

# Economic and Revenue Outlook

**FY 2021-22, FY 2022-23 and FY 2023-24**

Michigan Department of Treasury



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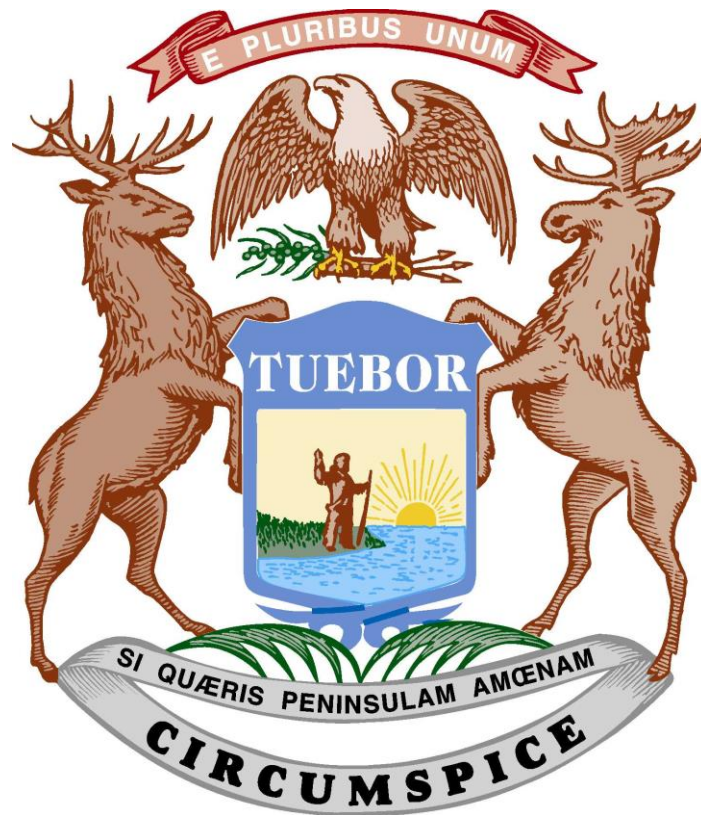
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**January 14, 2022**

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## Acknowledgements

The Economic and Revenue Outlook was prepared by Eric Bussis, Director of the Office and Revenue and Tax Analysis (ORTA), Andrew Lockwood, Melissa Gibson and Thomas Patchak-Schuster of ORTA. ORTA economists Scott Darragh, Denise Heidt, and Eric Krupka contributed to the estimates contained in the report.

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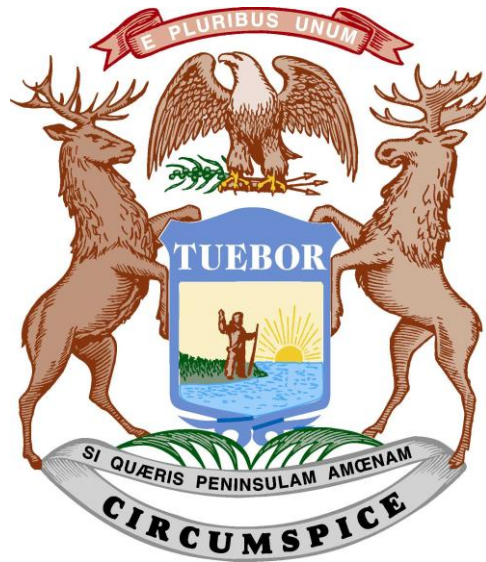
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# SECTION I

## Administration Estimates Executive Summary

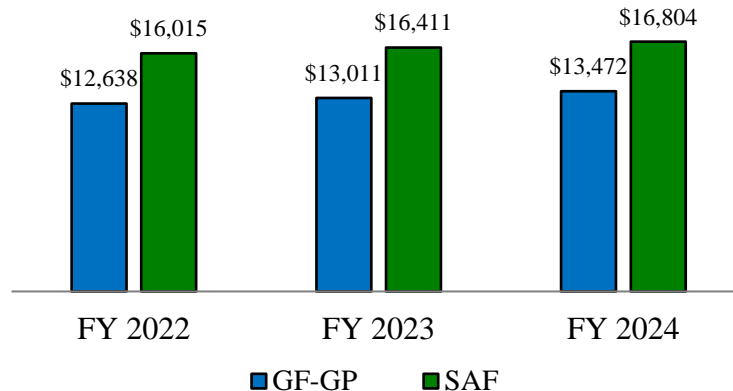


**Administration Estimates  
Executive Summary  
January 14, 2022**

**Revenue Review and Outlook**

- FY 2021 GF-GP preliminary revenue increased 20.3 percent to \$12,950.7 million, up \$1,673.9 million from the May 2021 Consensus estimate. FY 2021 SAF preliminary revenue increased 14.9 percent to \$16,050.3 million, up \$1,017.9 million from the May 2021 Consensus estimate.
- FY 2022 GF-GP revenue is forecast to decrease 2.4 percent to \$12,637.7 million, up \$964.5 million from the May 2021 Consensus estimate. FY 2022 SAF revenue is forecast to decrease 0.2 percent to \$16,015.2 million, up \$884.2 million from the May 2021 Consensus estimate.
- FY 2023 GF-GP revenue is forecast to increase 3.0 percent to \$13,011.0 million, up \$740.3 million from the May 2021 Consensus estimate. FY 2023 SAF revenue is forecast to increase 2.5 percent to \$16,411.2 million, up \$983.6 million from the May 2021 Consensus estimate.
- FY 2024 GF-GP revenue is forecast to increase 3.5 percent to \$13,471.8 million. FY 2024 SAF revenue is forecast to increase 2.4 percent to \$16,803.6.

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



## **Economic Outlook**

- Real GDP rose 5.4 percent in 2021. Economic growth will remain moderate with real GDP forecast to rise 3.9 percent in 2022, 2.9 percent in 2023 and 2.3 percent in 2024.
- U.S. employment rose 2.8 percent in 2021, and is forecasted to increase 3.4 percent in 2022, 1.8 percent in 2023 and 1.1 percent in 2024.
- The national unemployment rate dropped from 8.1 percent in 2020 to 5.3 percent in 2021. The national labor market is expected to strengthen with the U.S. unemployment rate forecast to fall to 4.5 percent in 2022, 4.0 percent in 2023 and then rise slightly to 4.1 percent in 2023.
- Housing starts rose 15.0 percent in 2021. Starts are expected to rise 4.5 percent in 2022, increase 2.6 percent in 2023 and then decline 2.3 percent in 2024.
- In 2021, light vehicle sales rose slightly to 14.9 million units. With the current semiconductor shortage expected to ease in 2022, light vehicle sales are forecast to strengthen. Sales are expected to increase to 16.5 million units in 2022, 17.5 million units in 2023 and 17.7 million units in 2024.
- The U.S. CPI rose 4.7 percent in 2021. Inflation will remain high in 2021 but subsequently slow. The national CPI is forecast to increase 4.7 percent in 2022, 2.6 percent in 2023 and 2.4 percent in 2024.

## **Michigan Economic Outlook**

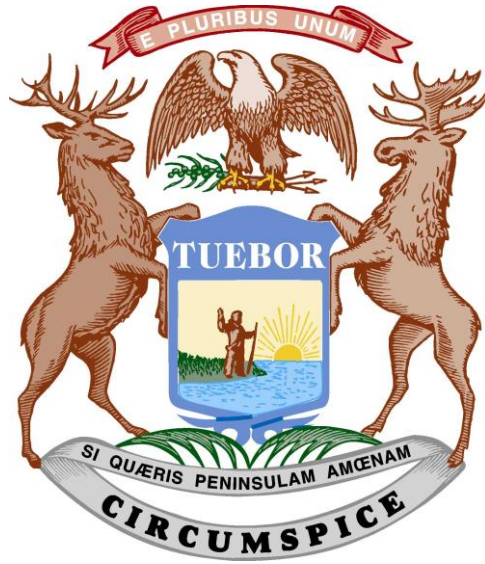
- In 2021, Michigan wage and salary employment rose 3.1 percent, State job growth will continue, although slowing in later years. Michigan employment is expected to increase 3.2 percent in 2022, 1.8 percent in 2023 and 1.3 percent in 2024.
- The Michigan unemployment rate fell from 9.9 percent in 2020 to 5.4 percent in 2021. The State labor market will tighten with the Michigan unemployment rate forecast to remain at 5.4 percent in 2022, but then fall to 4.6 percent in 2023 and 4.5 percent in 2024.
- Michigan wages and salaries rose 9.3 percent in 2021 and are forecast to increase 8.2 percent in 2022, 5.2 percent in 2023 and 3.8 percent in 2024.
- Michigan personal income increased 5.2 percent in 2021 and is forecast to rise 0.7 percent in 2022, increase 4.7 percent in 2023 and increase 4.1 percent in 2024.

## **Forecast Risks**

- The pandemic continues to evolve and emerging new variants may exacerbate current supply chain problems and labor shortages and lead to both higher inflation and slower economic growth than expected.
- Housing demand is anticipated to remain high over the next two to three years. However, the construction of new homes will be constrained by the price/availability of lumber and the availability of construction labor.
- Demand for new vehicles will be high this coming year, which could drive sales much higher than predicted. However, the semiconductor shortage has already limited vehicle production for several months and may continue to depress the number of vehicles for sale.
- Increases in inflation may be sharper and longer lasting than anticipated. Sharper and more sustained increases in inflation could spur the Fed to raise interest rates sooner and higher than expected and potentially cause a sharp economic slowdown.

## SECTION II

### Economic Review





## **Economic Review**

### **January 14, 2022**

### **Current U.S. Economic Situation**

#### Pre-Pandemic Recent History

In order to place recent economic activity in perspective, it is helpful to review where the U.S. and Michigan economies stood prior to the COVID-19 pandemic and the ensuing recession in 2020. Prior to the pandemic, the U.S. economy had reported modest but steady growth over a lengthy expansion:

- The U.S. experienced 10 straight years of economic growth, ending in 2019.
- U.S. employment increased for the ninth straight year, increasing 1.3 percent in 2019.
- The U.S. unemployment rate fell for the 9<sup>th</sup> straight year to 3.7 percent in 2019 – the lowest annual unemployment rate in 50 years. Between September 2019 and February 2020, the monthly unemployment rate ranged narrowly between 3.5 percent and 3.6 percent.
- While falling slightly from 2018, light vehicle sales remained close to 17.0 million in 2019.
- Since falling to an all-time low in 2009, housing starts rose each year through 2019. Starts rose to 1.29 million units in 2019, up 3.2 percent from 2018.

#### COVID-19 Economic Impact

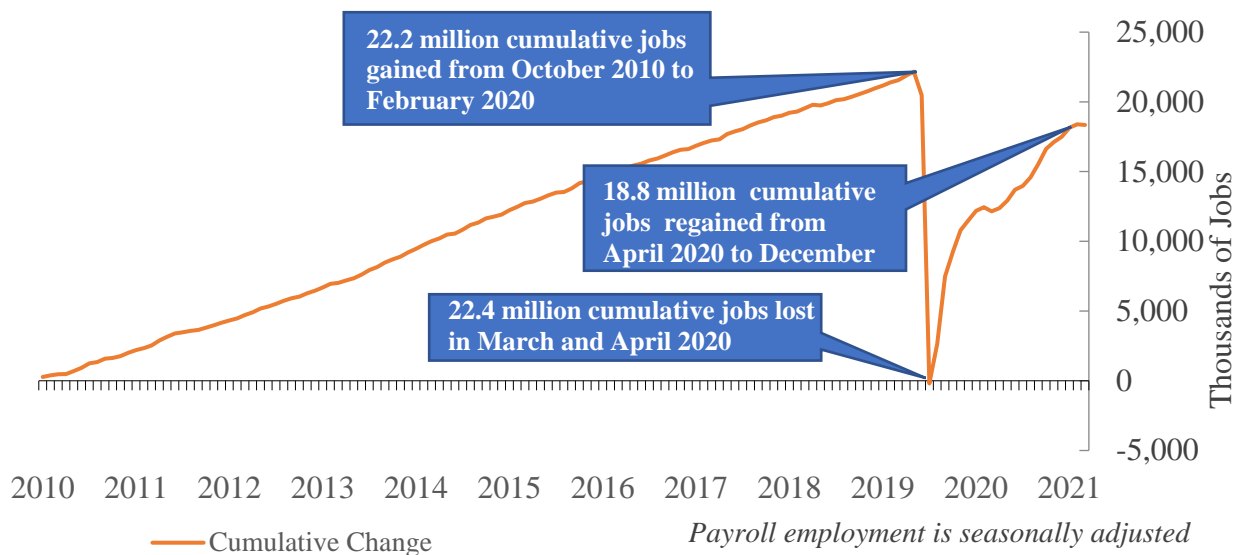
In the first quarter of 2020, the COVID-19 pandemic began to take hold in the U.S. As a result of COVID-19 and measures to contain the virus, the U.S. economy stalled with real GDP declining at a 5.1 percent annual rate in the first quarter of 2020 and plummeting in the second quarter at a record 31.2 percent annual rate. The economy rebounded in the third quarter with real GDP growing at a record 33.8 percent annual rate, followed by an annual growth of 4.5 percent in the fourth quarter. Overall, for calendar year 2020, annual real GDP declined 3.4 percent from 2019. Real GDP posted historically strong growth in the first two quarters of 2021, growing at a 6.3 percent annual rate in 2021Q1 and 6.7 percent annual rate in 2021Q2. Largely due to supply constraints, growth slowed markedly in 2021Q3 to a 2.3 percent annual rate. In 2021Q3, the level of real GDP stood 1.4 percent above its pre-pandemic 2019Q4 level.

After rising in 112 of 113 months and gaining a cumulative 22.2 million jobs, U.S. employment fell by 1.7 million jobs in March 2020 and then plummeted a record 20.7 million jobs in April. Wage and salary employment rose each month from May through November, regaining slightly more than half of the 22.4 million jobs lost in March and April. After declining by 306,000 jobs in December, wage and salary employment stood 10.0 million jobs below its February 2020 pre-pandemic level.

Over the first three months of 2021, employment rose at an accelerating pace, gaining 233,000 jobs in January, 536,000 jobs in February, and 785,000 jobs in March. Gains slowed in April to 266,000 jobs before accelerating over the following three months with gains of 614,000 jobs in May, 962,000 jobs in June and 1.1 million jobs in July. Gains slowed to 483,000 jobs in August and to

379,000 jobs in September. In October, gains accelerated to 648,000 jobs, but then slowed to 249,000 jobs added in November and 199,000 jobs added in December. Over the twelve months of 2021, the economy gained 6.5 million jobs. Added to the net 12.3 million jobs gain between May 2020 and December 2020, the economy has recovered a net 18.8 million jobs since May 2020, but remains 3.6 million jobs (2.3 percent) below February 2020 levels, prior to pandemic.

### Cumulative Change in U.S. Payroll Employment



Source: Bureau of Labor Statistics.

With the massive job losses in March and April of 2020, the unemployment rate rose sharply from 3.5 percent in February to a record high 14.7 percent in April. However, with the partial employment recovery, the unemployment rate fell each month between May and November and remained flat in December at a 6.7 percent unemployment rate.

The unemployment rate fell slightly over the first three months of 2021 dropping to 6.0 percent in March, where it remained in April. The rate fell to 5.8 percent in May and rose slightly to 5.9 percent in June. The unemployment rate then dropped in each of the following six months. In December, the rate fell to 3.9 percent – 10.8 percentage points below the April 2020 peak and only 0.4 percentage points above the February 2020 pre-pandemic rate.

The pandemic and its economic impact greatly affected consumer sentiment. In March and April of 2020, University of Michigan index of consumer sentiment fell a combined 29.2 points to its lowest level in almost nine years. As of April 2021, consumer sentiment had recovered a little more than half of the ground it lost early in the pandemic and stood 12.7 points below the index’s February 2020 reading. However, consumer sentiment has lost ground in several of the most recent months. Consequently, in November, concerns about rapidly rising inflation drove the index to a new pandemic low – 33.6 points below its pre-pandemic February 2020 level. Sentiment rebounded modestly in December – rising 3.2 points.

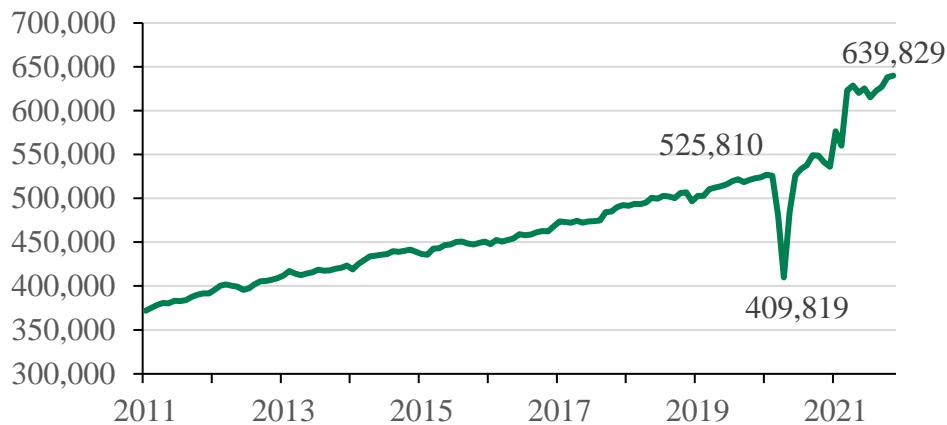
## Index of Consumer Sentiment U of M Consumer Survey



Source: University of Michigan Survey Research Center

Retail sales fell 5.9 percent in March 2020 year-over-year (y-o-y) and then plummeted a record 20.0 percent y-o-y in April. However, since June, sales have been up compared to a year earlier – in large part because of stepped-up government assistance programs combined with pent-up demand. Between June 2020 and February 2021, y-o-y changes in retail sales ranged from 2.0 percent to 9.4 percent. A year after the start of the pandemic, the one-month change better shows how retail sales are currently affected. In March 2021, the one-month change in retail sales was 11.3 percent. Over the next four months (April-July), the one-month change alternated between increases near 1.0 percent and decreases around 1.5 percent. In each of the following three months (August-October), retail sales rose from the prior month with increases ranging between 0.7 percent and 1.8 percent. Most recently, retail sales rose modestly (0.3 percent) in November.

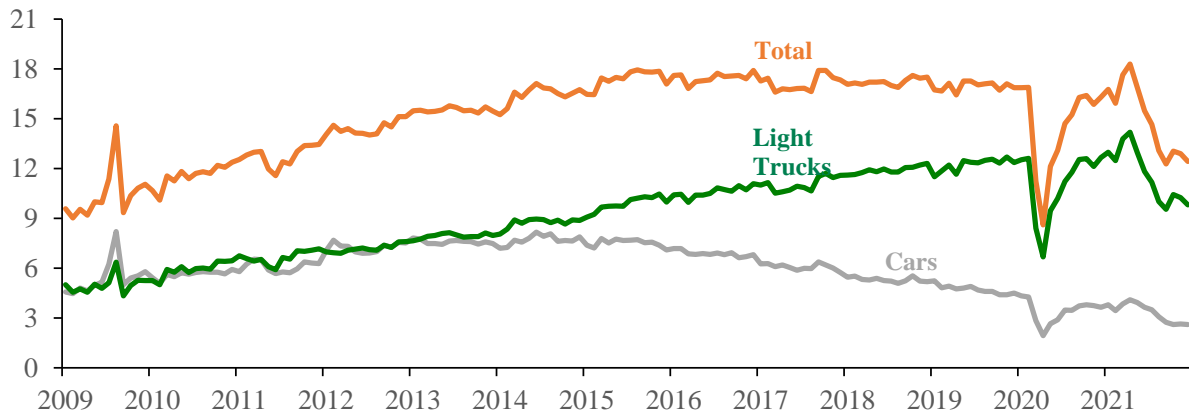
## Retail Sales Decline and Recover Sharply Annual Sales Rate, Millions of Dollars



Source: U.S. Census Bureau.

Light vehicle sales dropped sharply in March and April 2020, with annualized sales plummeting from 16.9 million units in February to 8.6 million units in April – a near 50-year low. Annualized light vehicle sales rose each month between May and October – rising to 16.4 million units by October. Light vehicle sales fell modestly in November but rose in each of the next two months – rising to 16.8 million units in January 2021. After falling in February, sales jumped up sharply in March and rose to 18.3 million units in April – the highest monthly sales rate in over 15 years. However, largely due to supply constraints, sales fell in each of the following five months – dropping to a 12.3 million unit annual rate in September. In October, sales rose modestly to a 13.1 million unit rate, before falling in November and December.

### Light Vehicle Sales Sag After Rebounding Seasonally Adjusted Annualized Rate (millions)



Source: Bureau of Economic Analysis

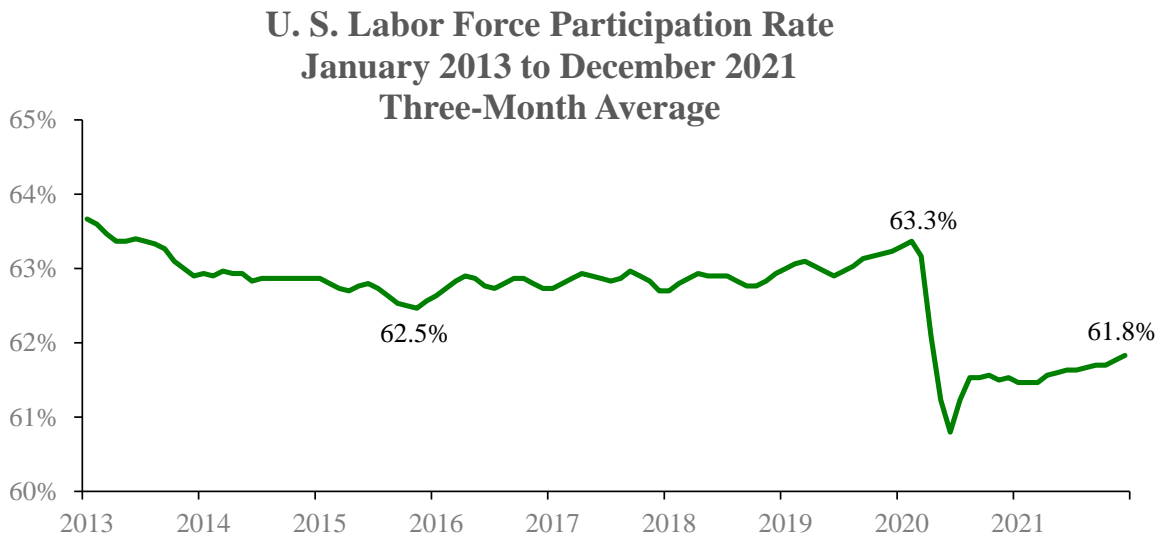
In April 2020, motor vehicle production came to a standstill because of the ongoing pandemic. Production partially restarted in May, picked up significantly in June and rose further in July and August, but declined in September and rose and fell through December. All told, national production dropped 17.7 percent in calendar year 2020. In 2021Q1, U.S. vehicle production was down 2.1 y-o-y. Between 2020Q2 (the onset of the pandemic) and 2021Q2, U.S. production doubled. However, the ongoing semi-conductor shortage pushed 2021Q3 national production down 20.0 percent from its 2020Q3 level. Through the first two months of 2021Q4, national vehicle production was down 15.6 percent from a year earlier.

After falling modestly in February 2020, housing starts dropped sharply in both March and April. As a result, annualized starts dropped to a five-year monthly low of 938,000. Through the end of 2020, housing starts then rose in all but one of the following months (August). Housing starts then fell slightly in January 2021 and, because of inclement weather, dropped substantially in February. Starts rebounded sharply in March, declined in April and then rose in both May and June. Starts fell in July, rose in August and then declined in both September and October. Over the most recent three months (September-November), annualized housing starts have averaged 1,577 thousand units – 4.8 percent up from a year earlier.

## Labor Force Participation

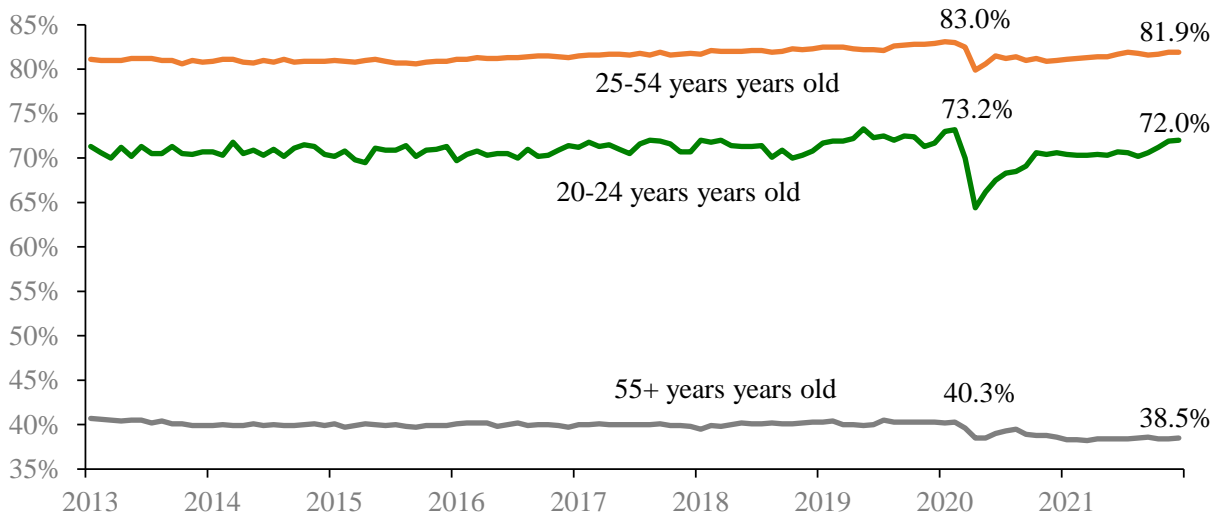
After trending downward for 15 years the labor force participation rate (the share of the working-age population who are in the labor force either working or actively looking for work) trended upward between 2016-2019 – rising to 63.1 percent in 2019. However, with the onset of the pandemic, the participation rate dropped sharply with the rate dropping to 60.2 percent in April 2020. While the rate rose to 61.5 percent by July 2020, the rate rose has risen only modestly since – rising to 61.9 percent by December 2021– significantly below the 2019 rate of 63.1 percent. With the still substantial drop in the labor force participation rate, the U.S. labor force has declined markedly. In calendar year 2021, the size of the U.S. labor force averaged 161.2 million persons. In contrast, had calendar year 2021 U.S. labor force participation rate averaged 63.1 percent, the size of the y-t-d U.S. labor force would have been 165.0 million – 3.8 million persons larger.

Spurred by COVID-19’s more severe impact on older adults, increased early retirements accounted for a substantial share of the estimated 3.8-million-person reduction in labor force. In December 2021, the labor force participation rate of adults 55 years and older remained 1.8 percentage points below its pre-pandemic February 2020 rate. In addition, in November 2021, the labor force participation rate of younger adults (25-54 years old) remained 1.1 percentage point below its February 2020 rate. Lack of available/affordable childcare, supplemental unemployment insurance payments, which expired in early September 2021, and fear of catching COVID-19 contributed to the reduction in labor supply.



Source: Bureau of Labor Statistics

## U. S. Labor Force Participation Rate January 2013 to December 2021 Selected Age Groups



Source: Bureau of Labor Statistics

### Inflation

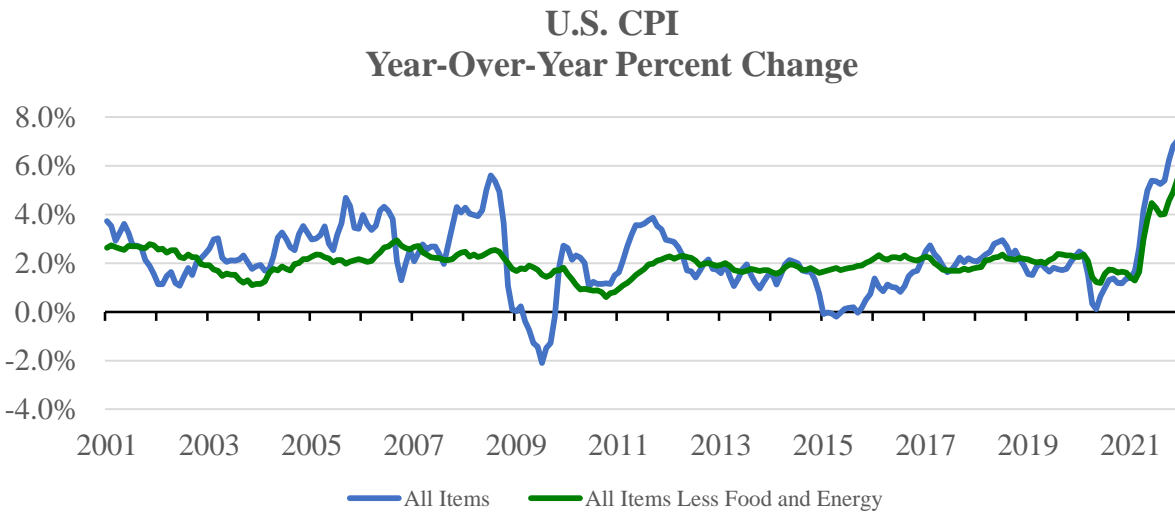
During the first year of the pandemic (March 2020-February 2021), the overall consumer price index y-o-y inflation remained low, averaging about 1.0 percent, and ranging between 0.1 percent in May 2020 up to 1.7 percent in February 2021. However, since March 2021, inflation has accelerated. In each of the most recent seven months, overall consumer prices rose from the prior year more than 5.0 percent – the first such streak in 30 years. In December 2021, the overall consumer price index rose 7.0 percent y-o-y, which is the fastest y-o-y increase in 39 years.

Several factors contributed to the acceleration of inflation including supply chain disruptions, physical input shortages and labor shortages, coupled with strong demand, spurred by historic government stimulus and pent-up demand.

While falling or rising only slightly y-o-y in 2020, producer price increases accelerated substantially through the first 11 months of 2021 with y-o-y increases accelerating from 1.6 percent in January to 9.8 percent in November (a record for the relatively brief current PPI series, which began in late 2009). In December, producer price inflation slowed only slightly to 9.7 percent. Similarly, the core producer price index rose less than 1.0 percent y-o-y between April 2020 and August 2020 before accelerating from 1.0 percent in September 2020 to 8.3 percent by December 2021.

Average wage increases fluctuated in 2021. While in January, the average wage were up 5.1 percent from a year earlier, y-o-y average wage increases slowed to 2.6 percent by June before most recently accelerating to 5.8 percent by November. In addition according to a December 2021 Conference Board survey, companies are setting aside an average of 3.9 percent of total payroll for wage increases in 2021 – the most since 2008.

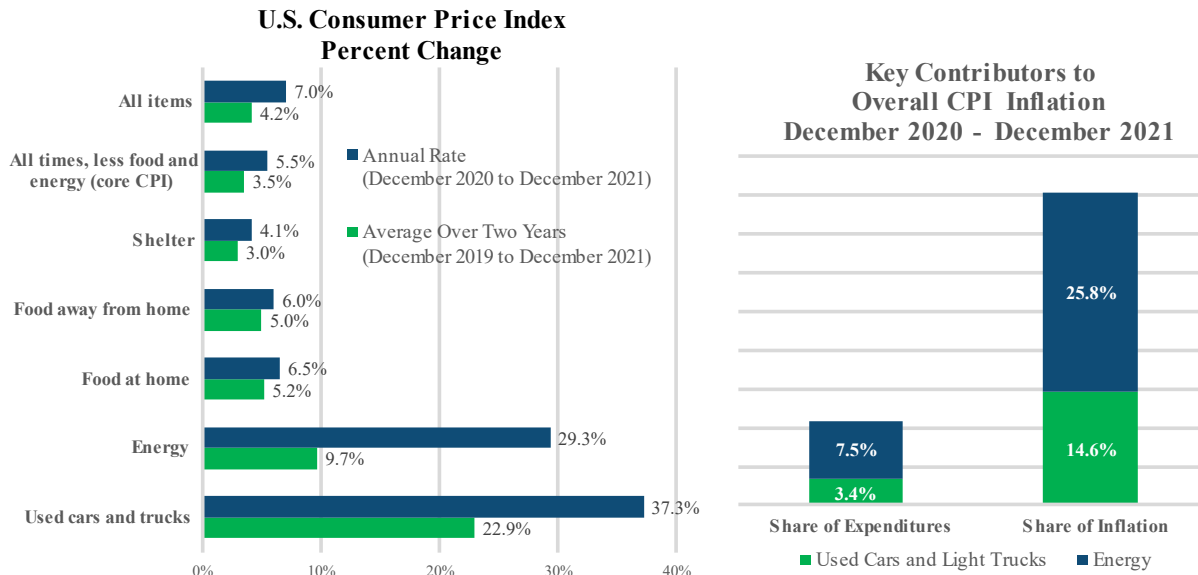
Sharp increases in energy prices have played a significant role in the recent acceleration in inflation. While having declined y-o-y through most of 2020, y-o-y energy price increases have exceeded 20 percent since April 2021. In December 2021, energy prices were up 29.3 percent from last December. Food prices have also accelerated over the past year with food prices rising 6.3 percent in December – rising at a rate last seen 13 years ago. However, the core consumer price index, which excludes food and energy prices, has also accelerated in recent months. While rising less than 2.0 percent y-o-y in each of the first 12 months of the pandemic, core consumer prices have accelerated over the past seven months with core inflation of 4.0 percent or greater in each of the past seven months. In December, the core consumer price index was up 5.5 percent from last December – the fastest y-o-y core consumer price inflation in 30 years.



Source: Bureau of Labor Statistics

The vehicle market has played a significant role in spurring faster inflation. Shortages of semi-conductors for new vehicles have accelerated both used and new car and truck prices. With vehicle owners retaining their vehicles longer than previously– in part due to the lack of availability of new vehicles and/or higher new vehicle prices – used car and truck price inflation have risen steeply over the past year. After rising around 10.0 percent y-o-y between fall 2020 and spring 2021, used car and truck prices accelerated sharply with y-o-y increases as much as 45.2 percent in June 2021. In each of the most recent nine months, used car and truck price inflation has exceeded 20.0 percent. In December, used car and truck prices were up 37.3 percent from December 2020. Similarly, new car and truck prices have accelerated in recent months – accelerating from a 1.2 percent y-o-y increase in February 2021 to an 11.8 percent y-o-y increase in December 2021 – the fastest recorded new car price increase.

Taken together, energy, food and used car and truck prices accounted for slightly over half (53.1 percent) of the overall consumer price increase between December 2020 and December 2021 even while accounting for only 25.0 percent of consumer purchases. Energy alone accounted for 25.8 percent of the overall price increase –while accounting for only 7.5 percent of consumer purchases.



Source: Bureau of Labor Statistics

From January 2019 through the first year of the pandemic, the Federal Reserve’s preferred inflation gauge (the core personal consumption expenditure price index) had remained at or below 2.0 percent. Still more, core PCE inflation had remained below 2.5 percent for nearly 15 years through March 2021. However, in April 2021, y-o-y core PCE index inflation accelerated above 3.0 percent for the first time in nearly 29 years. In November 2021, the core PCE was up 4.7 percent from a year earlier – the fastest core PCE inflation in 38 years and the sixth straight month above 3.5 percent.

## Monetary and Fiscal Policy Actions

### *Monetary Policy*

The Federal Reserve (Fed) has taken aggressive action to combat the impact of the pandemic and containment restrictions on the economy. In mid-March 2020, the Fed lowered the federal funds rate range to near zero and aggressively stepped up its quantitative easing program under which it purchases Treasury bonds and mortgage bond securities. As a result, the Fed holdings skyrocketed from \$4.2 trillion in late February to over \$6.7 trillion in late April. Continued steady substantial purchases increased Fed holdings to \$7.4 trillion by the end of 2020. The 76.2 percent increase in Fed holdings from February to December 2020 is in sharp contrast to the 4.8 percent rise over the same period in 2019. Continued Fed purchases through mid-December 2021 raised the Fed’s holdings to \$8.8 trillion – more than double (109.4 percent) its late February 2020 level.

At its most recent meeting (December 14-15, 2021) the Fed stated “[i]n light of inflation developments and the further improvement in the labor market” that it will reduce the amount of its monthly combined minimum purchases of Treasury bonds and mortgage bond securities by \$30 billion both in December 2021 and in January 2022 – reducing its monthly minimum purchase amount from \$120 billion to \$60 billion by January. Further, the Fed indicated that similar reductions would likely “be appropriate” in subsequent months – indicating that it is likely that the

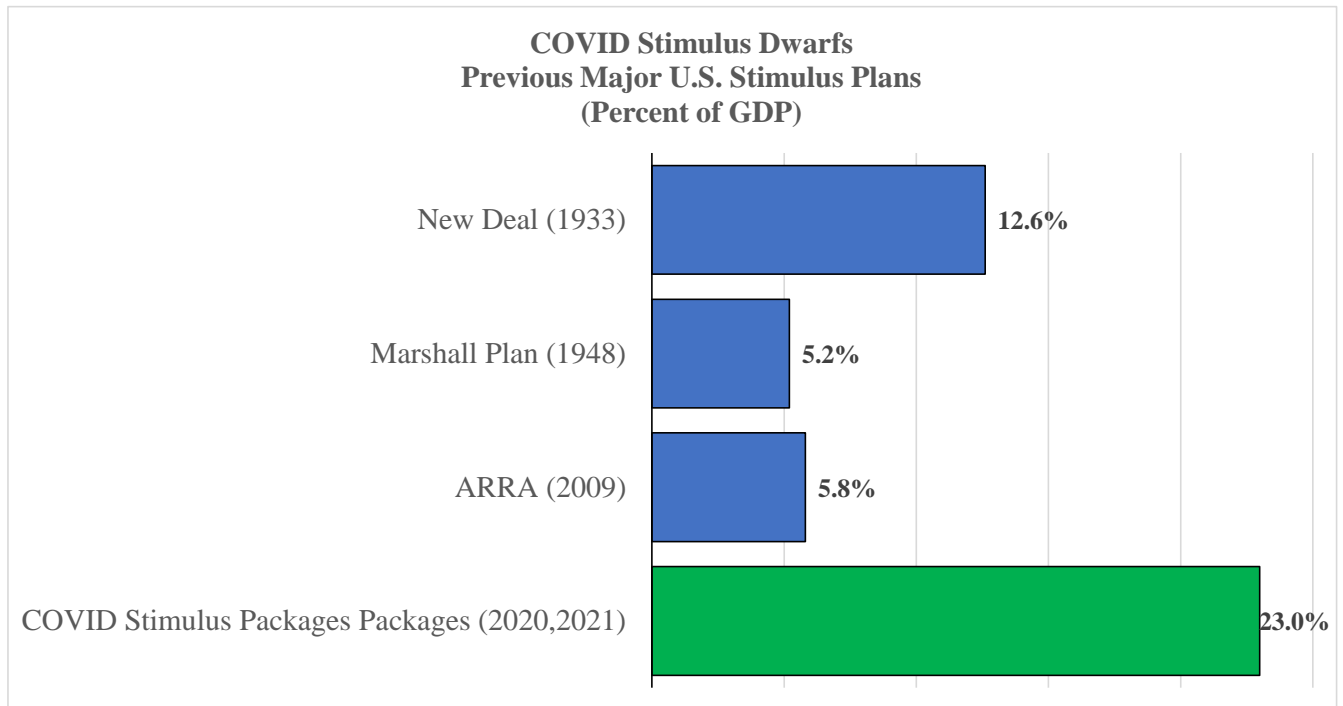


Fed would effectively end its quantitative easing program in March 2022. The Fed indicated that “it is prepared to adjust the pace of purchases if warranted by changes in the economic outlook.”

The FOMC left the federal funds rate near zero, stating that “[w]ith inflation having exceeded 2 percent for some time, the Committee expects it will be appropriate to maintain this target range until labor market conditions have reached levels consistent with the Committee's assessments of maximum employment.”

### *Fiscal Policy*

In response to the pandemic, the federal government enacted three extremely large economic stimulus packages, amounting to nearly \$5 trillion in estimated federal spending and tax expenditures. The near \$5 trillion stimulus equals 23.0 percent of GDP. As the graph below illustrates, COVID stimulus is tremendously larger than any other previous major stimulus plan.



Sources: Axios Research (December 23, 2020), Bureau of Economic Analysis. The COVID stimulus percentage includes the \$1.9 trillion American Rescue Plan (ARP), which was enacted in March 2021.

Three major COVID stimulus packages have been enacted during the pandemic:

- (1) The \$2 trillion-plus CARES Act enacted in March 2020, shortly after the onset of the pandemic. Major elements of the package included funding for direct relief payments to most adults of up to \$1,200 to individuals and \$2,400 to couples; funding for temporary \$600/week increases in unemployment insurance payments and increases in the coverage and the duration of unemployment insurance; a business loan/grant program (Payroll Protection Program), and payments to state, local and tribal governments.

- (2) A \$900 billion emergency COVID relief package enacted in late December 2020. The package included another round of stimulus checks of up to \$600 (individuals)/ \$1,200 (couples) and \$500 per child; funding through March 2021 for an additional \$300 per week for unemployment insurance along with an extension of the broader and lengthened UI coverage, along with additional funding for the Payroll Protection loan/grant program.
- (3) The \$1.9 trillion American Rescue Plan Act enacted in early March 2021 included:
  - a. \$1,400 stimulus payments to most persons in the U.S.
  - b. Extension of the \$300 per week unemployment insurance payments under the federal unemployment insurance programs first implemented under the CARES Act through early September 2021.
  - c. In 2021, an increase in the \$2,000 Child Tax Credit to \$3,000 (\$3,600 for parents of children under 6 and make parents of 17-year-olds) and expansion of the Child Care Tax Credit and the Earned Income Tax Credit (EITC).
  - d. \$360 billion to state, local governments and tribes.
  - e. \$125 billion for K-12 schools and \$40 billion for universities and colleges with at least 50 percent of the \$40 billion used to provide emergency financial aid grants to students.
  - f. \$123 billion in COVID-related policy with \$47.8 billion for testing, contact tracing and mitigation efforts; \$47 billion for the Disaster Relief Fund and \$10 billion to use the Defense Production Act to buy and distribute medical supplies.
  - g. \$22 billion in rental assistance; \$39 billion for child care; \$29 billion for the restaurant industry; \$86 billion for new program for multiemployer pension plans.

## **Current Michigan Economic Situation**

### Pre-Pandemic Recent History

Prior to the pandemic, Michigan's economy posted a decade of economic growth, but was showing signs of slowing.

In 2019:

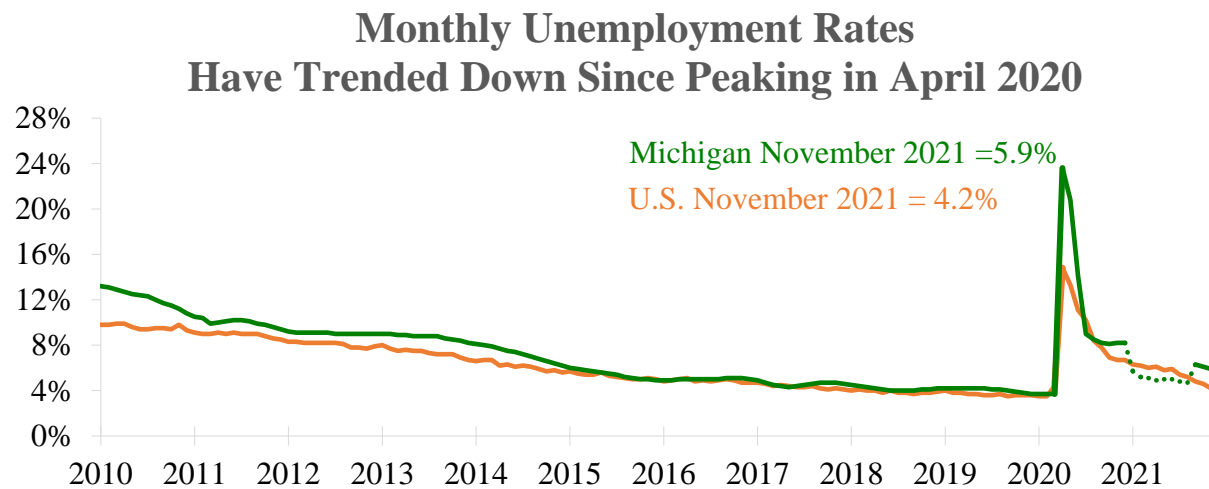
- Both Michigan wage and salary income and personal income increased for the tenth straight year. Wage and salary income grew 2.6 percent, slowing from 3.7 percent growth in 2018. Similarly, personal income increased 3.3 percent, slowing from 3.9 percent growth in 2018.
- Real Michigan gross domestic product (GDP) decreased slightly (-0.1 percent) after having risen in each of the prior nine years.
- Michigan wage and salary employment grew for the ninth straight year. Employment grew 0.4 percent, slowing from 1.1 percent growth in 2018 and representing the slowest annual growth over the nine years.
- The Michigan annual unemployment rate fell for the tenth straight year, falling to 4.1 percent – the lowest Michigan annual unemployment rate since 2000.
- Approximately 1,914,000 vehicles were produced in Michigan, an increase of 4.4 percent from 2018, and well above the historical low of 1,146,000 units produced in 2009.

## COVID-19 Economic Impact

The pandemic's impact on Michigan's economy mirrored the national impact. After rising to a 17-year monthly high in February 2020, Michigan wage and salary employment fell modestly in March (-38,200 jobs) and then plummeted in April – losing a record 1.0 million jobs. Michigan regained jobs each month between May and November before losing jobs in December. Through December, Michigan had regained a net 630,300 jobs.

State employment rose in each of the first three months of 2021 before falling in April and rising slightly in May. Employment gains accelerated in June and July. After slowing in August, job gains accelerated in September and October before slowing in November. On net, Michigan regained 842,900 jobs between May 2020 and November 2021.

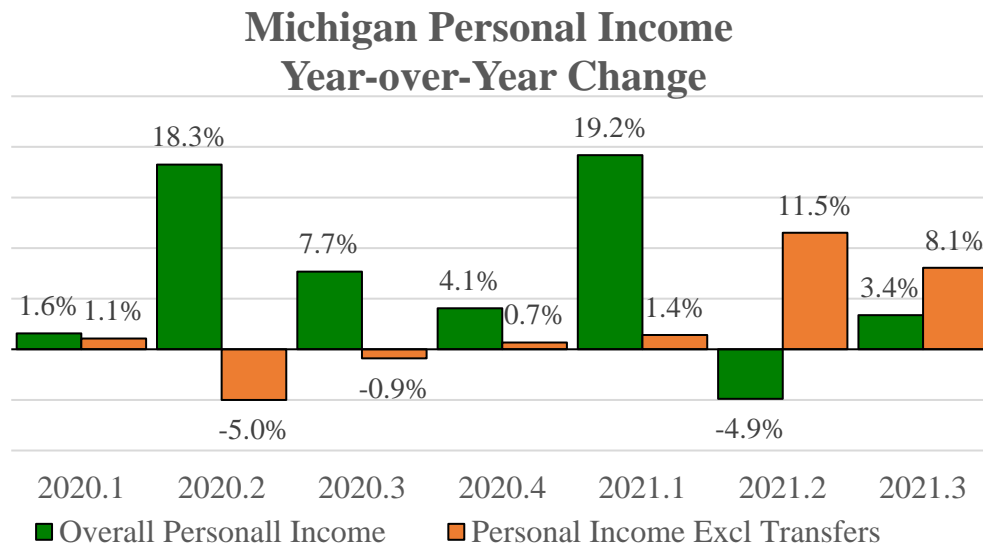
With the massive employment losses, Michigan's unemployment rate rose sharply in April 2020, from 3.7 percent to 23.6 percent. The rate quickly dropped to 8.2 percent in December 2020 and has declined to 5.9 percent in November 2021. Recently, "the U.S. Bureau of Labor Statistics (BLS) identified a distortion in their statistical estimates and has revised the Michigan's September unemployment rate upward by 1.7 percentage points to 6.3 percent. Additional revisions to the unemployment rate for January through August of 2021 will need to be made and will occur during the normal review process at the end of the year" (Michigan Department of Technology Management and Budget press release, November 17, 2021). The months still to be revised are presented as the dashed line in the graph below.



Source: Bureau of Labor Statistics.

Largely because of the CARES Act and state unemployment insurance payments, personal income rose in the second quarter of calendar year 2020 despite a substantial decline in economic activity. In 2020Q2, while Michigan real GDP fell 10.7 percent from a year earlier, personal income *rose* 18.3 percent y-o-y. Michigan personal income increased at a still strong 7.7 percent y-o-y in 2020Q3 before slowing to 4.1 percent in 2020Q4. Then, in 2021, with the convergence of two federal stimulus packages, Michigan personal income rose 19.2 percent y-o-y before falling 4.9 percent from 2020Q2, when the massive CARES package was implemented. In 2021Q3, Michigan personal income increased 3.4 percent.

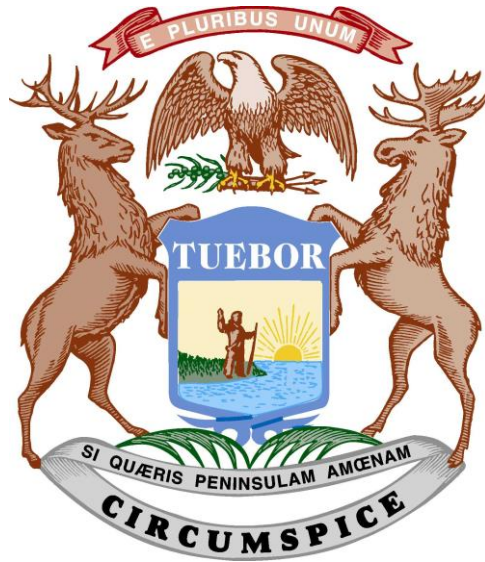
Excluding transfer payments, which encompass the federal stimulus direct relief payments and all unemployment insurance payments, Michigan personal income dropped 5.0 percent y-o-y in 2020Q2, declined slightly y-o-y in 2020Q3 and rose slightly y-o-y in 2020Q4. After rising modestly y-o-y in 2021Q1, Michigan personal income excluding transfer payments rebounded sharply from a year earlier in both 2021Q2 and 2021Q3 – increasing 11.5 percent and 8.1 percent, respectively.



Sources: Bureau of Economic Analysis and University of Michigan RSQE.

## SECTION III

### Administration Economic Forecast



## Administration Economic Forecast January 14, 2022

### Administration Economic Forecast Summary

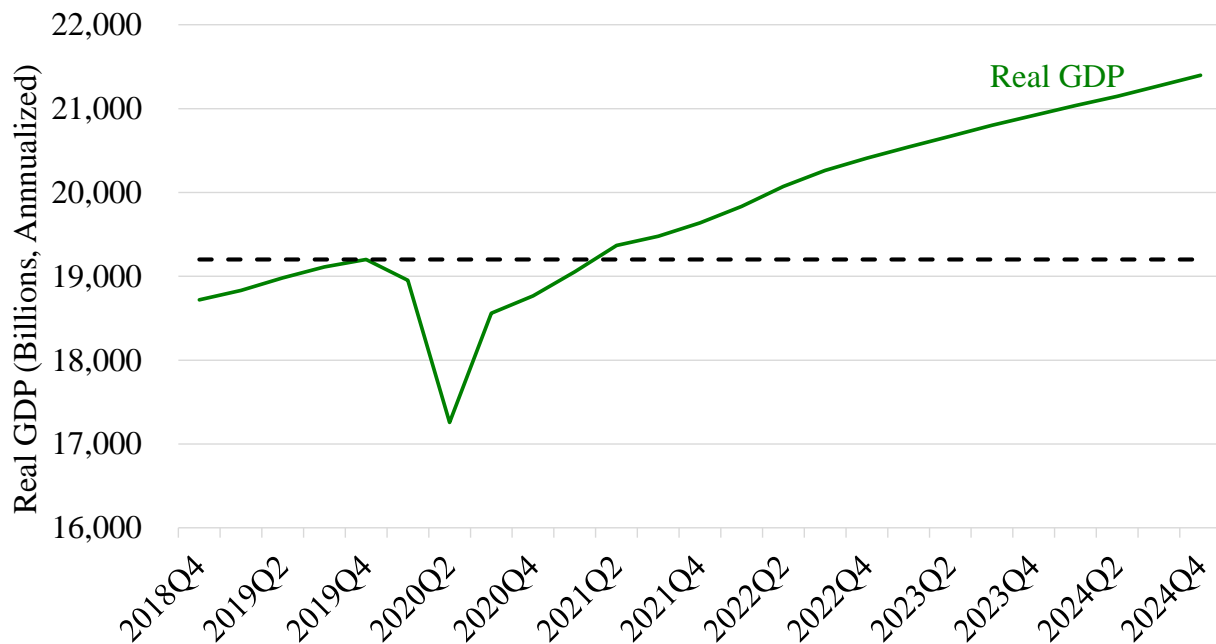
**Table 1** provides a one-page summary table of the Administration forecast of the U.S. and Michigan economies.

### 2022, 2023 and 2024 U.S. Economic Outlook

**Real (inflation adjusted) GDP** is expected to increase at a solid pace over the forecast horizon. After declining 3.4 percent in 2020 (the largest annual decline since 1946), real GDP is estimated to have risen 5.4 percent in calendar year 2021 – the fastest annual real GDP growth since 1984. Real GDP is forecast to rise 3.9 percent in 2022, increase 2.9 percent in 2023 and rise 2.3 percent in 2024.

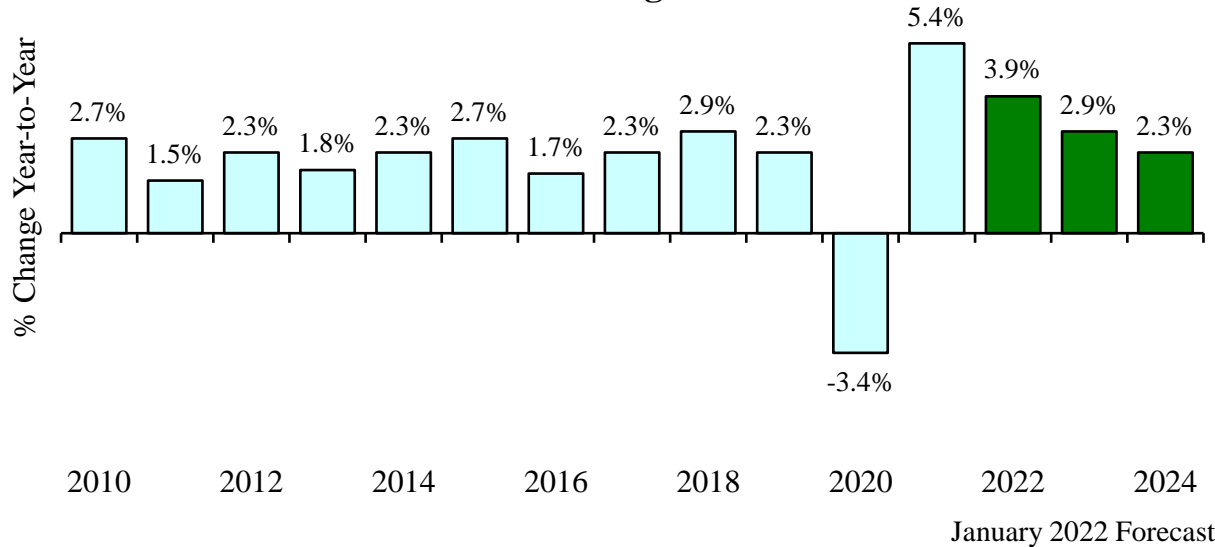
Real GDP fully regained the losses from the first two quarters of 2020 in 2021Q2 – four quarters following the steep drop. By the end of the forecast (2024Q4), real GDP is projected to be up 11.4 percent from its level five year earlier directly before the pandemic in 2019Q4.

### U.S. Economy Forecast To Continue Solid Recovery



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, January 2022.

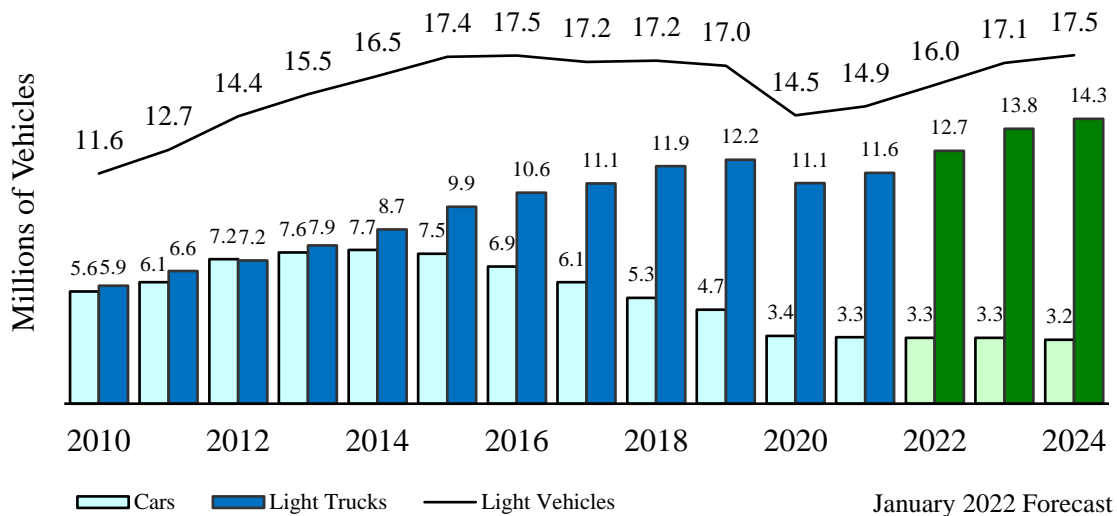
## Real GDP Growth Continues Across the Forecast At a Slowing Pace



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, January 2022.

As a result of sharp declines over the first half of 2020, **light vehicle sales** declined from 17.0 million units in 2019 to 14.5 million units in 2020. In 2021, light vehicle sales rose modestly to 14.9 million units. Light vehicle sales are expected to increase substantially over the forecast horizon – rising to 16.0 million units in 2022, 17.1 million units in 2023 and 17.5 million units in 2024. Light trucks continue to dominate the light vehicle market over the forecast horizon.

## Vehicle Sales Rebounds Sharply in 2022, 2023, 2024



Source Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, January 2022.

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

January 14, 2022

	Calendar 2020 Actual	Calendar 2021 Forecast	Percent Change from Prior Year	Calendar 2022 Forecast	Percent Change from Prior Year	Calendar 2023 Forecast	Percent Change from Prior Year	Calendar 2024 Forecast	Percent Change from Prior Year
<b>United States</b>									
Real Gross Domestic Product (Billions of Chained 2012 Dollars)	\$18,385	\$19,377	5.4%	\$20,133	3.9%	\$20,717	2.9%	\$21,193	2.3%
Implicit Price Deflator GDP (2012 = 100)	113.6	118.1	4.0%	123.2	4.3%	126.6	2.8%	129.6	2.4%
Consumer Price Index (1982-84 = 100)	258.811	270.970	4.7%	283.669	4.7%	290.961	2.6%	298.002	2.4%
Consumer Price Index - Fiscal Year (1982-84 = 100)	258.014	266.616	3.3%	281.407	5.5%	289.196	2.8%	296.286	2.5%
Personal Consumption Deflator (2012 = 100)	111.2	115.4	3.8%	120.0	4.0%	123.0	2.5%	125.8	2.3%
3-month Treasury Bills Interest Rate (percent)	0.4	0.0		0.5		1.2		1.6	
Unemployment Rate - Civilian (percent)	8.1	5.3		4.5		4.0		4.1	
Wage and Salary Employment (millions)	142.185	146.122	2.8%	151.090	3.4%	153.810	1.8%	155.500	1.1%
Housing Starts (millions of starts)	1.380	1.586	15.0%	1.657	4.5%	1.700	2.6%	1.661	-2.3%
Light Vehicle Sales (millions of units)	14.5	14.9	3.0%	16.0	7.4%	17.1	6.9%	17.5	2.3%
Passenger Car Sales (millions of units)	3.4	3.3	-3.0%	3.3	0.0%	3.3	0.0%	3.2	-3.0%
Light Truck Sales (millions of units)	11.1	11.6	4.8%	12.7	9.5%	13.8	8.7%	14.3	3.6%
Big 3 Share of Light Vehicles (percent)	40.5	36.0		39.2		38.3		38.0	
<b>Michigan</b>									
Wage and Salary Employment (thousands)	4,033	4,158	3.1%	4,291	3.2%	4,368	1.8%	4,425	1.3%
Unemployment Rate (percent)	9.9	5.4		5.4		4.6		4.5	
Personal Income (millions of dollars)	\$530,809	\$558,411	5.2%	\$562,320	0.7%	\$588,749	4.7%	\$612,887	4.1%
Real Personal Income (millions of 1982-84 dollars)	\$223,349	\$225,343	0.9%	\$216,917	-3.7%	\$221,447	2.1%	\$225,162	1.7%
Wages and Salaries (millions of dollars)	\$242,644	\$265,210	9.3%	\$286,957	8.2%	\$301,879	5.2%	\$313,350	3.8%
Detroit Consumer Price Index (1982-84 = 100)	237.659	247.805	4.3%	259.233	4.6%	265.864	2.6%	272.198	2.4%
Detroit CPI - Fiscal Year (1982-84 = 100)	237.292	244.089	2.9%	257.383	5.4%	264.362	2.7%	270.646	2.4%



The **U.S. unemployment rate** dropped from 8.1 percent in 2020 to 5.3 percent in 2021. The national unemployment rate is forecast to fall to 4.5 percent in 2022 and to 4.0 percent in 2023 before rising slightly to 4.1 percent in 2023.

U.S. wage and salary employment is forecast to continue recovering its steep 2020Q2 losses over the forecast horizon, but is not expected to fully recover its losses until 2022Q4. After having declined 5.8 percent in 2020, annual **U.S. wage and salary employment** rose 2.8 percent in 2021. Wage and salary employment is forecast to rise 3.4 percent in 2022, increase 1.8 percent in 2023 and rise 1.1 percent in 2024.

After having risen 1.2 percent in 2020, the **U.S. consumer price index (CPI)** increased 4.7 percent in 2021. The U.S. CPI is forecast to rise 4.7 percent in 2022, increase 2.6 percent in 2023 and increase 2.4 percent in 2024. The personal consumption price deflator rate is projected to rise 4.0 percent in 2022, 2.5 percent in 2023, and 2.3 percent in 2024.

The **three-month Treasury bill rate** averaged 0.0 percent in 2021, during which the federal funds rate remained near zero. With the Fed expected to raise the federal funds rate gradually over most of the forecast horizon, the Treasury bill rate is expected to average 0.5 percent in 2022, 1.2 percent in 2023, 1.6 percent in 2024.

**Housing starts** jumped 15.0 percent in 2021. In 2022, housing starts are forecast to increase 4.5 percent, and rise 2.6 percent in 2023 before declining 2.3 percent in 2024.

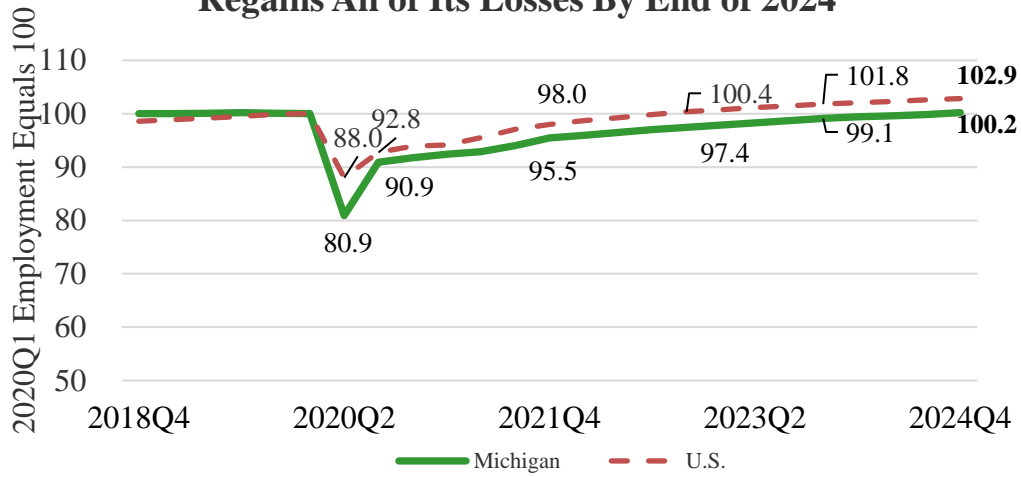
## **2022, 2023 and 2024 Michigan Economic Outlook**

**Michigan wage and salary employment** is forecast to rise over each quarter of the forecast horizon. By 2021Q3, Michigan employment had regained 68.7 percent of its 19.1 percent decline in 2020Q2. As a result, 2021Q3 Michigan employment remained 6.0 percent below its 2020Q1 level. Michigan employment is expected to be down 2.6 percent from its pre-pandemic level at the end of 2022 and be 0.9 percent below its pre-pandemic level in 2023Q4. Michigan employment regains all (100.2 percent) of its 2020Q2 losses by the end of the forecast horizon.

In 2020, annual Michigan wage and salary employment declined 9.2 percent -- the largest annual Michigan employment decline since 1958. Michigan employment rose 3.1 percent in 2021 and is forecast to rise 3.2 percent in 2022, 1.8 percent in 2023 and 1.3 percent in 2024.

In 2020, annual **Michigan manufacturing employment** dropped 11.0 percent. Michigan manufacturing employment increased 3.1 percent in 2021 and is forecast to rise 5.7 percent in 2022, 2.8 percent in 2023 and 0.3 percent in 2024.

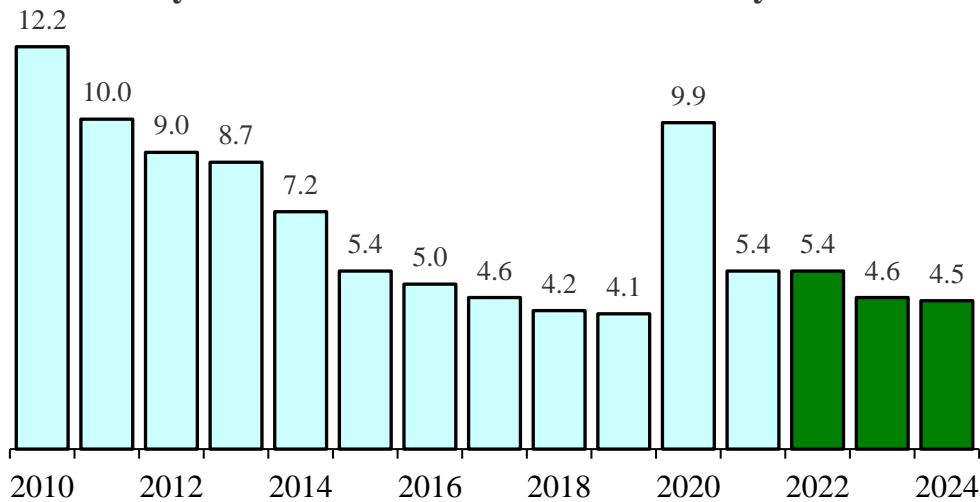
### Michigan Employment Plummeted in 2020Q2 Regains All of Its Losses By End of 2024



Source: Michigan Department of Technology, Management, & Budget, U.S. Bureau of Labor Statistics and January 2022 Administration Forecast.

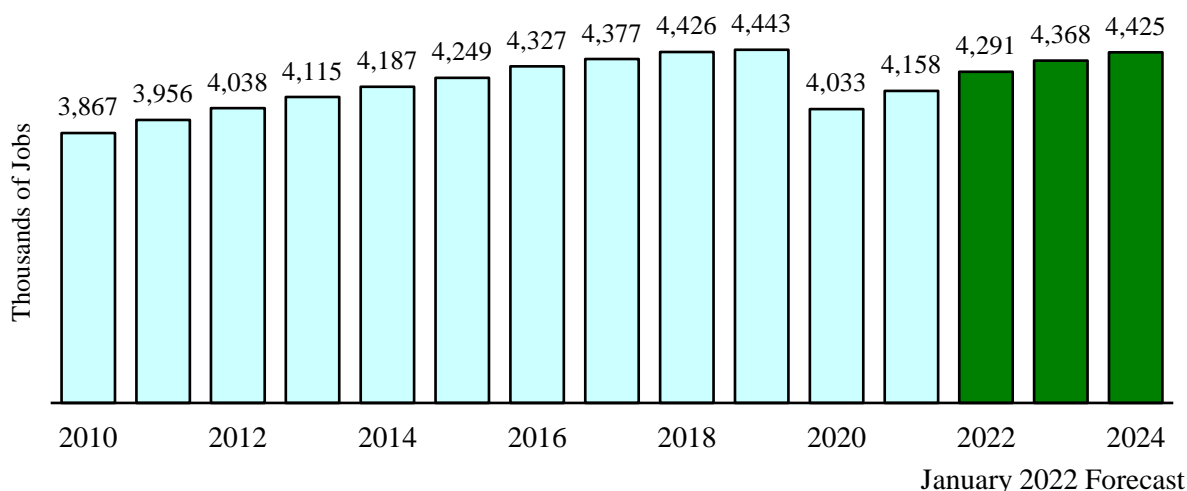
The **Michigan unemployment rate** rose to 9.9 percent in 2020 before falling to 5.4 percent in 2021. The rate is forecast to remain unchanged in 2022 before falling to 4.6 percent in 2023 and 4.5 percent in 2024.

### State Unemployment Rate Soars in 2020 Nearly Returns To Pre-Pandemic Levels by 2024



Source: Michigan Department of Technology, Management, & Budget, U.S. Bureau of Labor Statistics and January 2022 Administration Forecast.

## Michigan Wage and Salary Employment Plummetts in 2020 Rebounds Partially in 2021-2024



Source: Michigan Department of Technology, Management, & Budget, U.S. Bureau of Labor Statistics and January 2022 Administration Forecast.

**Michigan wages and salaries** rose 9.3 percent in 2021 and are forecast to rise 8.2 percent in 2022, 5.2 percent in 2023 and 3.8 percent in 2024.

**Michigan personal income** rose 5.2 percent in 2021 and is forecast to increase 0.7 percent in 2022. Personal income is then expected to rise 4.7 percent in 2023 and rise 4.1 percent in 2024.

The **Detroit CPI** rose 4.3 percent in 2021 and is forecast to increase 4.6 percent in 2022, 2.6 percent in 2023 and 2.4 percent in 2024. After rising 0.9 percent in 2021, **real (inflation adjusted) Michigan personal income** is forecast to fall 3.7 percent in 2022 and then increase 2.1 percent in 2023, followed by a 1.7 percent increase in 2024.

### Fiscal Year Economics

Michigan’s largest taxes are the individual income tax (\$12.6 billion in FY 2019) and sales and use taxes (\$10.0 billion). Income tax withholding is the largest component of the income tax. Withholding (\$9.9 billion) is most affected by growth in wages and salaries. **Michigan wages and salaries** increased 7.0 percent in FY 2021. In FY 2022, wages and salaries are forecast to increase 8.9 percent. Wages and salaries then are projected to rise 5.5 percent in FY 2023 and to increase 4.4 percent in FY 2024.

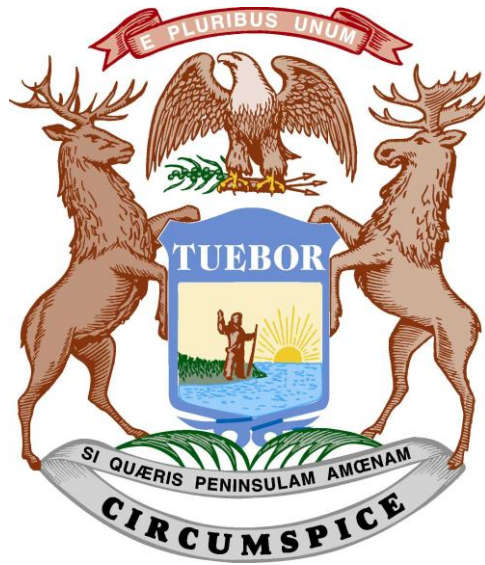
Sales and use taxes depend, in part, on **Michigan disposable (after tax) income** and inflation. Disposable income rose 4.3 percent in FY 2021. In FY 2022, disposable income is forecast to fall 0.7 percent, and is then projected to increase 4.2 percent in FY 2023 and to rise 4.5 percent in FY 2024. Prices, as measured by the **Detroit CPI**, rose 2.9 percent in FY 2021. The Detroit CPI is forecast to increase 5.4 percent in FY 2022, 2.7 percent in FY 2023, and 2.4 percent in FY 2024.

## **Forecast Risks**

The risks to the forecast include:

- The pandemic continues to evolve and emerging new variants may exacerbate current supply chain problems and labor shortages and lead to both higher inflation and slower economic growth than expected.
- Housing demand is anticipated to remain high over the next two to three years. However, the construction of new homes will be constrained by the price/availability of lumber and the availability of construction labor.
- Demand for new vehicles will be high this coming year, which could drive sales much higher than predicted. However, the semiconductor shortage has already limited vehicle production for several months and may continue to depress the number of vehicles for sale.
- In general, shortages of other raw materials and labor shortages may constrain growth more than assumed in the baseline forecast.
- Increases in inflation may be sharper and longer lasting than anticipated. Sharper and more sustained increases in inflation could spur the Fed to raise interest rates sooner and higher than expected and potentially cause a sharp economic slowdown.

**SECTION IV**  
**Administration**  
**Revenue Estimates**



## **Administration Revenue Estimates**

### **January 14, 2022**

### **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 2021 is the base year. Any non-economic changes to the taxes occurring in FY 2022, FY 2023 and FY 2024 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 2021 Revenue**

FY 2021 GF-GP revenue is estimated to be \$12,941.7 million, a 20.1 percent increase compared to FY 2020. The FY 2021 GF-GP preliminary revenue estimate is \$1,664.9 million above the May 2021 Consensus estimate. SAF revenue is forecast to be \$16,050.7 million, a 14.9 percent increase compared to FY 2020. The FY 2021 SAF estimate is \$1,018.3 million above the May 2021 Consensus estimate (see Table 2).

**Table 2**  
**FY 2020-21 Administration Revenue Estimates**  
(millions)

	<b>Preliminary</b>	<b>Growth</b>	<b>Change from May 2021 Consensus</b>
<b>General Fund - General Purpose</b>			
Baseline Revenue	\$14,797.3	23.2%	---
Tax Cut Adjustments	(\$1,846.6)	---	---
Net Resources	\$12,950.7	20.2%	\$1,673.9
<b>School Aid Fund</b>			
Baseline Revenue	\$16,214.4	15.1%	---
Tax Cut Adjustments	(\$164.1)	---	---
Net Resources	\$16,050.3	14.9%	\$1,017.9
<b>Combined</b>			
Baseline Revenue	\$31,011.7	18.8%	---
Tax Cut Adjustments	(\$2,010.7)	---	---
Net Resources	\$29,001.0	17.2%	\$2,691.8

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

## **FY 2022 Revenue Outlook**

FY 2022 GF-GP revenue is estimated to be \$12,637.7 million, a 2.3 percent decrease compared to FY 2021. The FY 2022 GF-GP revenue estimate is \$964.6 million above the May 2021 Consensus estimate. SAF revenue is forecast to be \$16,015.2 million, a 0.2 percent decrease compared to FY 2021. The FY 2022 SAF estimate is \$884.3 million above the May 2021 Consensus estimate (see Table 3).

**Table 3**  
**FY 2021-22 Administration Revenue Estimates**  
(millions)

	<b>Administration January 14, 2022</b>		<b>Change from May 2021 Consensus</b>
	<b>Amount</b>	<b>Growth</b>	
<b>General Fund - General Purpose</b>			
Baseline Revenue	\$14,235.8	-3.8%	---
Tax Cut Adjustments	(\$1,598.1)	---	---
Net Resources	\$12,637.7	-2.3%	\$964.6
<b>School Aid Fund</b>			
Baseline Revenue	\$16,035.8	-1.1%	---
Tax Cut Adjustments	(\$20.6)	---	---
Net Resources	\$16,015.2	-0.2%	\$884.3
<b>Combined</b>			
Baseline Revenue	\$30,271.6	-2.4%	---
Tax Cut Adjustments	(\$1,618.7)	---	---
Net Resources	\$28,652.9	-1.2%	\$1,848.9

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



## **FY 2023 Revenue Outlook**

FY 2023 GF-GP revenue is estimated to be \$13,011.0 million, a 3.0 percent increase compared to FY 2022. The FY 2023 GF-GP revenue estimate is \$740.4 million above the May 2021 Consensus estimate. SAF revenue is forecast to be \$16,411.2 million, a 2.5 percent increase compared to FY 2022. The FY 2023 SAF estimate is \$983.5 million above the May 2021 Consensus estimate (see Table 4).

**Table 4**  
**FY 2022-23 Administration Revenue Estimates**  
(millions)

	<b>Administration</b>		<b>Change from May 2021 Consensus</b>
	<b>January 14, 2022</b>		
	<b>Amount</b>	<b>Growth</b>	
<b>General Fund - General Purpose</b>			
Baseline Revenue	\$14,404.8	1.2%	---
Tax Cut Adjustments	(\$1,393.7)	---	---
Net Resources	\$13,011.1	3.0%	\$740.4
<b>School Aid Fund</b>			
Baseline Revenue	\$16,530.5	3.1%	---
Tax Cut Adjustments	(\$119.3)	---	---
Net Resources	\$16,411.2	2.5%	\$983.6
<b>Combined</b>			
Baseline Revenue	\$30,935.3	2.2%	---
Tax Cut Adjustments	(\$1,513.0)	---	---
Net Resources	\$29,422.3	2.7%	\$1,724.0

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

## **FY 2024 Revenue Outlook**

FY 2024 GF-GP revenue is forecast to increase 3.5 percent to \$13,471.8 million from FY 2023. FY 2024 SAF revenue is forecast to increase 2.4 percent to \$16,803.6. from FY 2023 (see Table 5).

**Table 5**  
**FY 2023-24 Administration Revenue Estimates**  
(millions)

	<b>January 14, 2022</b>	
	<b>Amount</b>	<b>Growth</b>
<b>General Fund - General Purpose</b>		
Baseline Revenue	\$14,779.3	2.6%
Tax Cut Adjustments	(\$1,307.4)	---
Net Resources	\$13,471.9	3.5%
<b>School Aid Fund</b>		
Baseline Revenue	\$16,929.9	2.4%
Tax Cut Adjustments	(\$126.4)	---
Net Resources	\$16,803.5	2.4%
<hr/>		
<b>Combined</b>		
Baseline Revenue	\$31,709.2	2.5%
Tax Cut Adjustments	(\$1,433.8)	---
Net Resources	\$30,275.4	2.9%

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 2020 revenue is compared to CY 2018 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 2020 revenues were \$9.7 billion below the revenue limit. State revenues will also be well below the limit for FY 2021 through FY 2024. FY 2021 revenues are expected to be about \$8.2 billion below the limit, FY 2022 revenues \$11.8 billion below the limit, FY 2023 revenues \$13.8 billion below the limit, and FY 2023 revenues \$13.2 billion below the limit (See Table 6).

**Table 6**  
**Administration Revenue Limit Calculation**  
(millions)

	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>
	<u>Admin</u>	<u>Admin</u>	<u>Admin</u>	<u>Admin</u>	<u>Admin</u>
	<u>Jan 2022</u>	<u>Jan 2022</u>	<u>Jan 2022</u>	<u>Jan 2022</u>	<u>Jan 2022</u>
<b>Revenue Subject to Limit</b>	\$34,052.0	\$38,459.6	\$38,274.2	\$39,210.0	\$40,155.9
<b><u>Revenue Limit</u></b>	<b><u>CY 2018</u></b>	<b><u>CY 2019</u></b>	<b><u>CY 2020</u></b>	<b><u>CY 2021</u></b>	<b><u>CY 2022</u></b>
Personal Income	\$484,030	\$491,632	\$528,093	\$558,411	\$562,320
Ratio	9.49%	9.49%	9.49%	9.49%	9.49%
Revenue Limit	\$45,934.4	\$46,655.9	\$50,116.0	\$52,993.2	\$53,364.2
<b><u>Amount Under (Over) Limit</u></b>	<b>\$11,882.5</b>	<b>\$8,196.3</b>	<b>\$11,841.8</b>	<b>\$13,783.2</b>	<b>\$13,208.2</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.

PA 613 of 2018 prohibits the legislature from appropriating money from the fund for a fiscal year when the annual growth rate of real personal income less transfer payments for the calendar year in which that fiscal year ends is estimated to be greater than 0% at the most recent consensus revenue estimating conference. When the annual growth rate is estimated to be less than 0% at the most recent consensus revenue estimating conference, the legislature may appropriate by law for the fiscal year ending in the current calendar year no more than 25% of the prior fiscal year ending

balance in the fund as reported in the comprehensive annual financial report. If personal income is forecast to be negative for subsequent fiscal years, the Legislature then could appropriate up to 25% of the available Fund balance in the first fiscal year for each subsequent fiscal year.

If real personal income less transfer payments 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.

Real calendar year personal income is projected to be above 2 percent in 2021 through 2023. This results in a pay-in for FY 2022 of \$60.8 million, a pay-in for FY 2023 of \$40.4 million, and a pay-in for FY 2024 of \$122.3 million.

### **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. 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 2023, the SAF revenue adjustment factor is calculated to be 1.0099 (See Table 7). For FY 2024, the SAF revenue adjustment factor is calculated to be 1.0277 (See Table 8).

**Table 7**

### **Administration School Aid Revenue Adjustment Factor For Fiscal Year 2023**

	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>
Baseline SAF Revenue	\$16,213.5	\$16,035.8	\$16,530.5
Balance Sheet Adjustments	<u>(\$162.8)</u>	<u>(\$20.6)</u>	<u>(\$119.3)</u>
Net SAF Estimates	\$16,050.7	\$16,015.2	\$16,411.2
Subtotal Adjustments to FY 2023 Base	<u>\$43.5</u>	<u>(\$98.7)</u>	<u>\$0.0</u>
Baseline Revenue on a FY 2023 Base	\$16,094.2	\$15,916.5	\$16,411.2

#### School Aid Fund Revenue Adjustment Calculation for FY 2023

Sum of FY 2021 & FY 2022	\$16,094.2	+	\$15,916.5	=	\$32,010.7
Sum of FY 2022 & FY 2023	\$15,916.5	+	\$16,411.2	=	\$32,327.8

<b>FY 2023 Revenue Adjustment Factor</b>	<b>1.0099</b>
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Note: Factor is calculated off a FY 2023 base year.

**Table 8**  
**Administration School Aid Revenue Adjustment Factor**  
**For Fiscal Year 2024**

	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>
Baseline SAF Revenue	\$16,035.8	\$16,530.5	\$16,930.0
Balance Sheet Adjustments	(\$20.6)	(\$119.3)	(\$126.4)
Net SAF Estimates	\$16,015.2	\$16,411.2	\$16,803.6
Subtotal Adjustments to FY 2024 Base	(\$105.8)	(\$7.1)	\$0.0
Baseline Revenue on a FY 2024 Base	\$15,909.4	\$16,404.1	\$16,803.6

School Aid Fund Revenue Adjustment Calculation for FY 2023

Sum of FY 2022 & FY 2023	\$15,909.4 + \$16,404.1 = \$32,313.5
Sum of FY 2023 & FY 2024	\$16,404.1 + \$16,803.6 = \$33,207.7

<b>FY 2024 Revenue Adjustment Factor</b>	<b>1.0277</b>
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Note: Factor is calculated off a FY 2024 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 9 and 10). Tax totals for the income, sales, use, CIT/MBT, tobacco and casino taxes for all funds are also included (See Table 11).

**Table 9**  
**Administration General Fund General Purpose Revenue Detail**  
(millions)

	FY 2022		FY 2023		FY 2024	
	Amount	Growth	Amount	Growth	Amount	Growth
<b>GF-GP Tax Amounts</b>						
Income Tax	\$7,855.6	1.8%	\$8,334.9	6.1%	\$8,681.6	4.2%
Sales	\$1,460.5	-2.2%	\$1,531.9	4.9%	\$1,571.1	2.6%
Use	\$1,189.7	-4.3%	\$1,218.8	2.4%	\$1,229.1	0.8%
Cigarette	\$175.0	-1.4%	\$172.5	-1.4%	\$172.8	0.2%
Beer & Wine	\$52.5	1.9%	\$53.5	1.9%	\$54.5	1.9%
Liquor Specific	\$81.0	0.6%	\$81.5	0.6%	\$82.0	0.6%
Insurance Co. Premium	\$380.0	7.1%	\$385.0	1.3%	\$390.0	1.3%
CIT/MBT	\$867.3	-28.3%	\$643.3	-25.8%	\$695.6	8.1%
Telephone & Telegraph	\$32.0	-1.2%	\$31.0	-3.1%	\$31.0	0.0%
Oil & Gas Severance	\$22.0	5.3%	\$22.5	2.3%	\$23.0	2.2%
Essential Services Assess.	\$135.0	7.3%	\$143.0	5.9%	\$143.0	0.0%
Penalties and Interest	\$136.0	1.0%	\$140.0	2.9%	\$142.0	1.4%
Railroad/Car Loaning	\$2.0	0.0%	\$2.0	0.0%	\$2.0	0.0%
Enhanc. Enforce/ACS	(\$150.0)	5.2%	(\$152.0)	1.3%	(\$155.0)	2.0%
<b>Total GF-GP Taxes</b>	<b>\$12,238.6</b>	<b>-2.2%</b>	<b>\$12,607.9</b>	<b>3.0%</b>	<b>\$13,062.7</b>	<b>3.6%</b>
<b>GF-GP Non-Tax Revenue</b>						
Federal Aid	\$10.0	23.5%	\$10.0	0.0%	\$10.0	0.0%
From Local Agencies	\$0.1	NA	\$0.1	0.0%	\$0.1	0.0%
From Services	\$7.0	112.1%	\$7.0	0.0%	\$7.0	0.0%
From Licenses & Permits	\$14.0	-37.5%	\$14.0	0.0%	\$14.0	0.0%
Miscellaneous	\$10.0	-68.3%	\$10.0	0.0%	\$10.0	0.0%
Interfund Interest	\$2.0	-81.4%	\$2.0	0.0%	\$2.0	0.0%
Liquor Purchase	\$270.0	8.0%	\$272.0	0.7%	\$275.0	1.1%
Charitable Games	\$1.0	-79.2%	\$2.0	100.0%	\$2.0	0.0%
Transfer From Escheats	\$85.0	-11.4%	\$86.0	1.2%	\$89.0	3.5%
Other Non Tax	\$0.0	0.0%	\$0.0	0.0%	\$0.0	0.0%
<b>Total Non Tax</b>	<b>\$399.1</b>	<b>-6.6%</b>	<b>\$403.1</b>	<b>1.0%</b>	<b>\$409.1</b>	<b>1.5%</b>
<b>Total GF-GP Revenue</b>	<b>\$12,637.7</b>	<b>-2.3%</b>	<b>\$13,011.0</b>	<b>3.0%</b>	<b>\$13,471.8</b>	<b>3.5%</b>

**Table 10**  
**Administration School Aid Fund Revenue Detail**

	FY 2022		FY 2023		FY 2024	
	Amount	Growth	Amount	Growth	Amount	Growth
<b>School Aid Fund</b>						
Income Tax	\$3,564.3	2.9%	\$3,586.7	0.6%	\$3,713.6	3.5%
Sales Tax	\$6,783.8	-0.6%	\$7,073.5	4.3%	\$7,277.5	2.9%
Use Tax	\$859.3	-3.3%	\$887.2	3.2%	\$899.2	1.4%
Liquor Excise Tax	\$80.6	5.1%	\$81.1	0.6%	\$81.6	0.6%
Cigarette & Tobacco	\$318.2	-1.2%	\$312.5	-1.8%	\$312.5	0.0%
Marijuana Excise Tax	\$52.5	0.0%	\$66.5	26.7%	\$73.5	10.5%
State Education Tax	\$2,340.0	3.3%	\$2,444.9	4.5%	\$2,509.9	2.7%
Real Estate Transfer	\$475.0	-3.1%	\$455.0	-4.2%	\$450.0	-1.1%
Industrial Facilities Tax	\$40.0	-4.5%	\$39.0	-2.5%	\$38.0	-2.6%
Casino (45% of 18%)	\$91.0	0.5%	\$92.0	1.1%	\$93.0	1.1%
iGaming, Other	\$134.0	48.1%	\$136.0	1.5%	\$138.0	1.5%
Commercial Forest	\$3.5	-16.7%	\$3.8	8.6%	\$3.8	0.0%
Other Spec Taxes	\$23.0	0.9%	\$23.0	0.0%	\$23.0	0.0%
<b>Subtotal Taxes</b>	\$14,765.2	1.2%	\$15,201.2	3.0%	\$15,613.6	2.7%
Lottery Transfer	\$1,250.0	-12.0%	\$1,210.0	-3.2%	\$1,190.0	-1.7%
<b>Total SAF Revenue</b>	\$16,015.2	0.1%	\$16,411.2	2.5%	\$16,803.6	2.4%

**Table 11**  
**Administration Major Tax Totals**

	FY 2022		FY 2023		FY 2024	
	Amount	Growth	Amount	Growth	Amount	Growth
<b>Major Tax Totals (Includes all Funds)</b>						
Income Tax	\$12,089.7	2.0%	\$12,591.4	4.1%	\$13,065.0	3.8%
Sales Tax	\$9,312.5	-1.0%	\$9,707.5	4.2%	\$9,985.7	2.9%
Use Tax	\$2,570.3	39.4%	\$2,654.0	3.3%	\$2,690.0	1.4%
CIT/MBT	\$867.3	-28.3%	\$643.3	-25.8%	\$695.6	8.1%
Cigarette and Tobacco	\$878.0	-1.3%	\$865.4	-1.4%	\$866.4	0.1%
Casino Tax	\$91.0	1.6%	\$92.0	1.1%	\$93.0	1.1%