)

	Administration May 17, 2017		Change fron Jan 2017
	Amount	**Growth**	**Consensus**
General Fund - General Purpose			
Baseline Revenue	$11,608.1	3.3%	---
Tax Policy Adjustments	($1,164.9)	---	---
Net Resources	$10,443.2	2.6%	($79.5)
School Aid Fund			
Baseline Revenue	$12,938.4	2.6%	---
Tax Policy Adjustments	$28.5	---	---
Net Resources	$12,966.9	2.8%	$183.8
Combined			
Baseline Revenue	$24,546.5	2.9%	---
Tax Policy Adjustments	($1,136.4)	---	---
Net Resources	$23,410.1	2.7%	$104.3

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 $10,736.9 million, a 1.3 percent increase compared to FY 2018. The FY 2019 GF-GP revenue estimate is $79.5 million below the January 2017 Consensus estimate. SAF revenue is forecast to be $13,159.1 million; representing a 2.8 percent increase compared to FY 2018. The FY 2019 SAF estimate is $183.8 million above the January 2017 Consensus estimate (see Table 4).

Table 4

FY 2018-19 Administration Revenue Estimates

(millions)

	Administration May 17, 2017		Change fron Jan 2017
	Amount	**Growth**	**Consensus**
General Fund - General Purpose			
Baseline Revenue	$11,963.4	3.1%	---
Tax Policy Adjustments	($1,455.8)	---	---
Net Resources	$10,507.6	0.6%	($81.7)
School Aid Fund			
Baseline Revenue	$13,234.4	2.3%	---
Tax Policy Adjustments	$60.2	---	---
Net Resources	$13,294.6	2.5%	$163.1
Combined			
Baseline Revenue	$25,197.8	2.7%	---
Tax Policy Adjustments	($1,395.6)	---	---
Net Resources	$23,802.2	1.7%	$81.4

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 2014 revenue is compared to CY 2012 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 2015 revenues were $7.4 billion below the revenue limit. State revenues will also be well below the limit for FY 2016 through FY 2019. FY 2016 revenues are expected to be $8.4 billion below the limit, FY 2017 revenues $9.2 billion below the limit, FY 2018 revenues $9.4 billion below the limit, and FY 2019 revenues $10.0 billion below the limit (See Table 5).

Table 5

Administration Revenue Limit Calculation

(millions)

	FY 2015 Final June 2016	FY 2016 Admin May 2017	FY 2017 Admin May 2017	FY 2018 Admin May 2017	FY 2019 Admin May 2017
Revenue Subject to Limit	$29,277.6	$29,939.7	$31,097.6	$32,393.9	$33,293.4
Revenue Limit	**CY 2013**	**CY 2014**	**CY 2015**	**CY 2016**	**CY 2017**
Personal Income	$386,471	$403,726	$424,807	$440,292	$456,583
Ratio	9.49%	9.49%	9.49%	9.49%	9.49%
Revenue Limit	$36,676.1	$38,313.6	$40,314.2	$41,783.7	$43,329.7
Amount Under (Over) Limit	**$7,398.5**	**$8,373.9**	**$9,216.6**	**$9,389.8**	**$10,036.3**

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 3.5 percent in 2016. Thus, the formula has a pay-in for FY 2017 of $150.2 million (See Table 6). In 2017, real calendar year personal income for Michigan is forecast to increase 1.7 percent, so the formula calls for no pay-in for FY 2018 or pay-out in FY 2017 (See Table 7). In 2018, real calendar year personal income for Michigan is forecast to increase 2.5 percent, so the formula calls for a pay-in of $52.2 million in FY 2019 (See Table 8). Based on the personal income numbers, there is no pay-out in FY 2019 (See Table 9).

Table 6

Budget and Economic Stabilization Fund Calculation Based on CY 2016 Personal Income Growth Administration Calculation

	CY 2015	CY 2016
Michigan Personal Income	$ 424,807 [1]	$ 440,292 [1]
less Transfer Payments	$ 91,439 [1]	$ 94,033 [1]
Income Net of Transfers	$ 333,369	$ 346,259
Detroit CPI	2.195 [2]	2.202 [2]
for 12 months ending	(June 2015)	(June 2016)
Real Adjusted Michigan Personal Income	$ 151,890	$ 157,247
Change in Real Adjusted Personal Income		3.5%
Excess over 2%		1.5%
GF-GP Revenue Fiscal Year 2015-2016		$ 10,015.4

	FY 2016-2017
BSF Pay-In Calculated for FY 2017	$ 150.2
	FY 2015-2016
BSF Pay-Out Calculated for FY 2016	NO PAY-OUT

Notes:

[1] Personal Income and Transfer Payments, Administration Forecast, May 2017.

[2] Detroit Consumer Price Index, Administration Forecast, May 2017.

Table 7

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

	CY 2016		CY 2017	
Michigan Personal Income	$ 440,292	(1)	$ 456,583	(1)
less Transfer Payments	$ 94,033	(1)	$ 97,997	(1)
Income Net of Transfers	$ 346,259		$ 358,586	
Detroit CPI	2.202	(2)	2.242	(2)
for 12 months ending	(June 2016)		(June 2017)	
Real Adjusted Michigan Personal Income	$ 157,247		$ 159,966	
Change in Real Adjusted Personal Income			1.7%	
Between 0 and 2%			0.0%	
GF-GP Revenue Fiscal Year 2016-2017			$ 10,178.1	

	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, May 2017.

(2) Detroit Consumer Price Index, Administration Forecast, May 2017.

Table 8

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

	CY 2017		CY 2018	
Michigan Personal Income	$ 456,583	(1)	$ 477,586	(1)
less Transfer Payments	$ 97,997	(1)	$ 103,515	(1)
Income Net of Transfers	$ 358,586		$ 374,071	
Detroit CPI	2.242	(2)	2.282	(2)
for 12 months ending	(June 2017)		(June 2018)	
Real Adjusted Michigan Personal Income	$ 159,966		$ 163,908	
Change in Real Adjusted Personal Income			2.5%	
Excess over 2%			0.5%	
GF-GP Revenue Fiscal Year 2017-2018			$ 10,443.2	

	FY 2018-2019
BSF Pay-In Calculated for FY 2019	$ 52.2
	FY 2017-2018
BSF Pay-Out Calculated for FY 2018	NO PAY-OUT

Notes:

(1) Personal Income and Transfer Payments, Administration Forecast, May 2017.

(2) Detroit Consumer Price Index, Administration Forecast, May 2017.

Table 9

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

	CY 2018		CY 2019	
Michigan Personal Income	$ 477,586	(1)	$ 500,032	(1)
less Transfer Payments	$ 103,515	(1)	$ 109,055	(1)
Income Net of Transfers	$ 374,071		$ 390,977	
Detroit CPI	2.282	(2)	2.327	(2)
for 12 months ending	(June 2018)		(June 2019)	
Real Adjusted Michigan Personal Income	$ 163,908		$ 167,989	
Change in Real Adjusted Personal Income			2.5%	
Excess over 2%			0.5%	
GF-GP Revenue Fiscal Year 2018-2019			$ 10,507.6	

	FY 2018-2019
BSF Pay-Out Calculated for FY 2019	NO PAY-OUT

Notes:

(1) Personal Income and Transfer Payments, Administration Forecast, May 2017.

(2) Detroit Consumer Price Index, Administration Forecast, May 2017.

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 2018, the SAF revenue adjustment factor is calculated to be 1.0305 (See Table 10). For FY 2019, the SAF revenue adjustment factor is calculated to be 1.0243 (See Table 11).

Table 10

Administration School Aid Revenue Adjustment Factor

For Fiscal Year 2018

	FY 2016	FY 2017	FY 2018
Baseline SAF Revenue	$12,181.6	$12,610.4	$12,938.4
Balance Sheet Adjustments	($62.9)	($62.9)	$28.5
Net SAF Estimates	$12,118.7	$12,547.5	$12,966.9
Subtotal Adjustments to FY 2018 Base	$91.4	$27.6	$0.0
Baseline Revenue on a FY 2018 Base	$12,210.1	$12,575.1	$12,966.9

School Aid Fund Revenue Adjustment Calculation for FY 2018

Sum of FY 2016 & FY 2017	$12,210.1	+	$12,575.1	=	$24,785.2
Sum of FY 2017 & FY 2018	$12,575.1	+	$12,966.9	=	$25,542.0

FY 2018 Revenue Adjustment Factor **1.0305**

Note: Factor is calculated off a FY 2018 base year.

Table 11

Administration School Aid Revenue Adjustment Factor

For Fiscal Year 2019

	FY 2017	FY 2018	FY 2019
Baseline SAF Revenue	$12,610.4	$12,938.4	$13,234.4
Balance Sheet Adjustments	$0.9	$28.5	$60.2
Net SAF Estimates	$12,611.3	$12,966.9	$13,294.6
Subtotal Adjustments to FY 2019 Base	$59.3	$31.7	$0.0
Baseline Revenue on a FY 2019 Base	$12,670.6	$12,998.6	$13,294.6

School Aid Fund Revenue Adjustment Calculation for FY 2019

Sum of FY 2017 & FY 2018	$12,670.6	+	$12,998.6	=	$25,669.2
Sum of FY 2018 & FY 2019	$12,998.6	+	$13,294.6	=	$26,293.2

FY 2019 Revenue Adjustment Factor **1.0243**

Note: Factor is calculated off a FY 2019 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 12

Administration General Fund General Purpose Revenue Detail

(millions)

	FY 2017		FY 2018		FY 2019	
	Amount	**Growth**	**Amount**	**Growth**	**Amount**	**Growth**
GF-GP Tax Amounts						
Income Tax	$6,989.5	4.2%	$7,224.1	3.4%	$7,128.9	-1.3%
Sales	$1,193.1	4.4%	$1,244.9	4.3%	$1,272.8	2.2%
Use	$672.1	-27.9%	$583.6	-13.2%	$613.9	5.2%
Cigarette	$186.0	-0.2%	$184.4	-0.9%	$182.7	-0.9%
Beer & Wine	$53.0	2.3%	$54.0	1.9%	$55.0	1.9%
Liquor Specific	$54.0	2.5%	$55.2	2.2%	$56.6	2.5%
Single Business Tax	($5.0)	NA	$0.0	NA	$0.0	NA
Insurance Co. Premium	$390.6	18.7%	$419.4	7.4%	$420.5	0.3%
CIT/MBT	$143.7	221.5%	$188.2	31.0%	$294.9	56.7%
Telephone & Telegraph	$36.6	5.5%	$36.0	-1.6%	$36.0	0.0%
Oil & Gas Severance	$25.1	32.8%	$27.2	8.4%	$29.1	7.0%
Essential Services Assess.	$0.0	NA	$0.0	NA	$0.0	NA
GF-GP Other Taxes	($26.7)	NA	($27.0)	1.1%	($26.8)	-0.7%
Total GF-GP Taxes	$9,790.0	2.5%	$10,070.1	2.9%	$10,147.5	0.8%
GF-GP Non-Tax Revenue						
Federal Aid	$25.0	33.0%	$25.0	0.0%	$25.0	0.0%
From Local Agencies	$0.1	NA	$0.1	0.0%	$0.1	0.0%
From Services	$7.0	4.5%	$7.0	0.0%	$7.0	0.0%
From Licenses & Permits	$12.5	-6.0%	$12.5	0.0%	$12.5	0.0%
Miscellaneous	$8.0	-79.7%	$8.0	0.0%	$8.0	0.0%
Driver Responsibility Fees	$62.5	-11.6%	$43.5	-30.4%	$25.5	-41.4%
Interfund Interest	($5.5)	323.1%	($6.5)	18.2%	($7.5)	15.4%
Liquor Purchase	$215.0	2.6%	$220.0	2.3%	$225.0	2.3%
Charitable Games	$5.0	66.7%	$5.0	0.0%	$5.0	0.0%
Transfer From Escheats	$58.5	-45.4%	$58.5	0.0%	$59.5	1.7%
Other Non Tax	$0.0	0.0%	$0.0	0.0%	$0.0	0.0%
Total Non Tax	$388.1	-16.9%	$373.1	-3.9%	$360.1	-3.5%
Total GF-GP Revenue	$10,178.1	1.6%	$10,443.2	2.6%	$10,507.6	0.6%

Table 13

Administration School Aid Fund Revenue Detail

	FY 2017		FY 2018		FY 2019	
	Amount	**Growth**	**Amount**	**Growth**	**Amount**	**Growth**
School Aid Fund						
Income Tax	$2,771.7	4.1%	$2,860.1	3.2%	$2,957.5	3.4%
Sales Tax	$5,566.9	4.9%	$5,740.0	3.1%	$5,878.8	2.4%
Use Tax	$526.5	7.5%	$560.7	6.5%	$590.3	5.3%
Liquor Excise Tax	$53.6	3.1%	$54.8	2.2%	$56.2	2.6%
Cigarette & Tobacco	$357.2	-0.3%	$352.6	-1.3%	$347.7	-1.4%
Other Tobacco	$0.0	0.0%	$0.0	0.0%	$0.0	0.0%
State Education Tax	$1,945.9	2.6%	$2,002.6	2.9%	$2,061.0	2.9%
Real Estate Transfer	$310.2	7.2%	$314.8	1.5%	$321.0	2.0%
Industrial Facilities Tax	$35.0	7.8%	$36.0	2.9%	$37.0	2.8%
Casino (45% of 18%)	$114.0	1.0%	$115.0	0.9%	$116.8	1.6%
Commercial Forest	$3.3	-8.3%	$3.3	0.0%	$3.3	0.0%
Other Spec Taxes	$25.0	7.3%	$25.0	0.0%	$25.0	0.0%
Subtotal Taxes	$11,709.3	4.3%	$12,064.9	3.0%	$12,394.6	2.7%
Lottery Transfer	$902.0	1.5%	$902.0	0.0%	$900.0	-0.2%
Total SAF Revenue	$12,611.3	4.1%	$12,966.9	2.8%	$13,294.6	2.5%

Table 14

Administration Major Tax Totals

	FY 2017		FY 2018		FY 2019	
	Amount	**Growth**	**Amount**	**Growth**	**Amount**	**Growth**
Major Tax Totals (Includes all Funds)						
Income Tax	$9,762.0	4.2%	$10,085.0	3.3%	$10,237.2	1.5%
Sales Tax	$7,649.4	4.8%	$7,886.4	3.1%	$8,076.9	2.4%
Use Tax	$1,198.6	-15.7%	$1,144.3	-4.5%	$1,204.2	5.2%
CIT/MBT	$143.7	221.2%	$188.2	31.0%	$294.9	56.7%
Cigarette and Tobacco	$944.4	-0.2%	$935.7	-0.9%	$926.3	-1.0%
Casino Tax	$114.0	1.6%	$115.0	0.9%	$116.8	1.6%