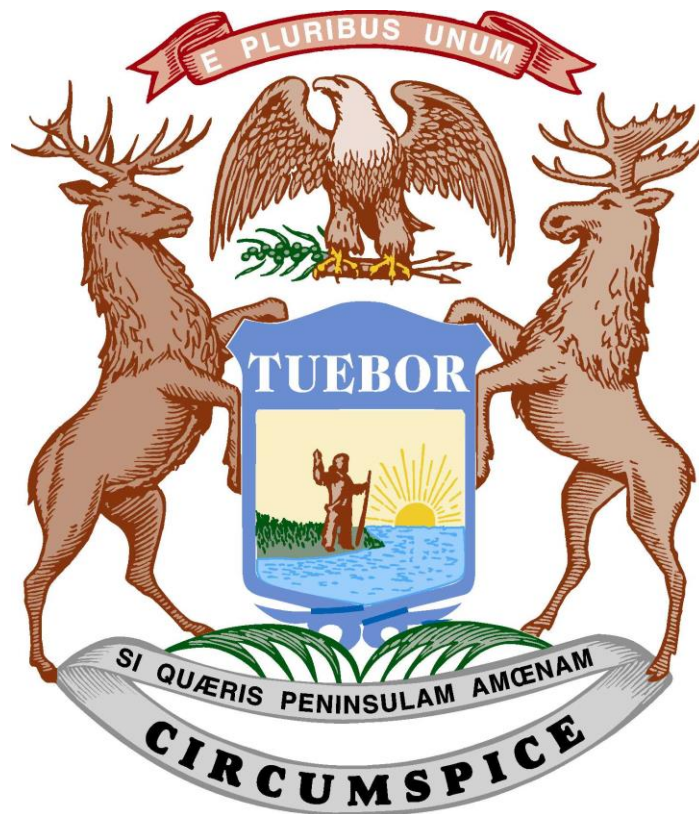


# Administration Estimates Michigan Economic and Revenue Outlook



**FY 2015-16, FY 2016-17 and FY 2017-18**

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**ADMINISTRATION ESTIMATES**  
**EXECUTIVE SUMMARY**  
**May 17, 2016**

**Revenue Review and Outlook**

- FY 2016 GF-GP revenue is forecast to decrease 2.4 percent to \$9,791.2 million, down \$52.6 million from the January 2016 Consensus estimate. FY 2016 SAF revenue is forecast to increase 2.7 percent to \$12,062.3 million, down \$69.3 million from the January 2016 Consensus estimate.
- FY 2017 GF-GP revenue is forecast to increase 4.9 percent to \$10,267.5 million, up \$53.6 million from the January 2016 Consensus estimate. FY 2017 SAF revenue is forecast to increase 2.9 percent to \$12,410.8 million, down \$75.3 million from the January 2016 Consensus estimate.
- FY 2018 GF-GP revenue is forecast to increase 5.2 percent to \$10,797.1 million, up \$197.7 million from the January 2016 Consensus estimate. FY 2018 SAF revenue is forecast to increase 3.2 percent to \$12,808.2 million, down \$22.8 million from the January 2016 Consensus estimate.

**2016, 2017 and 2018 U.S. Economic Outlook**

- Real GDP rose 2.4 percent in both 2014 and 2015. Economic growth is forecast to decelerate to 2.2 percent in 2016. Real GDP is expected to accelerate to 2.7 percent in 2017 and then slow slightly to 2.6 percent in 2018.
- U.S. wage and salary employment rose 1.9 in 2014. In 2015, U.S. employment grew 2.1 percent – the fastest annual growth since 2000. U.S. employment growth is expected to slow modestly over the forecast horizon. In 2016, national employment growth is expected to decelerate to 1.8 percent before slowing to 1.5 percent in 2017 and 1.4 percent in 2018.
- The U.S. unemployment rate is forecast to decline each year over the forecast horizon. The unemployment rate averaged 6.2 percent in 2014 and 5.3 percent in 2015. The national unemployment rate is forecast to fall to 4.8 percent in 2016, 4.6 percent in 2017 and 4.4 percent in 2018.
- Housing starts increased 8.5 percent in 2014 and 10.8 percent in 2015. Housing starts are forecast to continue to increase with starts rising 10.3 percent in 2016, 13.8 percent in 2017 and 5.7 percent in 2018. In 2014, housing starts rose above 1.0 million units for the first time since 2007. In 2018, starts are expected to total 1.48 million units.

- 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 16.4 million units in 2014 and to 17.39 million units in 2015, slightly exceeding the previous record sales level of 17.35 million units set in 2000. Light vehicle sales are forecast to rise to 17.7 million units in 2016 and then are expected to grow to a new record high of 17.8 million units in 2017. Light vehicle sales are also forecast to total 17.8 million units in 2018.
- 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 is expected to accelerate to 1.3 percent in 2016, 2.1 percent in 2017 and 2.4 percent in 2018.

### **2016, 2017 and 2018 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 an estimated 61,700 jobs (1.5 percent). Michigan wage and salary employment is forecast to increase 1.9 percent in 2016, 1.2 percent in 2017 and 1.4 percent in 2018.
- 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. The Michigan unemployment rate is forecast to continue to decline each year with the rate falling to 4.8 percent in 2016, 4.6 percent in 2017 and 4.5 percent in 2018.
- After dropping 8.3 percent in 2009 (the largest percent decline since 1945), Michigan wages and salaries increased 1.6 percent in 2010, grew 5.4 percent in 2011, rose 4.1 percent in 2012 and increased 2.8 percent in 2013. Michigan wages and salaries increased 4.9 percent in 2014 and grew 4.4 percent in 2015. Michigan wages and salaries are forecast to increase 4.1 percent in 2016, 4.2 percent in 2017 and 4.2 percent in 2018.
- 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 2.8 percent in 2010 and rose 6.1 percent in 2011. Personal income increased 3.6 percent in 2012 and rose 1.5 percent in 2013. In 2014, Michigan personal income increased 4.1 percent and rose 4.3 percent in 2015. Michigan personal income is forecast to increase 4.1 percent in 2016, 4.5 percent in 2017 and 4.8 percent in 2018.
- On a fiscal year basis, Michigan disposable income rose 2.3 percent in FY 2014 and increased 3.8 percent in FY 2015. Disposable income is forecast to grow 4.1 percent in FY 2016, 4.2 percent in FY 2017 and 4.5 percent in 2018. Wages and salaries increased 4.0 percent in FY 2014 and rose 4.5 percent in FY 2015. Wages and salaries are forecast to increase 4.6 percent in FY 2016, 3.9 percent in FY 2017 and 4.3 percent in FY 2018.

## **Forecast Risks**

- 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.
- After having left the federal funds rate in the range of 0.00 percent to 0.25 percent for seven straight years, the Federal Reserve raised the range 25 basis points at its December 2015 meeting. However, through mid-May, the Fed has not increased (or decreased) the range in 2016. Uncertainty surrounds the timing of the next (and subsequent) increases. Uncertainty also surrounds consumer and business reactions to any subsequent changes.
- Division among federal policymakers could substantially weaken consumer and investor confidence. Polarization could also substantially limit the federal government's ability to respond to negative financial and macroeconomic shocks.
- 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.
- Adverse weather could disrupt economic activity.

# ECONOMIC REVIEW AND OUTLOOK

## May 17, 2016

### Current U.S. Economic Situation

#### Overall Economic Growth

The current U.S. economic expansion is more than six years old. According to the Institute for Supply Management, the overall U.S. economy expanded for its 83<sup>rd</sup> straight month in April 2016. **Real Gross Domestic Product (GDP)** has grown in all but two quarters since the end of the Great Recession.

In 2015, real GDP grew at a rate of 2.4 percent, however, the pace of growth was not steady during the year. 2015 got off to a rough start as growth slowed to a 0.6 percent annual rate in 2015Q1. The 2015Q1 deceleration was substantially attributable to temporary factors including an extremely harsh winter and West Coast port disruptions. Growth accelerated to 3.9 percent in 2015Q2 before slowing to 2.0 percent in 2015Q3 and 1.4 percent in 2015Q4. In 2016Q1, growth slowed further to 0.5 percent -- with inventories, net exports, federal defense spending, and business investment slowing growth. Problems with seasonal adjustment are partly responsible for the reported deceleration in 2016Q1. The 2016Q1 growth estimate will be re-estimated in May 2016 and again in June 2016.

#### Employment

The four-week average of seasonally adjusted **initial unemployment claims** rose to a 43-week high in mid-January 2016 (283,250). The average then trended downward through mid-March, 2016 -- falling to 259,500. The average rose over the balance of March 2016 and in early April 2016. However, the average has since declined and fell in the week ending April 23 to 256,000 - its lowest reading since December 1973. The average did rise in the final week of April -- but only slightly (2,000). The four-week average of initial unemployment claims has remained below 300,000 for 84 consecutive weeks -- the longest streak of sub-300,000 readings since 1970. (U.S. Department of Labor)

In December 2015 (the most recent month of data available prior to the January 2016 Consensus Conference), the **U.S. unemployment rate** stood at 5.0 percent. Over the past four months since the Conference, the national rate has changed little. In January 2016, the rate fell to 4.9 percent -- its lowest level since November 2007. The rate remained unchanged in February 2016 before returning to 5.0 percent in March. The rate remained at 5.0 percent in April. In each of the most recent nine months (August 2015-April 2016), the U.S. unemployment rate has remained within 0.1 of a percentage point of 5.0 percent.

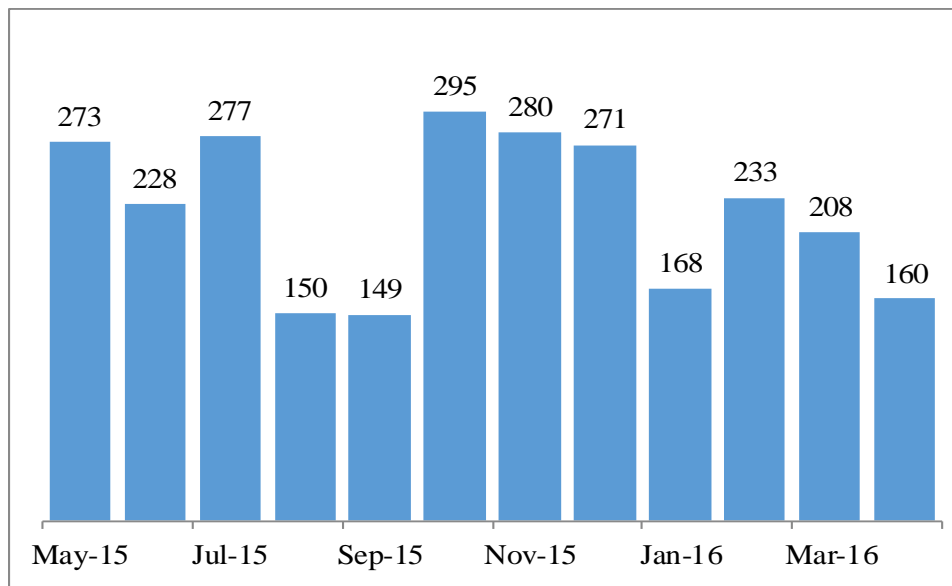
U.S. wage and salary employment has continued rising since the January 2015 Conference. April 2016 marked the 67<sup>th</sup> consecutive monthly increase in national wage and salary employment. Consequently, at 143.9 million jobs, the April 2016 employment level represents the all-time high monthly U.S. employment level. Compared to November 2015 (the last month available prior to the January 2016 Conference), April 2016 employment was up by 1.0 million



jobs (an average of 208,000 jobs increase per month). Compared to a year ago, April 2016 employment was up by 2.7 million jobs (1.9 percent).

Calendar year 2015 represented the fifth 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 and 2.1 percent in 2015.

### **U.S. Payroll Employment 2.7 Million Jobs Added in Past Year (Monthly Change in Thousands)**



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

**Manufacturing sector employment** rose in each of the past five calendar years (CY) with increases of 1.7 percent in both 2011 and 2012, 0.8 percent in 2013, 1.4 percent in 2014 and 1.1 percent in 2015. Over the past year (April 2015-April 2016), manufacturing employment has fallen a net 19,000 jobs. Still more, despite a small increase between March and April (4,000 jobs), April 2016 manufacturing employment is down a net 41,000 from January 2016 manufacturing employment. April 2016 manufacturing employment is down by 1.4 million jobs (-10.5 percent) from the start of the Great Recession (December 2007). Compared to the Recession's end (June 2009), sector employment is up by 571,000 (4.9 percent).

Calendar year 2015 marked the fifth 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 and 4.8 percent in 2015. Compared to a year ago, April 2016 construction was up 261,000 (4.1 percent) – marking the 59<sup>th</sup> consecutive month that construction employment is up compared to a year ago. Construction employment is up by 660,000 jobs (11.0 percent) since the end of the Great Recession but is still down by 820,000 jobs (-10.9 percent) compared to December 2007.

## Housing Market

### *House Construction and Sales*

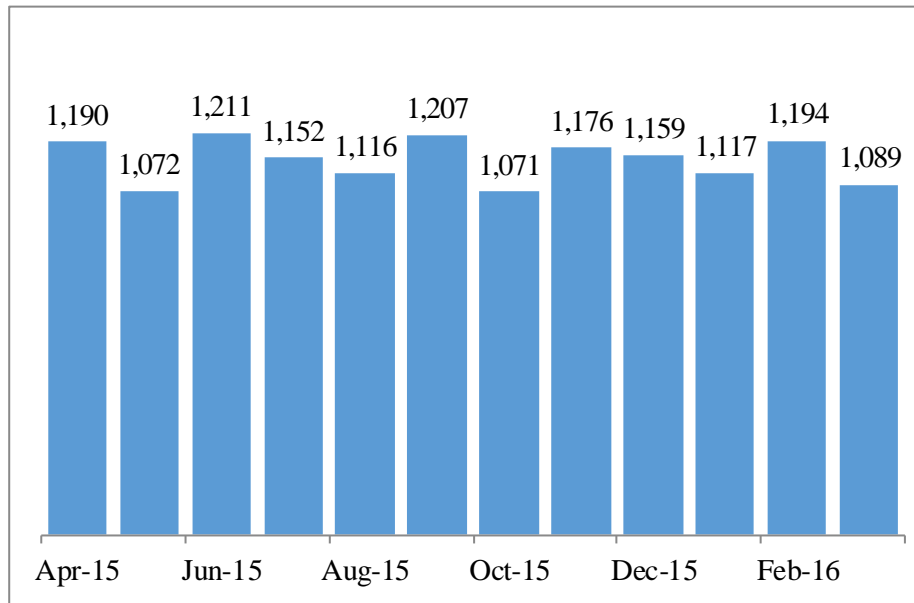
The housing market has strengthened, but still remains at a historically low level. In each year from 2008-2013, housing starts totaled fewer than 1.0 million units. Prior to 2008, starts had never fallen below 1.0 million units since at least 1959. However, after falling to a record low of 554,000 units in 2009, housing starts increased each year from 2010 to 2015. In 2014, total starts rose above 1.0 million units for the first year since 2007. Starts rose still further in 2015, increasing to 1.1 million units. Compared to the 2009 record low, calendar year 2015 housing starts were 100.7 percent higher. However, 2015 housing starts were 46.2 percent below the record high 2005 level. 2015 starts were 18.9 percent lower than average housing starts in the 1990s (pre-boom). March 2016 marked the 12<sup>th</sup> straight month in which annualized housing starts were above 1.0 million. In addition, housing starts were up compared to a year earlier in 11 of the most recent 12 months for which data are available (April 2015-March 2016). In the first quarter of 2016, starts were up 15.9 percent compared to 2015Q1.

In November 2015 (the last month of data available at the January 2016 Consensus Conference), the **National Association of Home Builders (NAHB) sentiment** index stood at 62. (A reading above 50 indicates that more builders viewed conditions as favorable compared with the number who viewed conditions as unfavorable). The NAHB index fell to 60 in December before rising to 61 in January 2016. In February, the index fell to 58, where it remained in March and April.

With **new home sales** totaling 501,000 units, 2015 marked the third straight year in which new home sales exceeded 400,000 units as well as the fourth straight year of increasing new home sales. In three of the four years of increasing sales, the percent gain exceeded 10.0 percent. Most recently, new home sales rose 14.6 percent in 2015. In March 2016 (the most recent month available), annualized seasonally adjusted new home sales exceeded 500,000 units for the fifth straight month. Through the first three months of 2016, new home sales are unchanged compared to the first three months of 2015. (U.S. Census Bureau).

In 2015, **existing home sales** rose 6.3 percent, following a 9.2 percent increase in 2013 and a 2.9 percent decline in 2014. In March 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 2014, but then rose above 5.0 million units in December 2015 and have remained above the 5.0 million unit threshold through March 2016. Through the first three months of 2016, the annualized sales rate averaged 5.3 million units, up 4.8 percent from the average annualized sales rate from January 2015-March 2015. (National Association of Realtors)

## Annualized Housing Starts Holding Steady at Historically Low Levels



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

### *House Prices*

House prices have grown in recent months.

- Between March 2015 and March 2016, the **Core Logic Home Price Index** increased 6.7 percent (including distressed sales) and 6.6 percent (excluding distressed sales). Furthermore March 2016 marked the 49<sup>th</sup> consecutive month of year-over-year home price gains (including distressed sales). However, the March 2016 level remained 5.4 percent below the index's peak (April 2006).
- In 2015, the **Census Bureau's median new home sales price** reported its sixth straight annual price increase – rising 4.8 percent from 2014. Over the six years, the median new home sales price rose 36.8 percent. At \$296,400, the 2015 annual median price represents the highest annual median new home sale price on record. However, compared to a year ago, the monthly median new home price has fallen in three of the past four months. Most recently, the March 2016 median new home price was down 1.8 percent from March 2015.
- In 2015, the **median existing-house price** rose 6.8 percent from 2015. The median existing-house sale price rose 5.7 percent between March 2015 and March 2016 -- marking the 49<sup>th</sup> consecutive month of year-over-year price gains. (National Association of Realtors)

### Foreclosures and Mortgage Rate

In 2016Q1, U.S. **foreclosures** were down eight percent from a year earlier to their lowest quarterly level since 2006Q4. Foreclosures in 2016Q1 were 69 percent below the 2009Q2 peak level set during the Great Recession but were four percent higher than pre-recession average quarterly foreclosures between 2006Q1 to 2007Q3. (RealtyTrac)

In February 2016, there were 34,000 **completed foreclosures** in the U.S. February 2016 foreclosures were down 2.6 percent from January 2016 and down 10.0 percent from a year ago. Further, the February 2016 **rate of serious delinquencies** dropped to 3.2 percent, the lowest rate since November 2007. Through February 2016, the **number of loans in the foreclosure process** has fallen for 52 straight months. (CoreLogic)

In 2015Q4, **homeowner real estate equity** rose to its highest level since 2006Q4. Compared to a year ago, 2015Q4 real estate equity was up \$1.2 trillion. At 56.9 points, the 2015Q4 homeowner equity rate was 19.8 points higher than its all-time low (2009Q1). Over the past year, the equity rate rose by 2.2 percentage points. (Federal Reserve Bank, *Flow of Funds Accounts of the United States*).

At 3.61 percent, the **30-year fixed mortgage rate** in April 2016 represented the lowest rate since May 2013. (Federal Reserve). The April 2016 rate is down .06 of a percentage point from a year ago. Through April 2016, the mortgage rate has been below 4.0 percent in 16 of the past 17 months.

Between October 2015 (the most recent month available prior to the January Consensus Conference) and March 2016, the **National Association of Realtors composite housing affordability index** has risen a net 2.6 points. However, given due to some sizeable declines prior to October 2015, the March 2016 housing affordability index is down 4.1 points from the index's March 2015 reading.

### Monetary Policy

In December 2008, the Federal Open Market Committee (FOMC) lowered the target 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. However, through May 2016, the Fed has not raised the target federal funds rate range any further. Uncertainty surrounds the timing of the next (and any subsequent) rate increases.

The FOMC stated that the path of future rate changes will be gradual. At the last meeting, the Committee observed that the employment picture continues to improve even as overall economic growth appears to have slowed.

The FOMC projected that gradual rate increases will allow the labor market to continue tightening. The Committee acknowledged that the inflation rate continues to remain below its target 2 percent rate. The FOMC attributed the current sub-2 percent inflation rate to the “transitory effect” of recent considerable reductions in energy prices and import prices. With the dissipation of the transitory effects and continued labor market tightening, the Committee projects that the inflation rate will rise to the 2 percent target rate in the “medium term.” Given that monetary policy affects the economy with a lag, the FOMC judged it prudent to raise rates in anticipation of higher inflation, rather than run the risk of beginning rate hikes too late and risk overheating. Future rate changes depend upon “realized and expected economic conditions relative to its objectives of maximum employment and 2 percent inflation” and will likely remain well below long-term target rates for a considerable length of time.

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 April 2016 statement, the FOMC indicated that it would continue reinvesting and rolling over securities well into the future. 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 at the end of April 2016 -- more than five times the amount that the Fed held directly before its quantitative easing program.

### Fiscal Policy

In December 2015, Congress passed and the President signed legislation that funded the federal government through September 2016. The legislation passed by wide margins in the House (316-113) and the Senate (65-33). The legislation, which passed with considerable support from Democrats as well as Republicans, averted a government shutdown due to occur on December 23, 2015. The \$1.15 trillion fiscal year 2016 spending package was combined with \$622 billion in tax cuts. The tax cut package made permanent numerous tax cuts due to expire. In addition, several tax cuts that had lapsed were re-enacted retroactively and made permanent. The legislation suspended the excise tax on medical devices for 2016 and 2017 and delayed the “Cadillac tax” on high-cost employer sponsored health insurance. In addition, the legislation lifted the 40-year ban on oil exports from the U.S.

### Inflation

In November 2015 (the most recent month for which monthly oil price data were available prior to the January 14, 2016 Consensus Revenue Estimating Conference), the price of oil averaged \$42.44 per barrel. In the each of the following three months, the price of oil fell with the price dropping to \$30.32 per barrel in February 2016 – the lowest monthly level in over 12 years. In March 2016, the price of oil rose to \$37.55 per barrel. Compared to a year ago, the price of oil in March 2016 was down \$10.27 per barrel (21.5 percent). (Federal Reserve Bank of St. Louis).

In November 2015, the most recent month for which gasoline prices were available prior to the January 2016 Consensus Conference, the monthly average price of regular gasoline in the U.S.

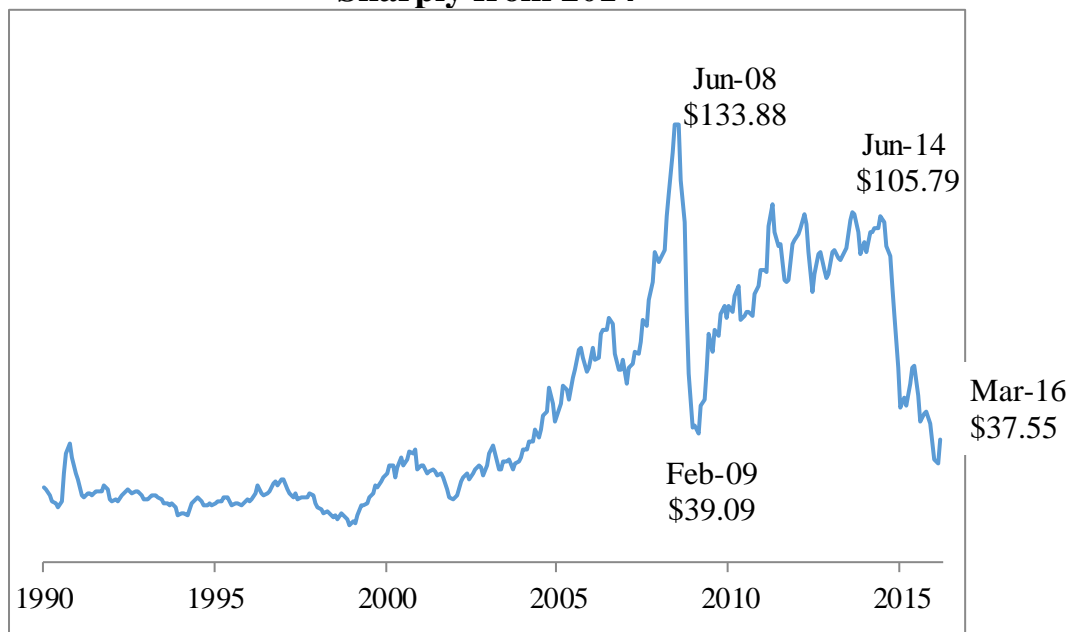
stood at \$2.16 per gallon. The average price of regular gasoline fell in each of the following three months with the price dropping to \$1.76 per gallon in February 2016 – the lowest price since December 2008. The average price of regular gasoline rose in each of the next two months with the price standing at \$2.11 per gallon in April 2016. Compared to a year ago, the April 2016 price of regular gasoline was down by 36 cents. In March 2016, the three-month average price of regular gasoline fell to \$1.89 per gallon --- the lowest three-month average price since February 2009. The three-month average price rose to \$1.95 per gallon in April 2016 -- down 43 cents from a year ago.

In recent years and months, price inflation has remained mild. In 2015, **consumer prices** increased only 0.1 percent. The slight increase follows a 0.4 percent decline in 2009, a 1.6 percent increase in 2010, a 3.2 percent rise in 2011, a 2.1 percent rise in 2012, a 1.5 percent increase in 2013 and a 1.6 percent increase in 2014. Through March 2016, consumer prices have averaged 1.1 percent above the first three months of 2015.

In 2015, **core consumer prices** (excluding food and energy) were up 1.8 percent. This follows annual core price inflation ranging from 1.0 percent to 2.1 percent from 2010 to 2014. Through March 2016, core consumer prices have averaged 2.2 percent above core prices in the first three months of 2015. (U.S. Bureau of Labor Statistics)

**Producer prices** fell 0.9 percent in 2015. This decline follows increases of 1.9 percent in 2012, 1.3 percent in 2013 and 1.6 percent in 2014. Through the first three months of 2016, producer prices are down 0.1 percent. Core producer prices rose 0.7 percent in 2015. The core producer price increase follows increases of 1.9 percent in 2012, 1.4 percent in 2013 and 1.8 percent in 2014. Through the first three months of 2016, core producer prices are up 1.0 percent from a year ago. (Bureau of Labor Statistics)

### Oil Prices Down Sharply from 2014



Source: Federal Reserve Bank of St. Louis. Price per barrel, West Texas Intermediate oil.

## Major Economic Indicators

In October 2015, the **ISM (Institute for Supply Management) manufacturing index, known as the PMI (Purchasing Management Index)**, fell below 50.0 – indicating a contracting manufacturing sector. The PMI remained below 50.0 in each of the following four months. The PMI rose above 50.0 in March 2016 with a reading of 51.8. The index fell in April 2016, but, at 50.8, remained above 50.0. Compared to a year ago, the April 2016 PMI was down 0.8 of a point. In April 2016, the PMI signaled an expanding *overall* economy for the 83<sup>rd</sup> consecutive month. In April 2016, the **ISM non-manufacturing index (NMI)** at 55.7 was down 1.8 points from March 2015. However, April 2016 marked the 75<sup>th</sup> straight month of an expanding service sector.

In 2015, **industrial production** grew 0.3 percent – marking the sixth straight annual increase. However, the slight increase represented the smallest increase over the six-year period. Still more, monthly industrial production has fallen from a year ago in every month since September 2015. The March 2016 decline marked the seventh straight year-over-year decrease in industrial production. Through the first three months of 2016, industrial production is down 1.7 percent compared to January-March 2015. (Board of Governors of the Federal Reserve System)

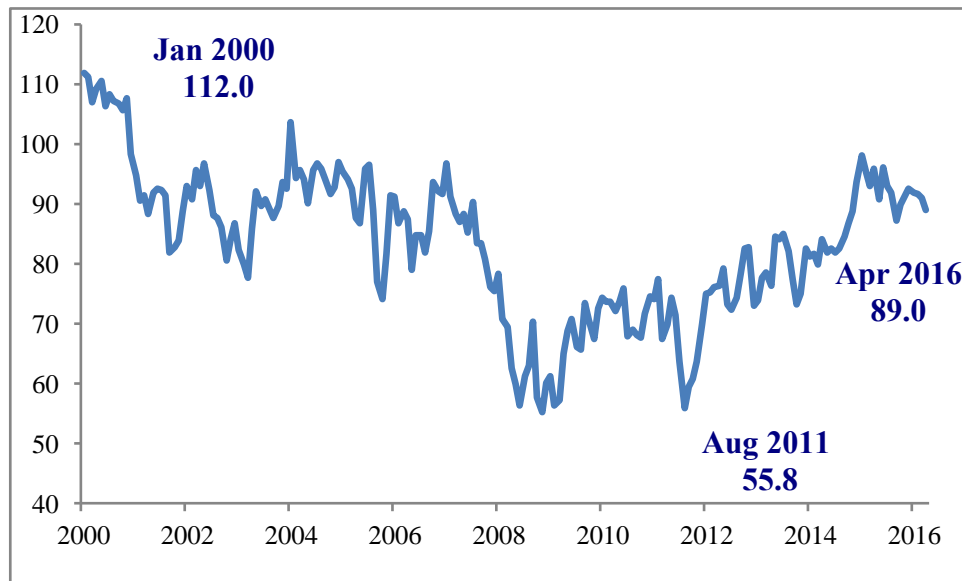
In 2015, the annual average **capacity utilization rate** fell 1.5 points – the first annual decline since 2009. In addition, March 2016 marked the 13<sup>th</sup> straight month in which the capacity utilization rate fell compared to a year ago. Since September 2015, the year-over-year decline has exceeded 2.0 points. Through the first three months of 2016, the capacity utilization rate is down 2.4 points. At 74.8, the March 2016 capacity utilization rate represents the lowest utilization rate since August 2010.

November 2015, the last month for which data were available prior to the January 2016 Conference, marked the 10<sup>th</sup> straight month in which the **three-month moving average for new durable goods orders** declined from a year ago. In each of the four additional months for which data are now available, the three-month average was up compared to a year ago. However, all of the y-o-y increases were smaller than 1.0 percent and in March 2016 (the latest month of available data), the increase was very slight (0.04 percent).

Beginning in December 2009, the **three-month moving average for retail sales** has increased every month from the year-ago level. Over this period, the median y-o-y percent increase has been 4.3 percent. In the four months of newly available data (December 2015-March 2016), the y-o-y increases have ranged between 1.9 percent and 3.1 percent. Most recently, retail sales in the first quarter of 2016 were up 2.8 percent compared with the first quarter of 2015.

In the three months directly prior to the January 2016 Consensus Conference (October 2015-December 2015), the **University of Michigan index of consumer sentiment** rose each month with increases totaling 5.4 points. However, in each of the first four months of 2016, the index declined with a cumulative decline of 2.9 points. Further, the April 2016 index was down 6.2 points compared to a year ago.

## Consumer Sentiment Recently Trending Downward But Well Above August 2011 Trough



Source: University of Michigan Survey of Consumers.

In 2015Q3, the **Conference Board Measure of CEO Confidence Index** reported its first negative reading (below 50) since 2012Q4. In both of the two quarters newly available since the January 2016 Conference (2015Q4 and 2016Q1), the index reported negative readings of 45.0 and 47.0, respectively. Further, the 2016Q1 index is down 10.0 points compared to a year ago.

The **Conference Board index of leading economic indicators (LEI)** rose 0.4 percent in November 2015 (the most recent month available prior to the January 2016 Consensus Conference). In each of the following three months (December 2015-February 2016), the LEI fell with declines of 0.2 percent, 0.2 percent and 0.1 percent, respectively. However, most recently, the LEI increased 0.2 percent in April 2016.

Stock prices increased slightly since the January 2015 Consensus Conference. Between the end of December 2015 and the end of April 2016, the **stock market (Wilshire 5000)** rose 1.0 percent. The Wilshire 5000 declined through mid-February 2016 and had been down by as much as 11.9 percent compared to the end of 2015 before trending upward and recouping its year-to-date losses.

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 and has accelerated each week. In late April, the growth rate rose to 5.4 percent – the fastest weekly leading index growth rate since late June 2013.



## Vehicle Sales and Production

The vehicle sector has shown substantial growth over the past six years. **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 new record high of 17.39 million units – slightly exceeding the previous record of 17.35 million units set in 2000. In 2015, light vehicle sales were up 5.8 percent from 2014 sales. Since 2009, light vehicle sales have risen by 67 percent.

In March 2016, light vehicle sales exceeded a 15.0 million unit annual rate for the 41<sup>st</sup> straight month. Light vehicle sales have exceeded a 16.0 million unit rate in each of the past 25 months. Between July 2015 and February 2016, the annualized sales rate exceeded 17.0 million units each month. Prior to February 2016, the light vehicle sales rate last exceeded 17.0 million units for eight (or more) straight months during the 12-month period beginning in July 1999 and ending in June 2000. In March 2016, the sales rate fell to 16.5 million units. Through the first three months of 2016, the annualized light vehicle sales rate has averaged 17.1 million units – up 2.6 percent from 2015Q1.

Light truck sales share of the light vehicle sales market has continued to grow. In 2015, light truck sales accounted for a record 56.7 percent -- up 3.5 percentage points from 2014 and 1.1 percentage points higher than the previous record high light truck share set in 2004. Through the first three months of 2016, light truck sales have accounted for 58.9 percent of light vehicle sales. While bringing vehicle makers higher profitability per unit, the record high light truck sales share exposes makers to greater downward risks from economic slowdowns and higher fuel prices.

**U.S. vehicle production** declined each year from 2003 to 2009. During these years, U.S. vehicle production decreased 6.6 million units or 53.5 percent. Production began to increase again in 2010 and by 2015, production was up 111.9 percent from 2009. U.S. vehicle production in the first quarter of 2016 was up 2.2 percent compared with 2015Q1 vehicle production.

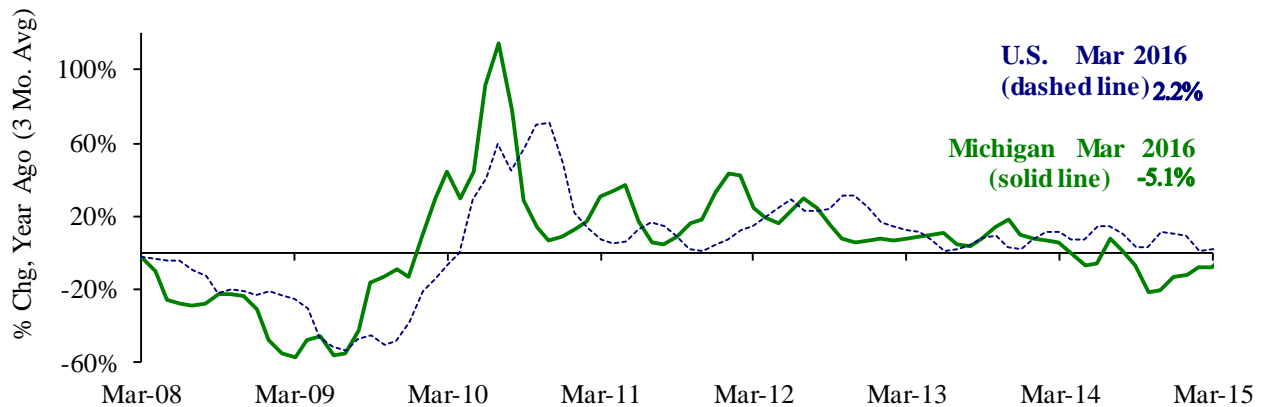
## Current Michigan Economic Conditions

### 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 the 17 quarters between 2010Q1 and 2014Q1, inclusive, quarterly Michigan vehicle production was up from a year ago. In the next five quarters (2014Q2-2015Q2, inclusive), Michigan vehicle production fell from a year earlier. Michigan vehicle production in 2015Q3 did rise 3.1 percent from a year ago and State vehicle production in 2015Q4 did increase 2.9 percent from a year earlier. However, Michigan vehicle production in 2016Q1 fell 5.1 percent compared with 2015Q1.

In 2013, **Michigan's share of U.S. vehicle production** rose to 22.3 percent –the State's highest production share since 2003. However, in 2014, the State's share of U.S. vehicle production fell 2.4 percentage points to 19.9 percent. Michigan's share of national vehicle production fell an additional 0.5 of a percentage point in 2015. The State's share of U.S. vehicle production in 2016Q1 (18.7 percent) was down 1.4 percentage points compared to 2015Q1.

### **Michigan Vehicle Production Falling from Year Ago**



Source: Automotive News and Michigan Department of Treasury.

## Employment

In 2015, **Michigan wage and salary employment** rose for a fifth straight year with 1.5 percent growth, ranking 26<sup>th</sup> among U.S. states. At 4.2 million jobs, 2015 Michigan wage and salary employment represented the State's highest employment level since 2007. Rising by a total of 380,100 jobs between 2010 and 2015, Michigan wage and salary employment increased 9.8 percent (the 15<sup>th</sup> fastest percent growth among U.S. states). Michigan annual employment percent growth has decelerated over the past five years with increases of 2.3 percent in 2011, 2.1 percent in 2012, 1.9 percent in 2013, 1.8 percent in 2014 and 1.5 percent in 2015.

Directly prior to the five recent annual increases, Michigan employment had fallen each year from 2001 to 2010 by a total of 812,100 jobs. Thus, Michigan's 2015 wage and salary employment level of 4.2 million jobs remained 432,000 jobs (9.2 percent) below the State's record high annual employment level of 4.7 million jobs set in 2000.

In each of the past six months (October 2015-March 2016), Michigan employment has risen from the prior month with a cumulative employment increase of 73,900 jobs. In addition, Michigan employment has increased from the prior month in 17 of the past 18 months with a net increase of 133,200 jobs.

Manufacturing employment in Michigan increased each year from 2010 to 2015 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 and 2.7 percent in 2015. Over the past five years, State manufacturing employment increased by 121,300 jobs. Thus, manufacturing employment accounted for 31.9 percent of the overall State employment increase over the past five years, even while comprising only 12.1 percent of the overall *level* of 2010 Michigan wage and salary employment. In 2015, manufacturing employment accounted for 25.1 percent of the overall 2015 annual State wage and salary employment increase – down from the sector's 34.9 percent share of the overall increase in 2014.

Most recently, Michigan manufacturing employment rose 6,000 jobs in January 2016, but fell 3,600 jobs in February and dropped 600 jobs in March. Compared to a year ago, March 2016 State manufacturing employment was up 13,200 jobs from last March.

Michigan construction employment has risen in each of the past five 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 and 4.3 percent in 2015. After dropping by 500 jobs from December 2015 to January 2016, State construction employment rose 3,500 jobs in February and increased 900 jobs in March. Compared to a year ago, March 2016 State construction employment was up 8,200 jobs from last March.

Michigan's wage and salary employment has increased 12.6 percent since the end of the Great Recession (June 2009) and this is the 12<sup>th</sup> strongest growth rate among all U.S. states. From March 2015 to March 2016, Michigan employment increased 2.3 percent, ranking 18<sup>th</sup> among U.S. states.

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 2015,

inclusive, the State's unemployment rate decreased. Over the past six years, Michigan's unemployment rate dropped a combined 8.3 percentage points. In 2015, the Michigan unemployment rate fell 1.9 percentage points to 5.4 percent, the State's lowest annual unemployment rate since 2001.

In August 2015, the Michigan unemployment rate fell to 5.1 percent, at which the rate remained until January 2016, when the rate declined to 4.9 percent. In February 2016, the State unemployment rate dropped to 4.8 percent, the State's lowest rate since March 2001. In March 2016, the Michigan unemployment rate held steady at 4.8 percent – 1.0 percentage point below the State's jobless rate a year earlier.

By the end of the Great Recession (June 2009), the **gap between Michigan's unemployment rate and the U.S. unemployment rate** had risen to 5.4 percentage points. Within a year, the gap shrank to 3.0 percent 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 was essentially eliminated. As of March 2016, Michigan's 4.8 percent unemployment rate was 0.2 of a percentage point below the national March 2016 unemployment rate. Prior to March 2016, the last time the Michigan unemployment was 0.2 of a percentage point or more below the national unemployment rate was August 2000.

**Michigan household employment** fell in each month between September 2005 and November 2009 with household employment falling a combined 581,500 persons (12.2 percent). Since December 2009, household employment has trended upward and has regained a net 447,500 persons. Over the most recent one-year period (March 2014-March 2015), Michigan household employment rose by 157,400 persons – accounting for over one-third of the entire post November 2009 net gain.

**Michigan's labor force** fell every year between 2006 and 2012, inclusive. Over the seven years, the State's labor force dropped a combined 410,600 persons. The State's labor force increased 1.2 percent in 2013 and rose 0.5 percent in 2014 with the annual labor force rising a combined 81,100 persons. In 2015, Michigan's labor force fell very slightly (-0.1 percent). However, Michigan's labor force has risen from the prior month each month since July 2015. Consequently, Michigan's March 2016 labor force was up a net 117,100 persons from a year ago (2.5 percent) – the largest percent increase in Michigan labor force over a twelve-month period since July 1999.

Between March 2015 and March 2016, **Michigan unemployment** fell 40,400 persons (14.8 percent). Compared to unemployment at the end of the Great Recession, March 2016 unemployment is 505,000 persons lower. Compared to the *outset* of the Recession, March 2016 unemployment is 131,900 persons lower. In March 2016, the number of Michigan unemployed fell to its lowest level since January 2001.

## Housing Market

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 recently seen signs of improvement.

**Michigan housing unit authorizations** have increased in each of the past six years. In 2010, 2012 and 2013, annual increases exceeded 25 percent. While State housing unit authorizations rose just 1.1 percent 2014, State housing unit authorizations increased 15.1 percent. Nationally, authorizations increased 12.4 percent.

From 2009 to 2015, Michigan authorizations rose 164.8 percent, compared with a 102.9 percent increase nationally. However, in 2015 Michigan authorizations were still 64.7 percent below the State's 1996-2005 annual average (51,688 units). Total U.S. authorizations in 2014 were 31.4 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 1.5 percent of U.S. authorizations in 2015.

In February 2016, according to **Case-Shiller house price measures** (seasonally adjusted), the Detroit MSA recorded a 6.5 percent year-over-year house price increase, compared to a 5.3 percent average increase for the 20 U.S. metro areas surveyed for the measure. Detroit's 6.5 percent year-over-year increase ranked 8<sup>th</sup> highest among the 20 metro areas. According to CoreLogic, Michigan saw the second largest year-over-year decline in inventory of foreclosure homes (33.8 percent), behind Florida (37.6 percent) between February 2015 and February 2016. Michigan had the second highest number of **completed foreclosures** for the 12 months ending February 2016 with 49,000 completed foreclosures. However, Michigan had the 6<sup>th</sup> smallest **percent of homes in foreclosure**.

The **share of mortgage properties underwater (negative equity)** in Michigan is higher than the national average. In 2015Q4, 8.5 percent of residential properties with mortgages were underwater nationally. In Michigan, 10.9 percent of such properties were underwater –ranking Michigan 10<sup>th</sup> highest among the fifty states behind Nevada (18.7 percent), Florida (17.1 percent), Illinois (14.6 percent), Arizona (14.0 percent), Rhode Island (13.5 percent), Maryland (13.1 percent), Ohio (13.1 percent), New Jersey (11.6 percent) and Connecticut (11.1 percent). (CoreLogic)

## Personal Income

**Michigan annual personal income** growth accelerated slightly from 4.1 percent in 2014 to 4.3 percent in 2015. Michigan's 4.3 percent income growth in 2015 ranked 18<sup>th</sup> among U.S. states. Nationally, personal income grew at essentially the same rate in 2014 and 2015 (4.4 percent). Twenty-two states reported faster personal income growth in 2015 compared with 2014. Michigan's 2015 per capita income increase (4.1 percent) ranked 4<sup>th</sup> among U.S. states. (Bureau of Economic Analysis)

**Michigan's quarterly personal income** grew from the prior year in all but one quarter between 2010Q1-2015Q4 (the latest quarter available). Most recently, in 2015Q4, Michigan personal income was up 4.6 percent from a year ago (ranking 10<sup>th</sup> among U.S. states). In 2015Q4, Michigan personal income growth outpaced national personal income growth by 0.6 of a percentage point.

Each quarter between 2010Q2 and 2015Q3, **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 3.9 percent in 2015Q1, Michigan wage and salary growth accelerated to 4.0 percent in 2015Q2, 4.7 percent in 2015Q3 and 5.1 percent in 2015Q4. Michigan's 2015Q4 y-o-y wage and salary growth ranked 8<sup>th</sup> among the 50 states. Nationally, wage and salary income rose 4.2 percent between 2014Q4 and 2015Q4.

After year-over-year declines in 12 straight quarters from 2007Q2 to 2010Q1, **Michigan manufacturing wages and salaries** have experienced 23 consecutive quarters of y-o-y increases. Between 2010Q1 and 2015Q4, Michigan manufacturing wages outpaced overall U.S. manufacturing sector wages in 23 of the 24 quarters. At 7.2 percent, Michigan manufacturing y-o-y wage growth in 2015Q4 ranked 3<sup>rd</sup> fastest among U.S. states. Michigan manufacturing wage growth in 2015Q4 outpaced national manufacturing wage growth by 5.6 percentage points.

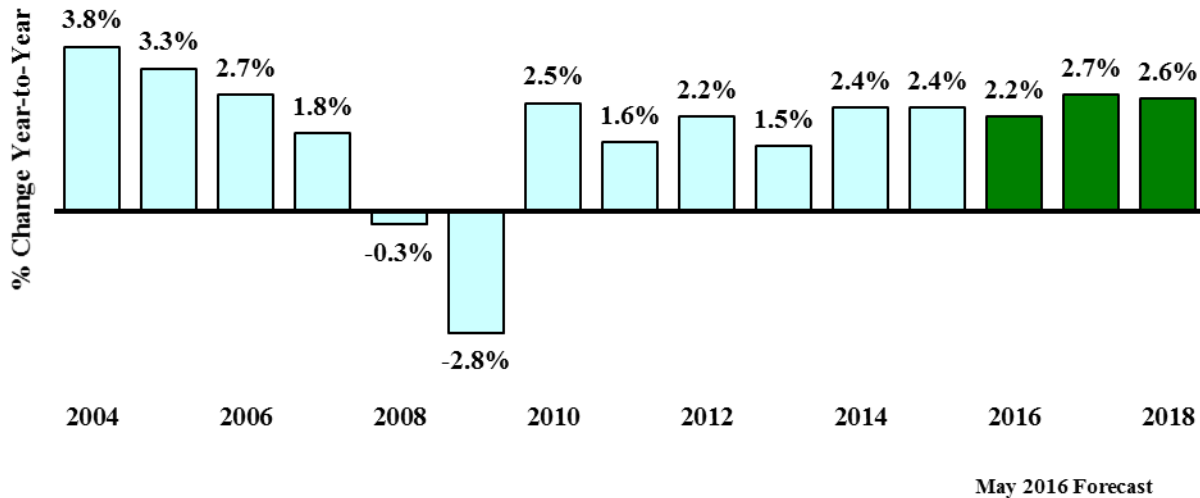
Historically and most recently, manufacturing wages accounted for a substantially larger share of overall wage growth in Michigan compared with the U.S. overall. In 2015Q4, the manufacturing sector accounted for 26.2 percent of overall State y-o-y wage growth, compared with only 4.0 percent nationally.

## **2016, 2017 and 2018 U.S. Economic Outlook**

### Summary

Inflation adjusted GDP rose 2.4 percent in 2015, marking the sixth straight year of annual growth. Real GDP is forecast to rise 2.2 percent in 2016, 2.7 percent in 2017 and 2.6 percent in 2018.

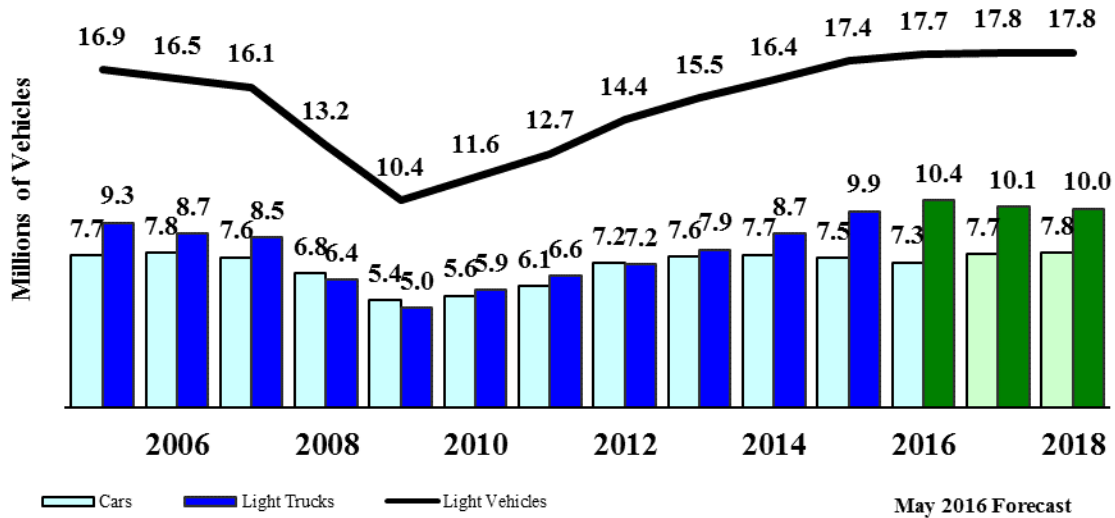
### **Real GDP Forecast to Rise for Ninth Straight Year in 2018**



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, May 2016.

Light vehicle sales totaled 14.4 million units in 2012 and increased to 15.5 million units in 2013. -- marking the first year in which light vehicle sales had exceeded 15.0 million units since 2007. Light vehicle sales totaled 16.4 million units in 2014 and 17.4 million units in 2015 – slightly above the previous record of 17.3 million units in 2000. Annual light vehicle sales are expected to increase to 17.7 million units in 2016. In 2017, sales are expected to rise slightly to a new record high of 17.8 million units and remain unchanged in 2018.

## Vehicle Sales Rise to New Record High Levels



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, May 2016.

The U.S. unemployment rate has fallen in each of the past five years with the unemployment rate dropping from a near post-World War II record high 9.6 percent in 2010 to 5.3 percent in 2015. The national unemployment rate is forecast to fall to 4.8 percent in 2016 and to 4.6 percent in 2017. In 2018, the unemployment rate is expected to fall to 4.4 percent, which would be the lowest annual U.S. unemployment rate since 2000.

U.S. wage and salary employment has increased in each of the past five years with national employment rising 1.2 percent in 2011, 1.7 percent in 2012, 1.6 percent in 2013, 1.9 percent in 2014 and 2.1 percent in 2015. U.S. employment is then forecast to rise 1.8 percent in 2016, 1.5 percent in 2017 and 1.4 percent in 2018. U.S. wage and salary employment in 2014 rose above the previous national peak employment level set in 2007. U.S. employment level then rose to a new record annual high in 2015. With further employment increases forecast in 2016, 2017 and 2018, calendar year 2018 national employment is expected to be 7.7 percent above the pre-2014 peak employment level.

U.S. consumer price inflation slowed sharply to an estimated 0.1 percent in 2015. Inflation is forecast to accelerate across the forecast horizon with overall annual consumer price increases of 1.3 percent in 2016, 2.1 percent in 2017 and 2.4 percent in 2018. The personal consumption inflation rate is projected to accelerate from 0.3 percent in 2015 to 2.0 percent in 2018.

The short-term Treasury bill rate averaged 0.1 percent each year between 2010 and 2013, inclusive. The rate fell below 0.1 percent in 2014 and remained below 0.1 percent in 2015. As a result of increases in the federal funds rate, the short-term Treasury bill rate is forecast to average 0.5 percent in 2016 and 1.1 percent in 2017. In 2018, the short-term Treasury bill rate is projected to increase to 1.9 percent – which would be the highest short-term Treasury bill rate since 2007.



After rising to 4.2 percent in 2013, the corporate Aaa bond rate held steady in 2014. Corporate rates fell to 3.9 percent in 2015. Corporate interest rates are forecast to rise each year, increasing to 4.1 percent in 2016, 4.3 percent in 2017 and 4.5 percent in 2018.

The 30-year fixed mortgage rate fell to 3.7 percent in 2012 and then rose to 4.0 percent in 2013 and 4.2 percent in 2014. Mortgage rates dropped to 3.9 percent in 2015. Mortgage rates are forecast to fall to 3.8 percent in 2016, rise to 4.2 percent in 2017 and 4.5 percent in 2018.

Throughout the forecast horizon, the housing market is expected to strengthen and housing starts are forecast to increase each year. Consequently, housing starts in 2018 (1.48 million units) are expected to be 33.4 percent higher than starts in 2015. Nevertheless, 2018 starts will remain well below the average 1.7 million annual starts in the ten years before the housing bust.

### Assumptions

The forecast expects real (inflation-adjusted) federal government expenditures to increase 1.9 percent in calendar year (CY) 2016, rise 1.8 percent in CY 2017 and then grow 1.3 percent in CY 2018.

In 2015, oil prices per barrel averaged \$49 per barrel – down nearly 50 percent from average oil prices in 2014. Average annual oil prices are expected to fall to \$41 per barrel in 2016. Oil prices are then forecast to rise to an average of \$50 per barrel in 2017 and increase to an average of \$60 per barrel in 2018.

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. Through May, the Fed has not yet increased the federal funds rate in 2016. The forecast assumes that the Fed will increase the federal funds rate by 25 basis every six months beginning in June 2016 through the end of 2017. In 2018, the Fed is expected to increase the federal funds rate at a rate of 25 basis points each quarter. As a result, the federal funds rate will rise from an average of 0.20 percent in 2015Q4 to 2.17 percent in 2018Q4.

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 2.3 percent in 2016, 1.8 percent in 2017 and 1.6 percent in 2018.

Over the forecast horizon, the savings rate is assumed to rise slightly from 5.1 percent in 2015 to 5.3 percent in 2016, and 5.4 percent in both 2017 and 2018.

At 1.8 percent, rest-of-world growth is expected to remain essentially unchanged from 2015 to 2016. The growth rate is then expected to accelerate to 2.3 percent in 2017 and 2.5 percent in 2018.

**Table 1**  
**Administration Economic Forecast**

May 2016

	Calendar 2014 Actual	Calendar 2015 Forecast	Percent Change from Prior Year	Calendar 2016 Forecast	Percent Change from Prior Year	Calendar 2017 Forecast	Percent Change from Prior Year	Calendar 2018 Forecast	Percent Change from Prior Year
<b>United States</b>									
Real Gross Domestic Product (Billions of Chained 2009 Dollars)	\$15,962	\$16,349	2.4%	\$16,709	2.2%	\$17,160	2.7%	\$17,606	2.6%
Implicit Price Deflator GDP (2009 = 100)	108.7	109.8	1.0%	111.1	1.2%	113.0	1.7%	115.4	2.1%
Consumer Price Index (1982-84 = 100)	236.736	237.017	0.1%	240.098	1.3%	245.140	2.1%	251.023	2.4%
Consumer Price Index - Fiscal Year (1982-84 = 100)	236.009	236.742	0.3%	239.111	1.0%	243.902	2.0%	249.495	2.3%
Personal Consumption Deflator (2009 = 100)	109.1	109.4	0.3%	110.5	1.0%	112.5	1.8%	114.8	2.0%
3-month Treasury Bills Interest Rate (percent)	0.03	0.05		0.5		1.1		1.9	
Aaa Corporate Bonds Interest Rate (percent)	4.2	3.9		4.1		4.3		4.5	
Unemployment Rate - Civilian (percent)	6.2	5.3		4.8		4.6		4.4	
Wage and Salary Employment (millions)	138.958	141.865	2.1%	144.420	1.8%	146.590	1.5%	148.640	1.4%
Housing Starts (millions of starts)	1.003	1.112	10.9%	1.227	10.3%	1.396	13.8%	1.476	5.7%
Light Vehicle Sales (millions of units)	16.4	17.4	5.8%	17.7	1.8%	17.8	0.6%	17.8	0.0%
Passenger Car Sales (millions of units)	7.7	7.5	-2.1%	7.3	-3.0%	7.7	5.5%	7.8	1.3%
Light Truck Sales (millions of units)	8.7	9.9	12.7%	10.4	5.5%	10.1	-2.9%	10.0	-1.0%
Big 3 Share of Light Vehicles (percent)	44.3	43.6		44.2		44.5		44.7	
<b>Michigan</b>									
Wage and Salary Employment (thousands)	4,182	4,244	1.5%	4,324	1.9%	4,376	1.2%	4,438	1.4%
Unemployment Rate (percent)	7.3	5.4		4.8		4.6		4.5	
Personal Income (millions of dollars)	\$403,726	\$421,044	4.3%	\$438,307	4.1%	\$458,031	4.5%	\$480,016	4.8%
Real Personal Income (millions of 1982-84 dollars)	\$182,036	\$192,516	5.8%	\$198,470	3.1%	\$203,134	2.4%	\$208,050	2.4%
Wages and Salaries (millions of dollars)	\$204,476	\$213,499	4.4%	\$222,253	4.1%	\$231,587	4.2%	\$241,314	4.2%
Detroit Consumer Price Index (1982-84 = 100)	221.784	218.706	-1.4%	220.843	1.0%	225.482	2.1%	230.722	2.3%

## Forecast Risks

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

**Weak Foreign Economies.** Europe's ongoing economic recovery has been slow and tenuous. In addition, Asian economies and financial markets (notably in China) have weakened considerably. U.S. financial markets (and the Fed) have grown more concerned about financial and economic weakness abroad. International geopolitical and military tensions have also heightened recently – along with concerns about those tensions' impact on the U.S. economy.

**Fiscal Policy.** Federal legislation enacted in late 2015 funds the U.S. government through the end of fiscal year 2016. The legislation was the product of substantial compromises across party lines and may indicate at least some lessening of divisions and partisanship. The lessening may improve the federal government's ability to address financial and macroeconomic issues. However, substantial uncertainty surrounds the outcome of the November 2016 Presidential and Congressional elections and the elections' impact on the federal government's ability to craft and implement legislation to address unexpected negative economic events.

**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 last year, oil prices and retail gasoline prices have fallen substantially. Over the forecast horizon, oil prices are projected to rise moderately. 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. Most recently, lower (higher) oil prices have had a negative (positive) impact on the economy and financial markets. Lower oil prices have increased household discretionary income and consumer sentiment, but in general have not boosted consumer spending. To the extent to which oil prices' impact on consumers operates with a longer lag, the overall economy will be weaker than forecast and conversely.

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 2015, the Fed lowered the federal funds rate by 0.25 of a percentage point. The Fed's recent action removes the uncertainty that had surrounded when the Fed would begin to raise interest rates. However, since December 2015, the Fed has not increased the federal funds rate further. Especially given that the Fed has indicated that its future actions will be highly data dependent -- 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, risk. 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.

**Housing Market.** Projected 2018 starts are nearly 50 percent higher than 2014 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 2018 starts total 1.5 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. Substantial uncertainty surrounds the recession’s negative impact on consumer and investor sentiment.

**Light Vehicle Sales.** According to the forecast, light vehicle sales will see their three highest annual sales levels in history in 2016, 2017 and 2018. 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. On the other hand, as a share of the vehicle buyer population, projected light vehicle sales appear to be at reasonable levels.

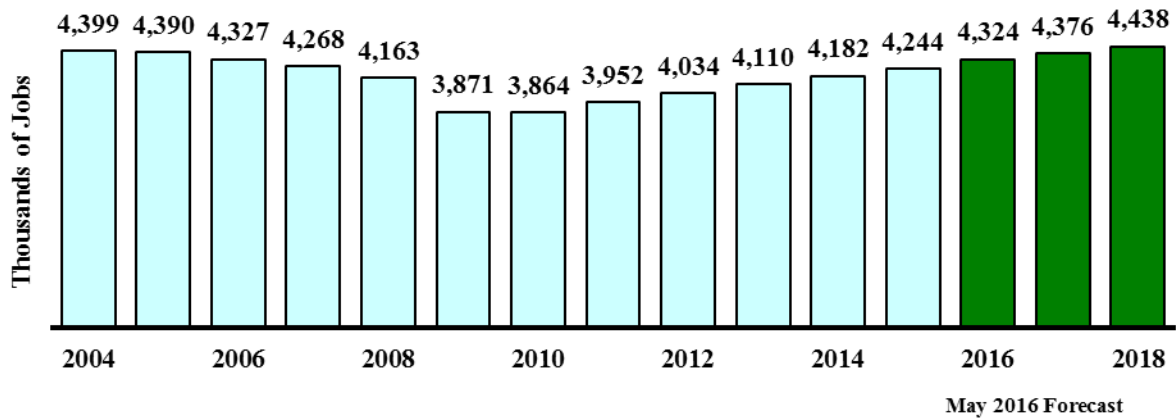
## **2016, 2017 and 2018 Michigan Economic Outlook**

Following ten straight annual declines between 2001 and 2010, inclusive, Michigan wage and salary employment reported its fifth straight annual employment increase in 2015. In 2015, Michigan employment increased 1.5 percent. State employment is forecast to grow in each of the next three years: 1.9 percent in 2016, 1.8 percent in 2017 and 1.5 percent in 2018. At 4.4 million jobs, the forecasted Michigan employment level in 2018 would represent the State’s highest employment level since 2002. However, forecasted 2018 Michigan employment would remain 238,200 jobs (5.1 percent) below the State’s peak annual employment set in 2000 (4.7 million jobs).

In 2015, private non-manufacturing employment rose 47,700 jobs. Private non-manufacturing employment is forecast to gain a net 66,100 jobs in 2016, 55,000 jobs in 2017 and 63,100 jobs in 2018.

In 2015, State manufacturing employment rose 2.7 percent. Michigan manufacturing employment growth is forecast to slow substantially in 2016 to 1.6 percent. State manufacturing employment is then projected to essentially remain flat in 2017 and 2018. Consequently, manufacturing employment is projected to rise only a net 4,000 jobs between 2015 and 2018.

### Michigan Wage and Salary Employment Continues to Rise



Source: Michigan Department of Labor and Economic Growth, U.S. Bureau of Labor Statistics, and May 2016 Administration Forecast.

Michigan transportation equipment employment increased 4.3 percent in 2015. The sector’s employment is not expected to grow in either 2016 or 2017. In 2018, transportation equipment employment is forecast to rise 1.5 percent. Forecasted 2018 transportation equipment employment of 175,900 jobs remains down 47.5 percent from the sector’s CY 2000 employment of 335,300 jobs.

The Michigan unemployment rate dropped substantially to 5.4 percent in 2015 from 7.3 percent in 2014. The State’s rate is expected to continue to decline modestly across the forecast horizon -- falling to 4.8 percent in 2016, 4.6 percent in 2017 and 4.5 percent in 2018.

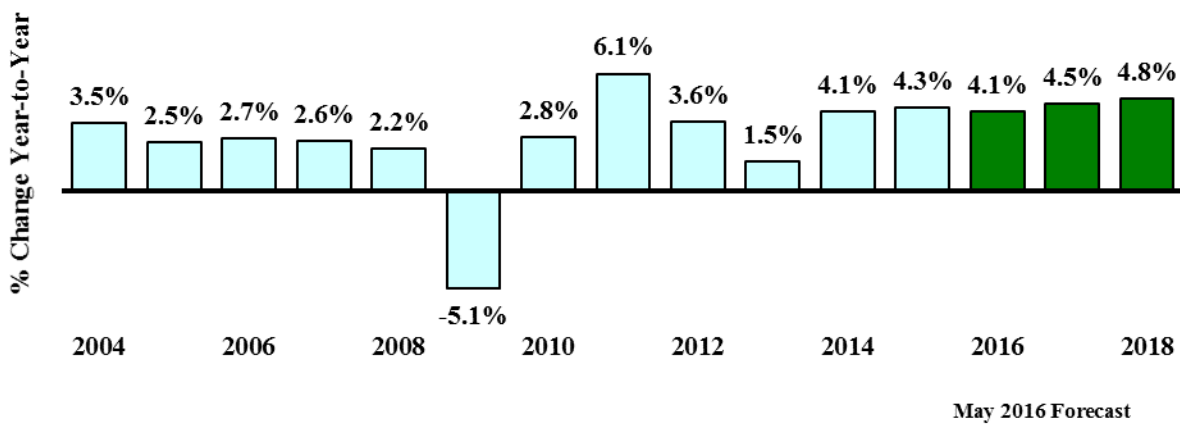
In 2015, wages and salaries rose 4.4 percent. Wages and salaries are forecast to rise each year of the forecast with increases of 4.1 percent in 2016, 4.2 percent in 2017 and 4.2 percent in 2018.

In 2015, Michigan personal income rose 4.3 percent. State personal income is forecast to rise 4.1 percent in 2016, 4.5 percent in 2017 and 4.8 percent in 2018.

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 is forecast to rise each year over the forecast with increases of 1.0 percent in 2016, 2.1 percent in 2017 and 2.3 percent in 2018.

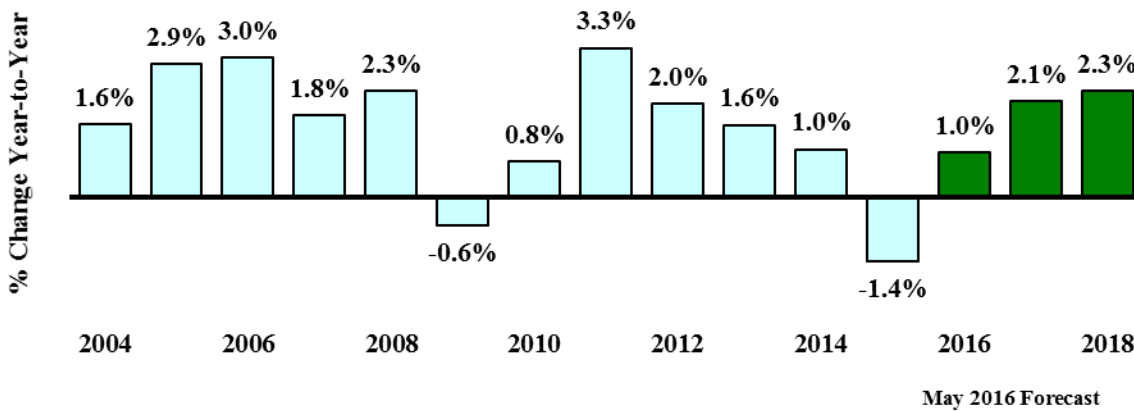
With a 1.4 percent decline in the Detroit CPI, real (inflation adjusted) Michigan personal income growth accelerated from 3.0 percent in 2014 to 5.8 percent in 2015 – the largest annual percent increase in real Michigan personal income since 1984. Real Michigan personal income growth is forecast to slow to 3.1 percent in 2016, 2.4 percent in 2017 and 2.4 percent in 2018.

### Michigan Personal Income Reports Solid Growth



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, May 2016.

### After 2015 Decline, Overall Price Level Rises in 2016, 2017 and 2018 Detroit CPI



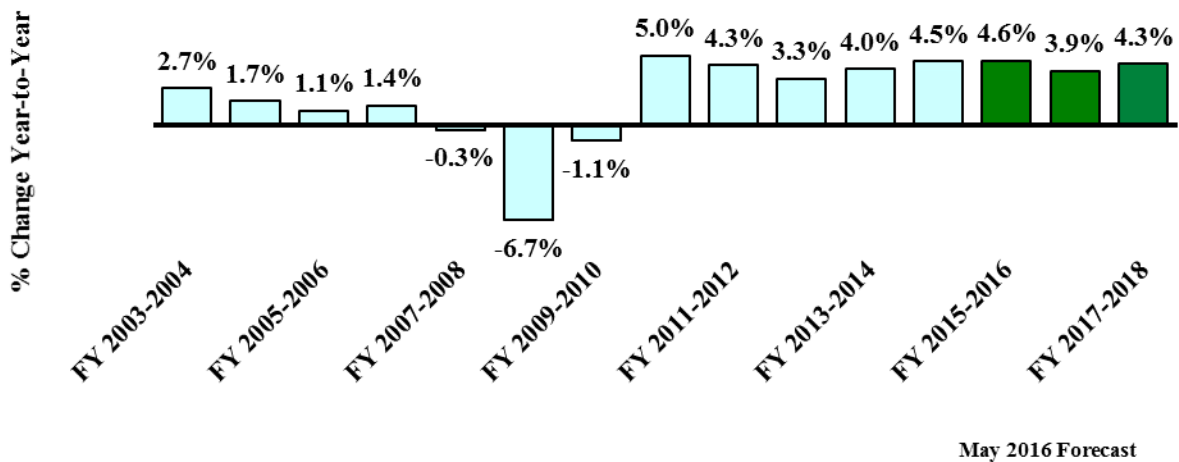
Source: U.S. Bureau of Labor Statistics and Administration Forecast, May 2016.

## Fiscal Year Economics

Michigan's largest taxes are the individual income tax (\$10.7 billion in FY 2015) and sales and use taxes (\$8.7 billion). Income tax withholding is the largest income tax component of the income tax. Withholding (\$8.7 billion) is most affected by growth in wages and salaries. Michigan wages and salaries rose 3.3 percent in FY 2013, increased 4.0 percent in FY 2014 and rose 4.5 percent in FY 2015. State wages and salaries are forecast to increase 4.6 percent in FY 2016, 3.9 percent in FY 2017 and 4.3 percent in FY 2018.

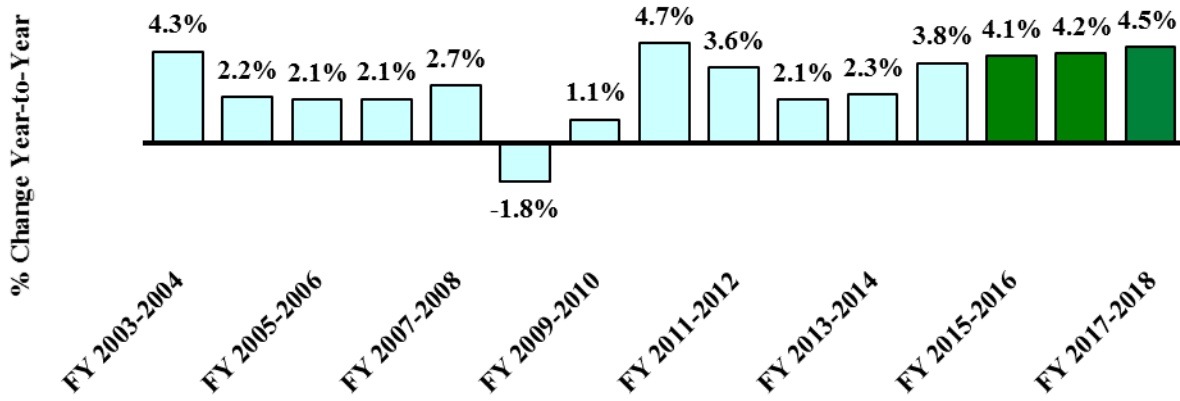
Sales and use taxes depend primarily on Michigan disposable (after tax) income and inflation. Having risen 2.1 percent in fiscal year 2013, disposable income increased 2.3 percent in FY 2014 and rose 3.8 percent in FY 2015. Disposable income is projected to increase 4.1 percent in FY 2016, 4.2 percent in FY 2017 and 4.5 percent in FY 2018. Prices, as measured by the Detroit CPI, rose 1.9 percent in FY 2013 and then increased 1.1 percent in FY 2014. However, the Detroit CPI fell 1.1 percent in FY 2015. The Detroit CPI is forecast to rise 0.5 percent in FY 2016, to increase 1.9 percent in FY 2017 and to rise 2.2 percent in FY 2018.

### **Michigan Wages and Salaries Rise Throughout Forecast Basis for Income Tax Withholding Collections**



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, May 2016.

## Michigan Disposable Income Increases Basis for Sales and Use Tax Collections



May 2016 Forecast

Source: Research Seminar in Quantitative Economics, University of Michigan, and Administration Forecast, May 2016.



## **ADMINISTRATION REVENUE ESTIMATES**

**May 17, 2016**

### **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 2015 is the base year. Any non-economic changes to the taxes occurring in FY 2016, FY 2017 and FY 2018 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 2016 Revenue Outlook**

FY 2016 GF-GP revenue is estimated to be \$9,791.2 million, a 2.4 percent decrease compared to FY 2015. The FY 2016 GF-GP revenue estimate is \$52.6 million below the January 2016 Consensus estimate. SAF revenue is forecast to be \$12,062.3 million; representing a 2.7 percent increase compared to FY 2015. The FY 2016 SAF estimate is \$69.3 million below the January 2016 Consensus estimate (see Table 2).

**Table 2**  
**FY 2015-16 Administration Revenue Estimates**  
(millions)

	<b>Consensus</b>		<b>Administration</b>		<b>Change</b>
	<b>January 14, 2016</b>		<b>May 17, 2016</b>		
	<b>Amount</b>	<b>Growth</b>	<b>Amount</b>	<b>Growth</b>	
<b>General Fund - General Purpose</b>					
Baseline Revenue	\$10,985.5	3.0%	\$10,941.1	2.6%	-----
Tax Cut Adjustments	(\$1,141.8)	-----	(\$1,150.0)		-----
Net Resources	<u>\$9,843.8</u>	<u>-1.9%</u>	<u>\$9,791.2</u>	<u>-2.4%</u>	<u>(\$52.6)</u>
<b>School Aid Fund</b>					
Baseline Revenue	\$12,123.7	2.9%	\$12,054.4	2.3%	-----
Tax Cut Adjustments	\$7.9	-----	\$7.9		-----
Net Resources	<u>\$12,131.6</u>	<u>3.3%</u>	<u>\$12,062.3</u>	<u>2.7%</u>	<u>(\$69.3)</u>
<b>Combined</b>					
Baseline Revenue	\$23,109.2	3.0%	\$22,995.5	2.5%	-----
Tax Cut Adjustments	(\$1,133.9)	-----	(\$1,142.1)		-----
Net Resources	<u>\$21,975.4</u>	<u>0.9%</u>	<u>\$21,853.5</u>	<u>0.3%</u>	<u>(\$121.9)</u>

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

## **FY 2017 Revenue Outlook**

FY 2017 GF-GP revenue is estimated to be \$10,267.5 million, a 4.9 percent increase compared to FY 2016. The FY 2017 GF-GP revenue estimate is \$53.6 million above the January 2016 Consensus estimate. SAF revenue is forecast to be \$12,410.8 million; representing a 2.9 percent increase compared to FY 2016. The FY 2017 SAF estimate is \$75.3 million below the January 2016 Consensus estimate (see Table 3).

**Table 3**  
**FY 2016-17 Administration Revenue Estimates**  
(millions)

	<b>Consensus</b>		<b>Administration</b>		<b>Change</b>
	<b>January 14, 2016</b>		<b>May 17, 2016</b>		
	<b>Amount</b>	<b>Growth</b>	<b>Amount</b>	<b>Growth</b>	
<b>General Fund - General Purpose</b>					
Baseline Revenue	\$11,336.5	3.2%	\$11,387.5	4.1%	-----
Tax Cut Adjustments	(\$1,122.6)	-----	(\$1,120.0)		-----
Net Resources	<u>\$10,213.9</u>	<u>3.8%</u>	<u>\$10,267.5</u>	<u>4.9%</u>	<u>\$53.6</u>
<b>School Aid Fund</b>					
Baseline Revenue	\$12,468.7	2.8%	\$12,393.3	2.8%	-----
Tax Cut Adjustments	\$17.5	-----	\$17.5		-----
Net Resources	<u>\$12,486.2</u>	<u>2.9%</u>	<u>\$12,410.8</u>	<u>2.9%</u>	<u>(\$75.3)</u>
<b>Combined</b>					
Baseline Revenue	\$23,805.1	3.0%	\$23,780.8	3.4%	-----
Tax Cut Adjustments	(\$1,105.1)	-----	(\$1,102.5)		-----
Net Resources	<u>\$22,700.0</u>	<u>3.3%</u>	<u>\$22,678.3</u>	<u>3.8%</u>	<u>(\$21.7)</u>

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 \$10,797.1 million, a 5.2 percent increase compared to FY 2017. The FY 2018 GF-GP revenue estimate is \$197.7 million above the January 2016 Consensus estimate. SAF revenue is forecast to be \$12,808.2 million; representing a 3.2 percent increase compared to FY 2017. The FY 2018 SAF estimate is \$22.8 million below the January 2016 Consensus estimate (see Table 4).

**Table 4**  
**FY 2017-18 Administration Revenue Estimates**  
(millions)

	Consensus January 14, 2016		Administration May 17, 2016		Change
	Amount	Growth	Amount	Growth	
General Fund - General Purpose					
Baseline Revenue	\$11,680.8	3.0%	\$11,876.1	4.3%	-----
Tax Cut Adjustments	(\$1,081.4)	-----	(\$1,079.0)		-----
Net Resources	\$10,599.3	3.8%	\$10,797.1	5.2%	\$197.7
School Aid Fund					
Baseline Revenue	\$12,826.9	2.9%	\$12,804.1	3.3%	-----
Tax Cut Adjustments	\$4.2	-----	\$4.2		-----
Net Resources	\$12,831.1	2.8%	\$12,808.2	3.2%	(\$22.8)
Combined					
Baseline Revenue	\$24,507.7	3.0%	\$24,680.2	3.8%	-----
Tax Cut Adjustments	(\$1,077.3)	-----	(\$1,074.9)		-----
Net Resources	\$23,430.4	3.2%	\$23,605.3	4.1%	\$174.9

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 2014 revenues were \$8.5 billion below the revenue limit. State revenues will also be well below the limit for FY 2015 through FY 2018. FY 2015 revenues are expected to be \$7.8 billion below the limit, FY 2016 revenues \$9.3 billion below the limit, FY 2017 revenues \$9.7 billion below the limit, and FY 2018 revenues \$9.9 billion below the limit (See Table 5).

**Table 5**  
**Administration Revenue Limit Calculation**  
(millions)

	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
	<u>Final</u>	<u>Admin</u>	<u>Admin</u>	<u>Admin</u>	<u>Admin</u>
	<u>June 2014</u>	<u>May 2016</u>	<u>May 2016</u>	<u>May 2016</u>	<u>May 2016</u>
<b>Revenue Subject to Limit</b>	\$27,432.5	\$28,844.3	\$29,058.6	\$30,223.6	\$31,684.2
<b>Revenue Limit</b>	<u>CY 2012</u>	<u>CY 2013</u>	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>
Personal Income	\$378,443	\$386,471	\$403,726	\$420,279	\$438,233
Ratio	9.49%	9.49%	9.49%	9.49%	9.49%
Revenue Limit	\$35,914.2	\$36,676.1	\$38,313.6	\$39,884.5	\$41,588.3
<b><u>Amount Under (Over) Limit</u></b>	<b>\$8,481.7</b>	<b>\$7,831.8</b>	<b>\$9,255.0</b>	<b>\$9,660.9</b>	<b>\$9,904.1</b>

## **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 4.7 percent in 2015. Thus, the formula has a pay-in for FY 2016 of \$270.9 million (See Table 6). In 2016, real calendar year personal income for Michigan is forecast to increase 4.0 percent, so the formula calls for a pay-in of \$195.8 million for FY 2017 (See Table 7). In 2017, real calendar year personal income for Michigan is forecast to increase 2.7 percent, so the formula calls for a pay-in of \$71.9 million in FY 2017 (See Table 8). Based on the personal income numbers, there is no pay-out in FY 2018 (See Table 9).

**Table 6**  
**Budget and Economic Stabilization Fund Calculation**  
**Based on CY 2015 Personal Income Growth**  
**Administration Calculation**

	CY 2014	CY 2015
Michigan Personal Income	\$ 403,726 <sup>(1)</sup>	\$ 421,044 <sup>(1)</sup>
less Transfer Payments	\$ 86,899 <sup>(1)</sup>	\$ 91,527 <sup>(1)</sup>
Income Net of Transfers	\$ 316,827	\$ 329,517
Detroit CPI	2.210 <sup>(2)</sup>	2.195 <sup>(2)</sup>
for 12 months ending	(June 2014)	(June 2015)
Real Adjusted Michigan Personal Income	\$ 143,336	\$ 150,122
Change in Real Adjusted Personal Income		4.7%
Excess over 2%		2.7%
GF-GP Revenue Fiscal Year 2014-2015		\$ 10,034.4
		<u>FY 2015-2016</u>
BSF Pay-In Calculated for FY 2016		\$ 270.9
		<u>FY 2014-2015</u>
BSF Pay-Out Calculated for FY 2015		NO PAY-OUT

Notes:

<sup>(1)</sup> Personal Income and Transfer Payments, Administration Forecast, May 2016.

<sup>(2)</sup> Detroit Consumer Price Index, Administration Forecast, May 2016.

**Table 7**  
**Budget and Economic Stabilization Fund Calculation**  
**Based on CY 2016 Personal Income Growth**  
**Administration Calculation**

	CY 2015	CY 2016
Michigan Personal Income	\$ 421,044 <sup>(1)</sup>	\$ 438,233 <sup>(1)</sup>
less Transfer Payments	<u>\$ 91,527 <sup>(1)</sup></u>	<u>\$ 95,981 <sup>(1)</sup></u>
Income Net of Transfers	\$ 329,517	\$ 342,253
Detroit CPI	2.195 <sup>(2)</sup>	2.193 <sup>(2)</sup>
for 12 months ending	(June 2015)	(June 2016)
Real Adjusted Michigan Personal Income	\$ 150,122	\$ 156,080
Change in Real Adjusted Personal Income		4.0%
Excess over 2%		2.0%
GF-GP Revenue Fiscal Year 2015-2016		\$ 9,791.2
		<u>FY 2016-2017</u>
BSF Pay-In Calculated for FY 2017		\$ 195.8
		<u>FY 2015-2016</u>
BSF Pay-Out Calculated for FY 2016		NO PAY-OUT

Notes:

<sup>(1)</sup> Personal Income and Transfer Payments, Administration Forecast, May 2016.

<sup>(2)</sup> Detroit Consumer Price Index, Administration Forecast, May 2016.

**Table 8**  
**Budget and Economic Stabilization Fund Calculation**  
**Based on CY 2017 Personal Income Growth**  
**Administration Calculation**

	CY 2016	CY 2017
Michigan Personal Income	\$ 438,233 <sup>(1)</sup>	\$ 458,030 <sup>(1)</sup>
less Transfer Payments	<u>\$ 95,981 <sup>(1)</sup></u>	<u>\$ 100,922 <sup>(1)</sup></u>
Income Net of Transfers	\$ 342,253	\$ 357,108
Detroit CPI	2.193 <sup>(2)</sup>	2.227 <sup>(2)</sup>
for 12 months ending	(June 2016)	(June 2017)
Real Adjusted Michigan Personal Income	\$ 156,080	\$ 160,353
Change in Real Adjusted Personal Income		2.7%
Excess over 2%		0.7%
GF-GP Revenue Fiscal Year 2016-2017		\$ 10,267.5
		<u>FY 2017-2018</u>
BSF Pay-In Calculated for FY 2018		\$ 71.9
		<u>FY 2016-2017</u>
BSF Pay-Out Calculated for FY 2017		NO PAY-OUT

Notes:

<sup>(1)</sup> Personal Income and Transfer Payments, Administration Forecast, May 2016.

<sup>(2)</sup> Detroit Consumer Price Index, Administration Forecast, May 2016.



**Table 9**  
**Budget and Economic Stabilization Fund Calculation**  
**Based on CY 2018 Personal Income Growth**  
**Administration Calculation**

	CY 2017	CY 2018
Michigan Personal Income	\$ 458,030 <sup>(1)</sup>	\$ 479,833 <sup>(1)</sup>
less Transfer Payments	<u>\$ 100,922 <sup>(1)</sup></u>	<u>\$ 106,495 <sup>(1)</sup></u>
Income Net of Transfers	\$ 357,108	\$ 373,338
Detroit CPI	2.227 <sup>(2)</sup>	2.275 <sup>(2)</sup>
for 12 months ending	(June 2017)	(June 2018)
Real Adjusted Michigan Personal Income	\$ 160,353	\$ 164,080
Change in Real Adjusted Personal Income		2.3%
Excess over 2%		0.3%
GF-GP Revenue Fiscal Year 2017-2018		\$ 10,797.1
BSF Pay-Out Calculated for FY 2018		FY 2017-2018 NO PAY-OUT

Notes:

<sup>(1)</sup> Personal Income and Transfer Payments, Administration Forecast, May 2016.

<sup>(2)</sup> Detroit Consumer Price Index, Administration Forecast, May 2016.

**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 2015 SAF revenue adjustment factor is calculated by dividing the sum of FY 2014 and FY 2015 SAF revenue by the sum of FY 2013 and FY 2014 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 2017, the SAF revenue adjustment factor is calculated to be 1.0257 (See Table 10). For FY 2018, the SAF revenue adjustment factor is calculated to be 1.0307 (See Table 11).

**Table 10**  
**Administration School Aid Revenue Adjustment Factor**  
**For Fiscal Year 2017**

	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>
Baseline SAF Revenue	\$11,780.9	\$12,054.4	\$12,393.3
Balance Sheet Adjustments	(\$33.8)	\$7.9	\$17.5
Net SAF Estimates	<u>\$11,747.1</u>	<u>\$12,062.3</u>	<u>\$12,410.8</u>
Subtotal Adjustments to FY 2017 Base	<u>\$51.3</u>	<u>\$9.6</u>	<u>\$0.0</u>
Baseline Revenue on a FY 2017 Base	\$11,798.4	\$12,071.9	\$12,410.8
<u>School Aid Fund Revenue Adjustment Calculation for FY 2017</u>			
Sum of FY 2015 & FY 2016	\$11,798.4	+ \$12,071.9	= \$23,870.3
Sum of FY 2016 & FY 2017	\$12,071.9	+ \$12,410.8	= \$24,482.7

<b>FY 2017 Revenue Adjustment Factor</b>	<b>1.0257</b>
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Note: Factor is calculated off a FY 2017 base year.

**Table 11**  
**Administration School Aid Revenue Adjustment Factor**  
**For Fiscal Year 2018**

	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Baseline SAF Revenue	\$12,054.4	\$12,393.3	\$12,804.1
Balance Sheet Adjustments	\$7.9	\$7.9	\$4.2
Net SAF Estimates	<u>\$12,062.3</u>	<u>\$12,401.2</u>	<u>\$12,808.2</u>
Subtotal Adjustments to FY 2018 Base	<u>(\$3.7)</u>	<u>(\$13.3)</u>	<u>\$0.0</u>
Baseline Revenue on a FY 2018 Base	\$12,058.6	\$12,387.9	\$12,808.2
<u>School Aid Fund Revenue Adjustment Calculation for FY 2018</u>			
Sum of FY 2016 & FY 2017	\$12,058.6	+ \$12,387.9	= \$24,446.5
Sum of FY 2017 & FY 2018	\$12,387.9	+ \$12,808.2	= \$25,196.2

<b>FY 2018 Revenue Adjustment Factor</b>	<b>1.0307</b>
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Note: Factor is calculated off a FY 2018 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 2016		FY 2017		FY 2018	
	Amount	Growth	Amount	Growth	Amount	Growth
<b>GF-GP Tax Amounts</b>						
Income Tax	\$6,758.7	4.6%	\$7,070.9	4.6%	\$7,382.7	4.4%
Sales	\$1,152.4	3.0%	\$1,183.5	2.7%	\$1,229.9	3.9%
Use	\$866.9	-9.5%	\$650.2	-25.0%	\$648.9	-0.2%
Cigarette	\$190.1	1.0%	\$189.0	-0.6%	\$187.7	-0.7%
Beer & Wine	\$52.0	11.3%	\$53.0	1.9%	\$54.0	1.9%
Liquor Specific	\$51.5	3.8%	\$52.9	2.7%	\$53.8	1.7%
Single Business Tax	(\$10.0)	NA	(\$5.0)	NA	\$0.0	NA
Insurance Co. Premium	\$310.0	-3.8%	\$312.0	0.6%	\$328.4	5.3%
CIT/MBT	(\$74.1)	-114.5%	\$257.9	-448.0%	\$409.4	58.7%
Telephone & Telegraph	\$42.0	0.5%	\$42.0	0.0%	\$41.0	-2.4%
Oil & Gas Severance	\$23.4	-23.0%	\$28.5	21.8%	\$33.5	17.5%
Essential Services Assess.	\$55.0	NA	\$69.0	25.5%	\$75.1	8.8%
GF-GP Other Taxes	(\$17.5)	24.6%	(\$13.5)	22.9%	(\$15.5)	-14.8%
<b>Total GF-GP Taxes</b>	<b>\$9,400.4</b>	<b>-2.4%</b>	<b>\$9,890.4</b>	<b>5.2%</b>	<b>\$10,428.9</b>	<b>5.4%</b>
<b>GF-GP Non-Tax Revenue</b>						
Federal Aid	\$35.0	-9.1%	\$35.0	0.0%	\$35.0	0.0%
From Local Agencies	\$0.1	0.0%	\$0.1	0.0%	\$0.1	0.0%
From Services	\$7.5	4.2%	\$7.5	0.0%	\$7.5	0.0%
From Licenses & Permits	\$11.5	0.0%	\$11.5	0.0%	\$11.5	0.0%
Miscellaneous	\$8.0	81.8%	\$8.0	0.0%	\$8.0	0.0%
Driver Responsibility Fees	\$69.2	-2.1%	\$52.5	-24.1%	\$38.5	-26.7%
Interfund Interest	(\$1.0)	-350.0%	(\$3.0)	200.0%	(\$4.0)	33.3%
Liquor Purchase	\$196.0	0.7%	\$201.0	2.6%	\$207.0	3.0%
Charitable Games	\$6.0	-6.3%	\$6.0	0.0%	\$6.0	0.0%
Transfer From Escheats	\$58.5	-8.9%	\$58.5	0.0%	\$58.5	0.0%
Other Non Tax	\$0.0	0.0%	\$0.0	0.0%	\$0.0	0.0%
<b>Total Non Tax</b>	<b>\$390.8</b>	<b>-1.8%</b>	<b>\$377.1</b>	<b>-3.5%</b>	<b>\$368.1</b>	<b>-2.4%</b>
<b>Total GF-GP Revenue</b>	<b>\$9,791.2</b>	<b>-2.4%</b>	<b>\$10,267.5</b>	<b>4.9%</b>	<b>\$10,797.1</b>	<b>5.2%</b>

**Table 13**  
**Administration School Aid Fund Revenue Detail**

	FY 2016		FY 2017		FY 2018	
	Amount	Growth	Amount	Growth	Amount	Growth
<b>School Aid Fund</b>						
Income Tax	\$2,663.7	5.7%	\$2,772.5	4.1%	\$2,887.1	4.1%
Sales Tax	\$5,304.1	0.7%	\$5,475.2	3.2%	\$5,672.7	3.6%
Use Tax	\$481.6	1.1%	\$515.6	7.0%	\$529.9	2.8%
Liquor Excise Tax	\$51.1	4.1%	\$52.5	2.7%	\$53.4	1.7%
Cigarette & Tobacco	\$364.4	0.2%	\$361.2	-0.9%	\$357.4	-1.0%
State Education Tax	\$1,890.1	1.7%	\$1,935.8	2.4%	\$1,994.4	3.0%
Real Estate Transfer	\$275.0	6.4%	\$286.7	4.3%	\$298.4	4.1%
Industrial Facilities Tax	\$36.0	3.7%	\$37.0	2.8%	\$38.0	2.7%
Casino (45% of 18%)	\$112.0	1.1%	\$113.0	0.9%	\$114.5	1.3%
Commercial Forest	\$3.3	6.5%	\$3.3	0.0%	\$3.3	0.0%
Other Spec Taxes	\$26.0	7.4%	\$26.0	0.0%	\$26.5	1.9%
<b>Subtotal Taxes</b>	\$11,207.3	2.2%	\$11,578.7	3.3%	\$11,975.5	3.4%
Lottery Transfer	\$855.0	9.0%	\$832.1	-2.7%	\$832.7	0.1%
<b>Total SAF Revenue</b>	\$12,062.3	2.7%	\$12,410.8	2.9%	\$12,808.2	3.2%

**Table 14**  
**Administration Major Tax Totals**

	FY 2016		FY 2017		FY 2018	
	Amount	Growth	Amount	Growth	Amount	Growth
<b>Major Tax Totals (Includes all Funds)</b>						
Income Tax	\$9,423.2	4.9%	\$9,844.2	4.5%	\$10,270.6	4.3%
Sales Tax	\$7,291.0	0.6%	\$7,524.7	3.2%	\$7,794.6	3.6%
Use Tax	\$1,348.5	-6.0%	\$1,165.8	-13.5%	\$1,178.8	1.1%
CIT/MBT	(\$74.1)	-116.8%	\$257.9	448.0%	\$409.4	58.7%
Cigarette and Tobacco	\$963.7	1.1%	\$958.0	-0.6%	\$951.0	-0.7%
Casino Tax	\$112.0	1.6%	\$113.0	0.9%	\$114.5	1.3%