

Economic and Revenue Outlook

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

Michigan Department of Treasury



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

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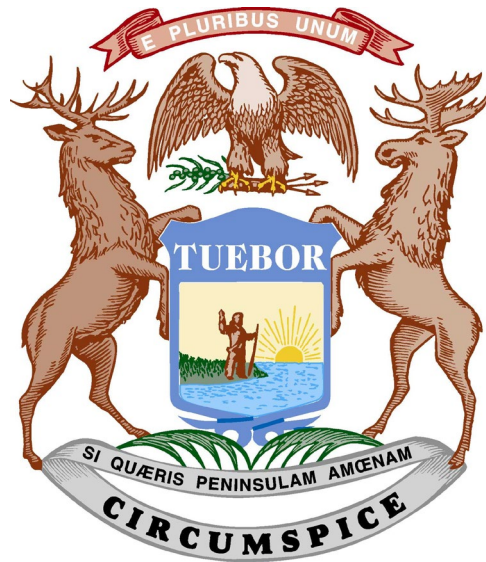
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SECTION I

Administration Estimates Executive Summary

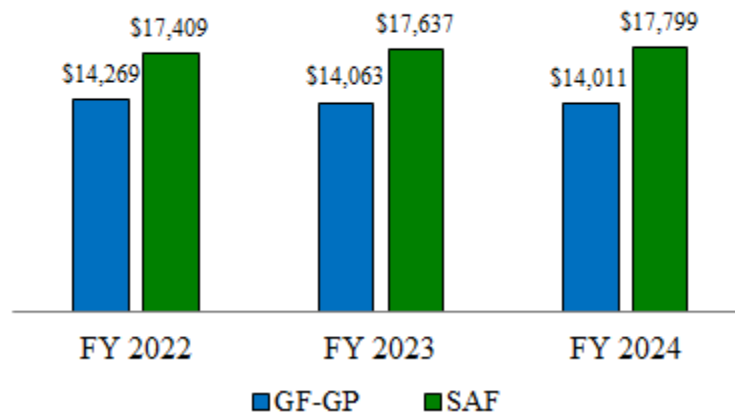


**Administration Estimates
Executive Summary
May 20, 2022**

Revenue Review and Outlook

- FY 2022 GF-GP revenue is forecast to increase 9.7 percent to \$14,268.8 million, up \$1,818.9 million from the January 2022 Consensus estimate. FY 2022 SAF revenue is forecast to increase 8.4 percent to \$17,408.9 million, up \$1,300.7 million from the January 2022 Consensus estimate.
- FY 2023 GF-GP revenue is forecast to decrease 1.4 percent to \$14,063.2 million, up \$1,171.1 million from the January 2022 Consensus estimate. FY 2023 SAF revenue is forecast to increase 1.3 percent to \$17,637.0 million, up \$1,390.4 million from the January 2022 Consensus estimate.
- FY 2024 GF-GP revenue is forecast to decrease 0.4 percent to \$14,010.9 million, up \$696.6 million from the January 2022 Consensus estimate. FY 2024 SAF revenue is forecast to increase 2.4 percent to \$17,798.9 million, up \$1,241.1 million from the January 2022 Consensus estimate.

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



Economic Outlook

- Real GDP rose 5.7 percent in 2021. Economic growth will slow with real GDP forecast to rise 2.5 percent in 2022, 1.9 percent in 2023 and 2.1 percent in 2024.
- U.S. employment rose 2.8 percent in 2021, and is forecasted to increase 4.0 percent in 2022, 1.3 percent in 2023 and 0.6 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 3.6 percent in 2022 before rising slightly to 3.8 percent in 2023 and to 3.9 percent in 2024.
- Housing starts rose 16.0 percent in 2021. Starts are expected to rise 2.9 percent in 2022, then decrease 5.8 percent in 2023 and then decline 0.1 percent in 2024.
- In 2021, light vehicle sales rose slightly to 14.9 million units. With the current semiconductor shortage expected to ease in late 2022, light vehicle sales are forecast to strengthen. Sales are expected to increase to 15.2 million units in 2022, 16.3 million units in 2023 and 17.0 million units in 2024.
- The U.S. CPI rose 4.7 percent in 2021. Inflation will accelerate in 2022 but subsequently slow. The national CPI is forecast to increase 7.3 percent in 2022, 4.1 percent in 2023 and 2.7 percent in 2024.

Michigan Economic Outlook

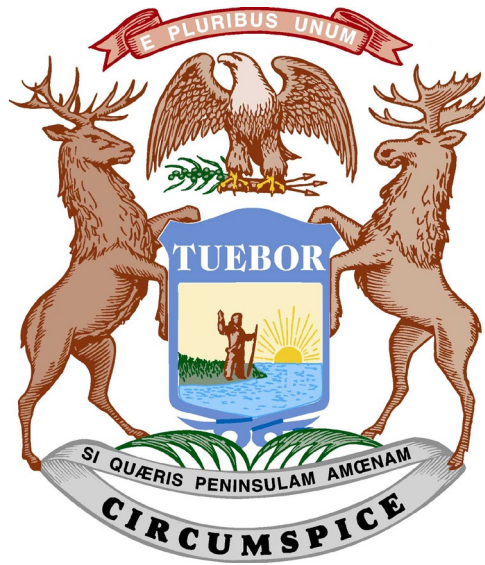
- In 2021, Michigan wage and salary employment rose 3.8 percent, State job growth will continue, although slowing in later years. Michigan employment is expected to increase 3.8 percent in 2022, 1.7 percent in 2023 and 0.9 percent in 2024.
- The Michigan unemployment rate fell from 10.0 percent in 2020 to 5.9 percent in 2021. The State labor market will tighten with the Michigan unemployment rate forecast to drop to 4.4 percent in 2022, remain unchanged in 2023 and then drop to 4.1 percent in 2024.
- Michigan wages and salaries rose 9.0 percent in 2021 and are forecast to increase 9.8 percent in 2022, 5.4 percent in 2023 and 3.6 percent in 2024.
- Michigan personal income increased 5.2 percent in 2021 and is forecast to rise 2.7 percent in 2022, increase 5.9 percent in 2023 and increase 4.1 percent in 2024.

Forecast Risks

- The Fed may raise interest rates substantially higher and/or accelerate quantitative tightening substantially faster than expected. The more restrictive monetary policy coupled with unforeseen shocks related to the global pandemic and/or the Russia-Ukraine conflict could push the U.S. economy into a recession.
- If the supply-side challenges fail to subside or worsen, the U.S. economy could be pushed into a period of stagflation (high inflation along with a shrinking domestic economy).
- 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.
- Demand for new vehicles will be high this coming year, which could drive sales 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.

SECTION II

Economic Review



Economic Review

May 20, 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 9th 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

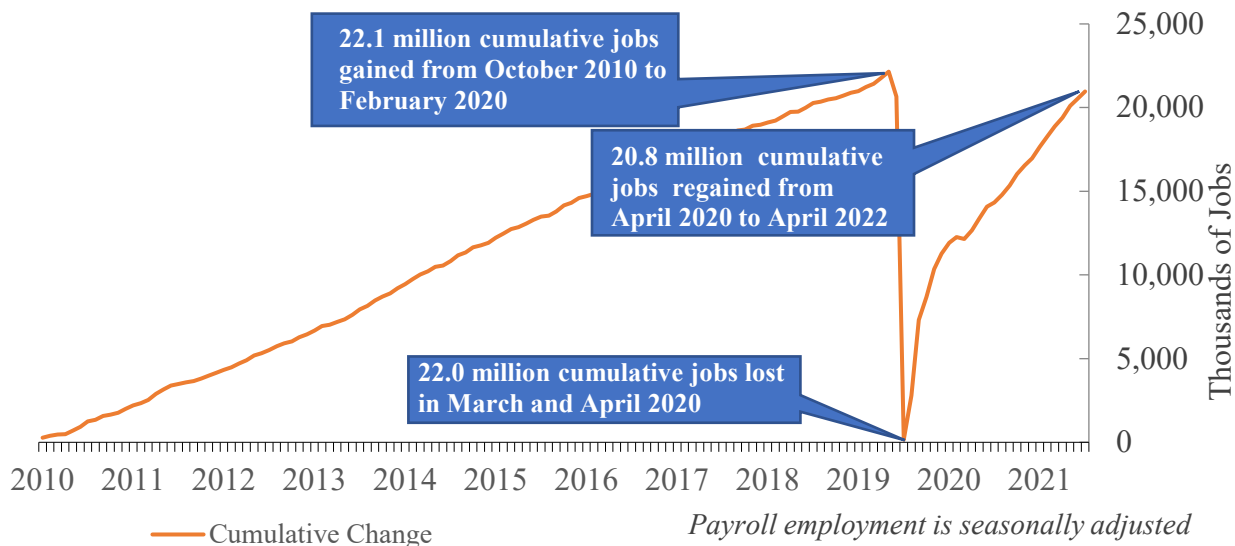
In the first quarter of 2020, the COVID-19 pandemic began to take hold in the U.S. As a result of COVID-19 and measures to contain the virus, the U.S. economy stalled with real GDP declining at a 5.1 percent annual rate in the first quarter of 2020 and plummeting in the second quarter at a record 31.2 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, growth but then accelerated in 2021Q4 to a 6.9 percent annual rate. In 2022Q1, real GDP declined at a 1.4 percent rate with a sharp increase in imports and decline in exports more than accounting for the overall decline. In 2022Q1, the level of real GDP stood 2.8 percent above its pre-pandemic 2019Q4 level.

After rising in 113 consecutive months and gaining a cumulative 22.1 million jobs, U.S. employment fell by 1.5 million jobs in March 2020 and then plummeted a record 20.5 million jobs in April. Wage and salary employment rose each month from May through November, regaining more than half of the 22.0 million jobs lost in March and April. After declining by 115,000 jobs in December, wage and salary employment stood 10.0 million jobs below its February 2020 pre-pandemic level.

In 2021, wage and salary employment rose each month with monthly gains averaging over a half million jobs and employment rising a cumulative 6.7 million jobs over the course of the year. Monthly job gains continued into 2022 with the U.S. economy adding another 2.1 million jobs over the first four months of the year. Since May 2020, U.S. wage and salary employment has increased a net 20.8 million jobs and is only 1.2 million jobs (0.8 percent) below February 2020 levels, prior to pandemic.

Cumulative Change in U.S. Payroll Employment



Source: Bureau of Labor Statistics.

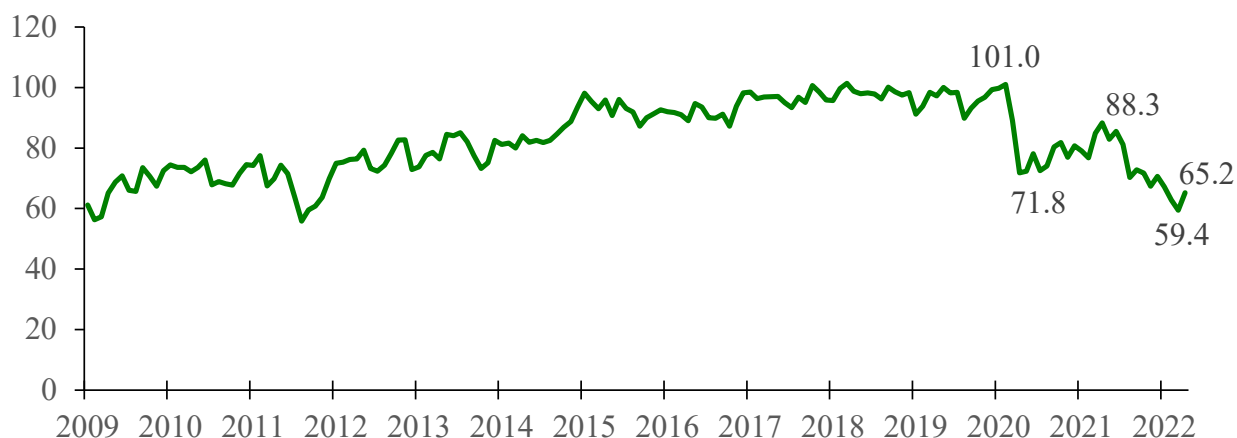
With the massive job losses in March and April of 2020, the unemployment rate rose sharply from 3.5 percent in February to a record high 14.7 percent in April. Employment recovered with the unemployment rate falling each month between May and November 2020.

The unemployment rate fell slightly over the first three months of 2021 dropping to 6.0 percent in March 2021 and was 5.9 percent by June. The unemployment rate dropped each month between July 2021 and December 2021. In March 2022, the unemployment rate had fallen to 3.6 percent, where it remained in April. – 11.1 percentage points below the April 2020 peak and only 0.1 percentage point above the February 2020 pre-pandemic rate.

Further underlining the extreme tightness of current labor markets, job openings and quit rates have recently soared. In March 2022, job openings rose to a record high 11.5 million job openings and the number of times employees have quit their current jobs rose to a record high 4.5 million. Compared to the pre-pandemic February 2020 level of job openings, March 2022 job openings were up 64.8 percent. Similarly, the job openings rate (number of job openings divided by the sum of job openings and employment) has jumped 1.7 percentage points from 4.4 percent to a record high 7.1 percent.

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 over eight 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 due to concerns about rapidly rising inflation. Consequently, in March 2022, consumer sentiment fell to a new pandemic low. While sentiment improved modestly in April, the April 2022 sentiment reading remained 23.2 points below last April's level and 35.8 points below the pre-pandemic February 2020 level.

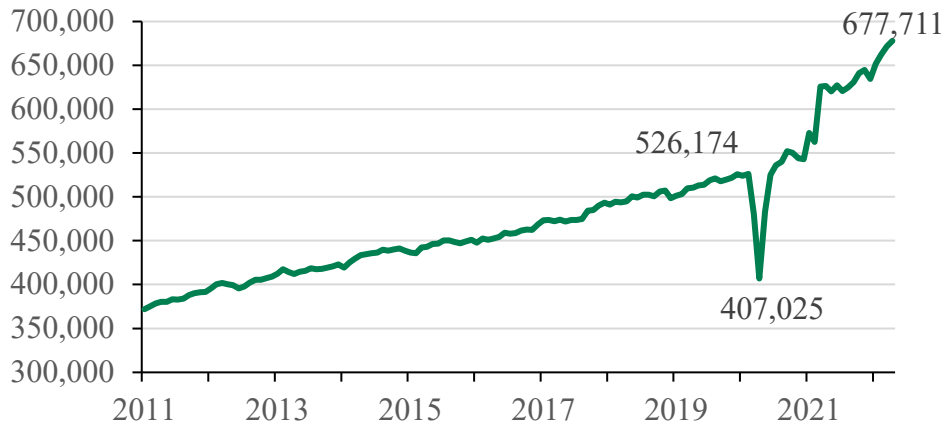
Index of Consumer Sentiment U of M Consumer Survey



Source: University of Michigan Survey Research Center

Retail sales fell 5.8 percent in March 2020 year-over-year (y-o-y) and then plummeted a record 20.2 percent y-o-y in April. However, since June 2020, 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 2.2 percent to 9.3 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 slight increases and decreases. In each of the following four months (August-November), retail sales rose from the prior month with increases ranging between 0.7 percent and 1.6 percent. Retail sales declined 1.6 percent in December 2021 and rebounded 2.7 percent in January 2022. In the each of the recent three months (February-April), retail sales have risen from the prior month, but at a decelerating pace. However, retail sales have remained strong in recent months despite the government stimulus's winding down. Rising inflation, which can either boost or crimp nominal retail spending, has not substantially slowed retail spending.

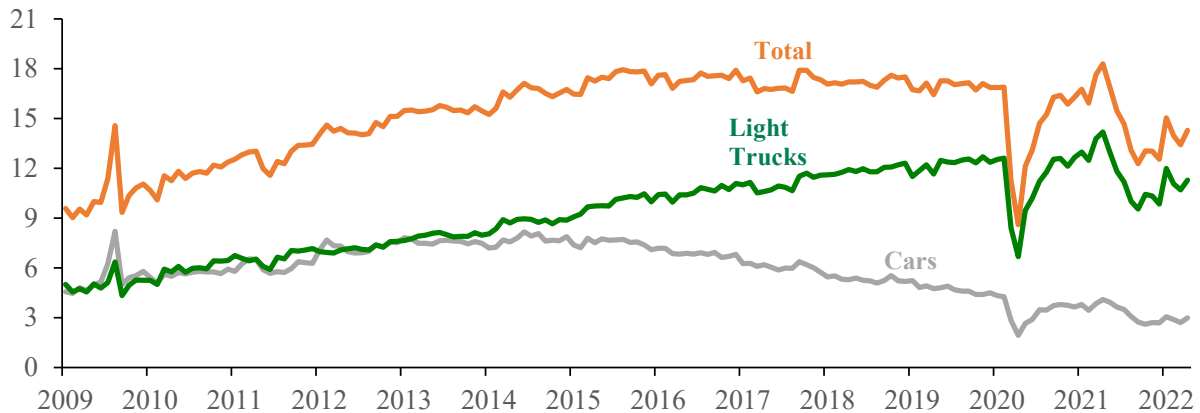
Retail Sales Decline and Recover Sharply Annual Sales Rate, Millions of Dollars



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 13.0 million unit rate, before falling in November and December. In December, the annual sales rate dropped to 12.5 million units. Vehicle sales rebounded to a 15.0 million annual rate in January 2022 but then declined in both February and March. In March, the annual vehicle sales rate stood at 13.3 million units. In April 2022, sales rebounded modestly to a 14.3 million unit annual rate. However, year-to-date, 2022 light vehicle sales are down 17.4 percent from last year.

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. With supply constraints starting to ease, the national vehicle production y-o-y decline slowed to -7.4 percent in 2021Q4 and to -0.4 percent in 2022Q1.

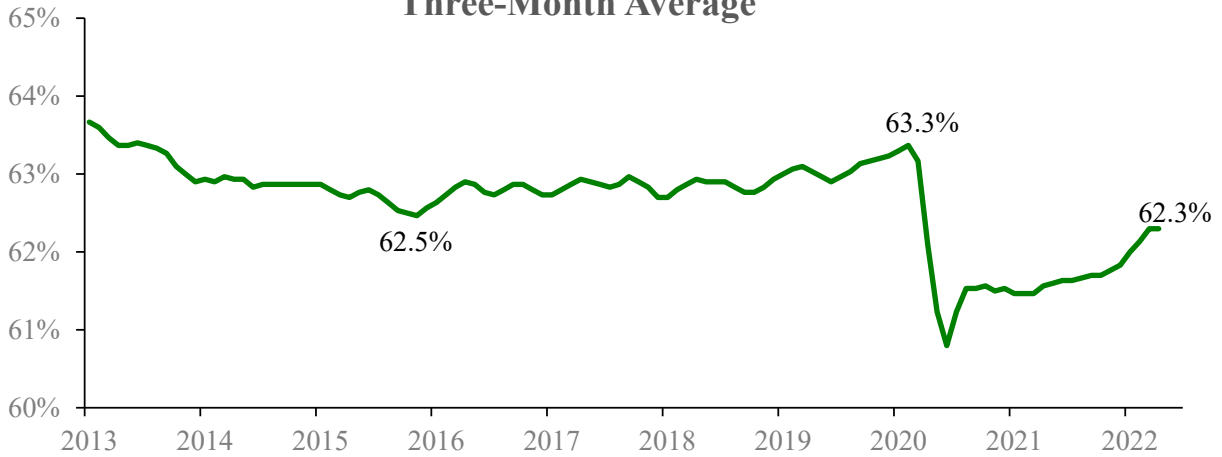
After falling modestly in February 2020, housing starts dropped sharply in both March and April. As a result, annualized starts dropped to a five-year monthly low of 938,000. Through the end of 2020, housing starts then rose in all but one of the following months (August). Housing starts then fell slightly 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. Between September 2021 and January 2022, starts fluctuated but remained above a 1.5 million unit annual rate each month. In February, starts rose to a 1.8 million unit annual rate – a 15-year high. Housing starts then fell slightly in March and April, but remained above a 1.7-million unit annual rate.

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 fell sharply with the rate dropping to 60.2 percent in April 2020. The rate rose to 61.5 percent by July 2020, the rate rose has risen modestly since – rising to 62.4 percent in March 2022 before falling slightly in April to 62.2 percent. Year-to-date through April 2022, the size of the U.S. labor force averaged 164.0 million persons. Had year-to-date U.S. labor force participation rate averaged 63.1 percent, the size of the y-t-d U.S. labor force would have been 166.1 million – 2.1 million persons larger.

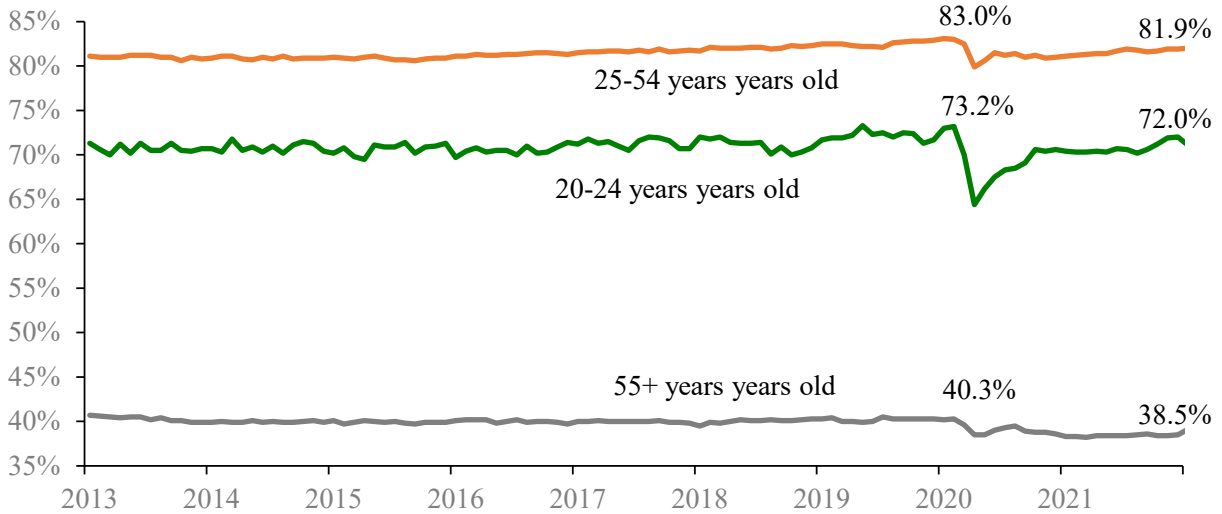
Spurred by COVID-19's more severe impact on older adults, increased early retirements accounted for a substantial share of the estimated 2.1-million-person reduction in labor force. Year-to-date through April, the 2022 average labor force participation rate of adults 55 years and older remained 1.3 percentage points below its pre-pandemic February 2020 rate. Year-to-date 2022, the labor force participation rate of younger adults (25-54 years old) remained 0.7 percentage point below its February 2020 rate. Lack of available/affordable childcare, and fear of catching COVID-19 contributed to the reduction in labor supply.

**U. S. Labor Force Participation Rate
January 2013 to April 2022
Three-Month Average**



Source: Bureau of Labor Statistics

**U. S. Labor Force Participation Rate
January 2013 to April 2022
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. In each of the most recent 11 months, overall consumer prices rose from the prior year more than 5.0 percent – the first such streak in 40 years. In March 2022, the overall consumer price index rose 8.5 percent y-o-y, which is the fastest y-o-y increase in over 40 years. Year-over-year CPI inflation slowed but only slightly to a still rapid 8.3 percent in April.

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 (both fiscal and monetary) and pent-up demand. In recent months, inflation's reach has expanded and become more entrenched.

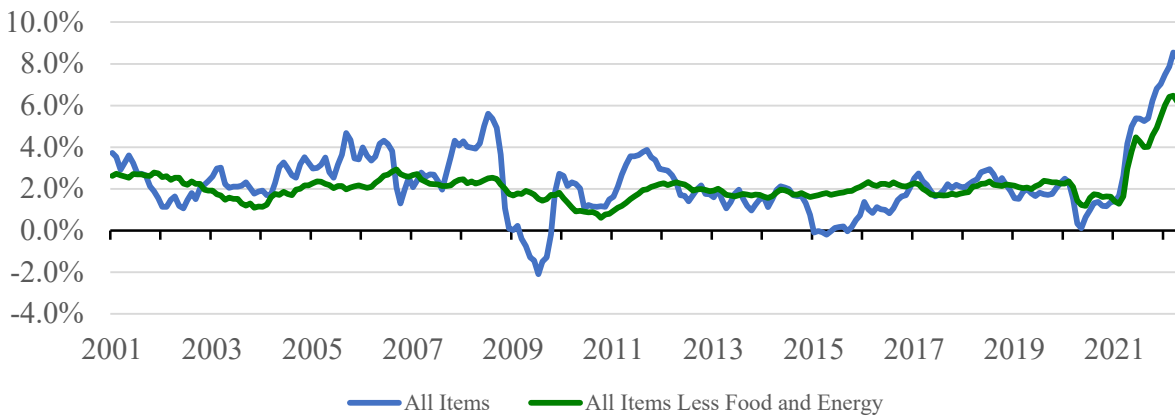
While falling or rising only slightly y-o-y in 2020, producer price increases accelerated substantially in each of the most recent 15 months with y-o-y increases accelerating from 1.6 percent in January 2021 to 11.5 percent in March 2022 (a record for the relatively brief current PPI series, which began in late 2009). Year-over-year PPI inflation slowed slightly in April to a still very rapid 11.0 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 9.6 percent by March 2022. Year-over-year core PPI inflation slowed in April to a still high 8.8 percent rate.

The y-o-y increase in average hourly earnings have exceeded 4.0 percent in each of the past 10 months and exceeded 5.0 percent in six of the most recent seven months. Year-to-date through April 2022, average hourly earnings are up 5.6 percent from the first four months of 2021.

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 April 2022, energy prices were up 30.3 percent from last April. The recently begun Russia-Ukraine war sustained rapidly rising energy and commodity prices increases. Food prices have also accelerated over the past year with food prices rising 9.4 percent in April – the category's largest y-o-y increase in over forty years.

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 11 months. In March, the core consumer price index was up 6.5 percent from last March – the fastest y-o-y core consumer price inflation in nearly 40 years. Core CPI inflation slowed slightly in April to 6.2 y-o-y.

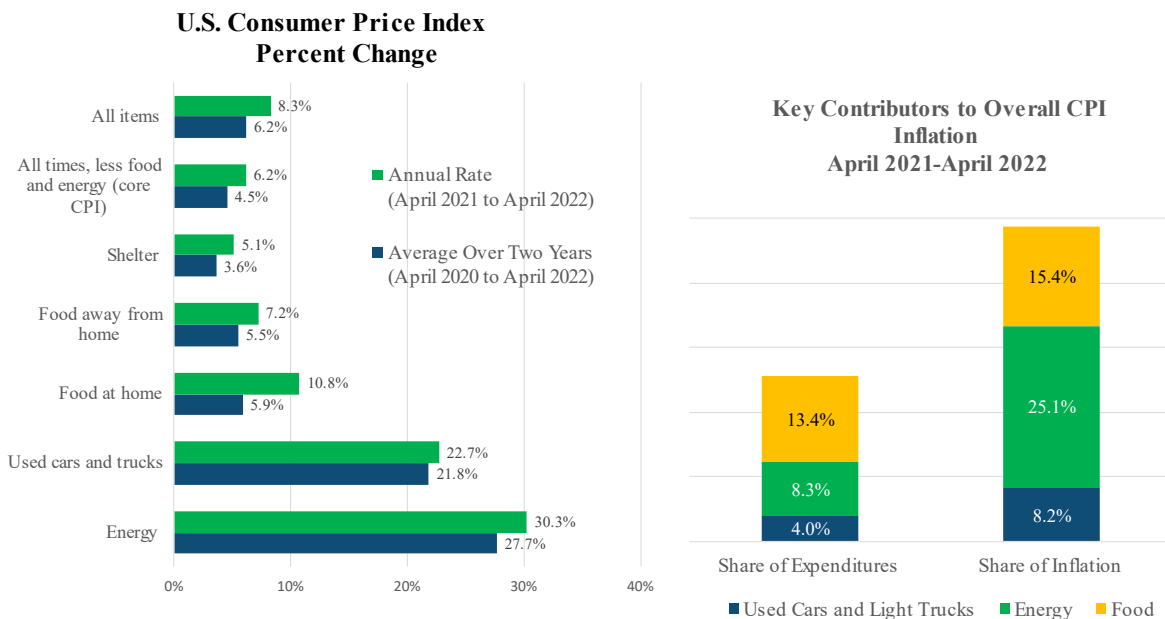
U.S. CPI Year-Over-Year Percent Change



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 has 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 12 months, used car and truck price inflation has exceeded 20.0 percent. In April 2022, used car and truck prices were up 22.3 percent from March 2021 -- slowing from recent months. New car and truck prices have accelerated in recent months – accelerating from a 1.2 percent y-o-y increase in February 2021 to a 13.2 percent y-o-y increase in April 2022 – the fastest recorded new car price increase.

Taken together, energy, food, and used car and truck prices accounted for 48.7 percent of the overall consumer price increase between April 2021 and April 2021 while accounting for 25.7 percent of consumer purchases. Energy alone accounted for 25.1 percent of the overall price increase –while accounting for only 8.3 percent of consumer purchases.



While currently lagging the overall inflation rate, shelter costs have steadily accelerated in recent months – rising 5.0 percent y-o-y in March 2022, the category’s fastest y-o-y increase in over 30 years. With prospective landlords buying a large number of houses in the current tight housing market, rising shelter costs (accounting for more than half of the CPI market basket) will likely accelerate and may serve to sustain current high inflation.

From January 2019 through the first year of the pandemic, the Federal Reserve’s preferred inflation gauge (the core personal consumption expenditure price index (the core PCE deflator)) 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 February 2022, the core PCE was up 5.3 percent from a year earlier – the fastest core PCE inflation in nearly 39 years. While core PCE deflator inflation slowed very slightly in March, core PCE deflator inflation, at 5.2 percent, remained above 5.0 percent for the third straight month – a streak last seen nearly 39 years ago.

Monetary and Fiscal Policy Actions

Monetary Policy

The Federal Reserve (Fed) took 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 quantitative easing through October 2021 raised the Fed’s

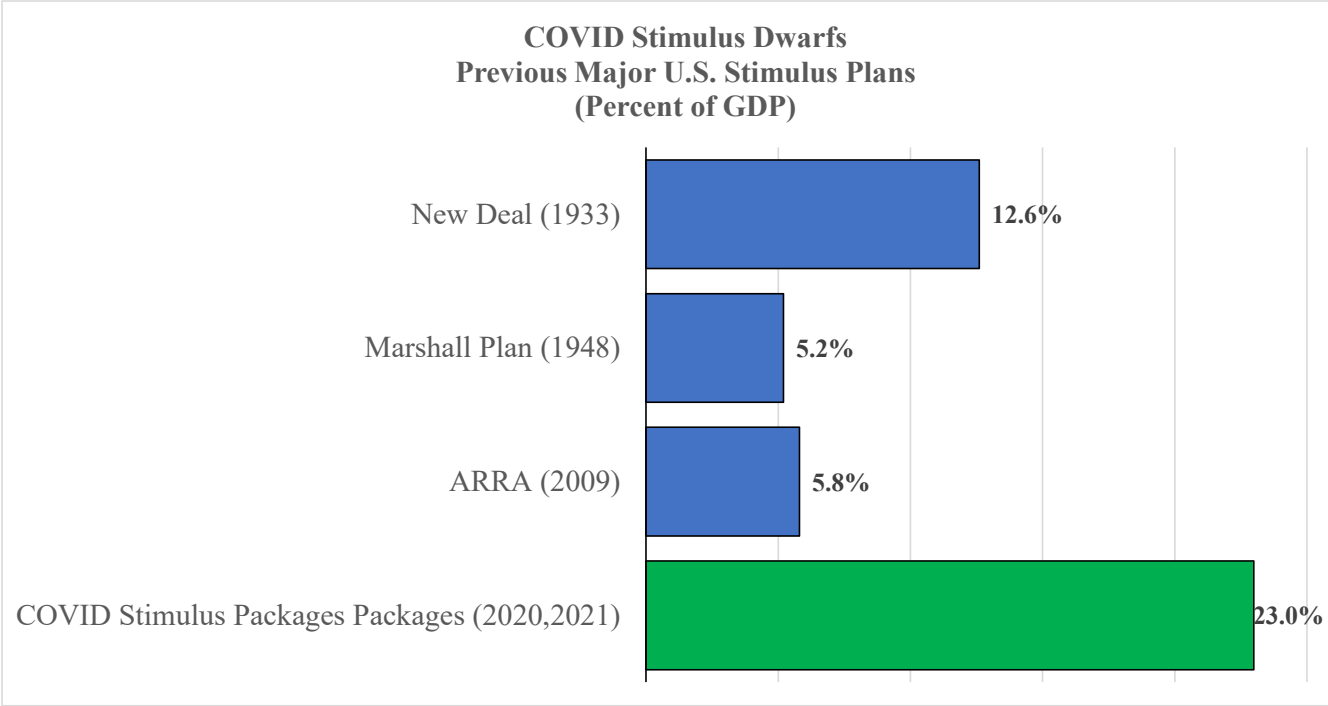
holdings to \$8.5 trillion – more than double (106.7 percent) its late February 2020 level. In November 2021, the Fed announced that it would begin tapering its quantitative easing program. A month later, the Fed accelerated its tapering efforts. As a result, the Fed fully ended its quantitative easing program as of March 2022 at which point Fed holding had risen to \$8.9 trillion. The Fed has announced that it will begin reducing its holdings of Treasury bonds and mortgage bond securities effective June 2022. The Fed stated that it would reduce holdings by up to \$47.5 billion per month through August and by up to \$95.0 billion per month in subsequent months.

After raising the target federal funds rate target range 25 basis points on March 16, 2022, the FOMC increased the target federal funds rate range an additional 50 basis points on May 4, 2022. The Fed last raised the federal funds rate by 50 basis points in 2000. The target rate range now stands at 0.75 percent-1.00 percent. The Fed anticipated “that ongoing increases in the target range will be appropriate.”

The Fed faces substantial challenges in seeking to contain inflation. While the Fed has tools to seek to contain demand pressures by raising interest rates and quantitative tightening, the monetary institution lacks tools with which to combat the numerous supply pressures arising from the severe COVID containment measures taken by China, and the Russian invasion of Ukraine and related economic sanctions. These external factors serve to accelerate inflation as well as hinder U.S. economic growth. In addition, the shift toward less reliance on foreign markets and subsequent greater reliance on domestic markets will exacerbate both demand-side and supply-side upward pressures on inflation.

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 \$1,400 stimulus payments to most persons in the U.S.; \$360 billion to state, local governments and tribes; \$125 billion for K-12 schools and \$40 billion for universities and colleges and \$123 billion in COVID-related policy along with an extension of the \$300 federal unemployment insurance payments through September 2021 and, for 2021, an increase in the Child Tax Credit to \$3,000 (\$3,600 for parents of children under 6).

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.

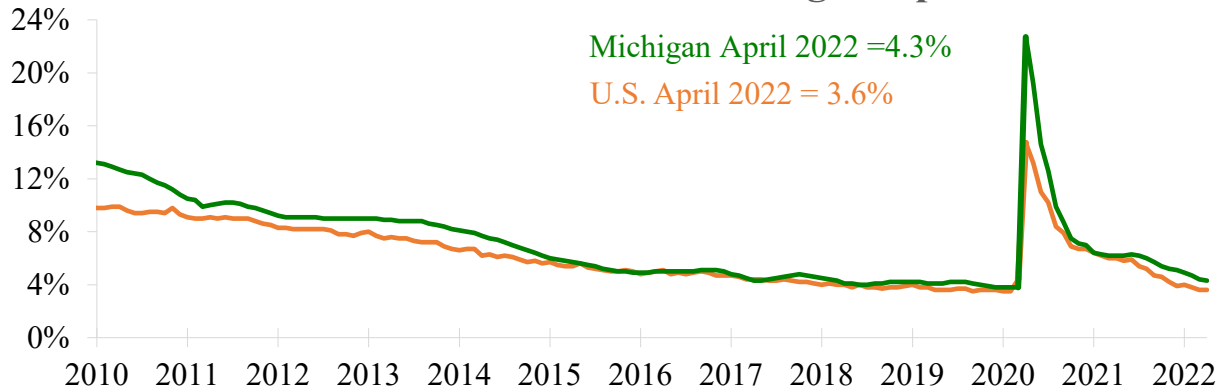
COVID-19 Economic Impact

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 (-36,300 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 2020, Michigan had regained a net 648,700 jobs.

State employment rose in each of the first three months of 2021 before falling slightly in April and rising slightly in May. Employment gains accelerated in June and July. After slowing in each of the following three months, job gains accelerated in October before slowing in November. State employment posted modest gains each between November 2021 and March 2022, inclusive. Employment fell slightly in April 2022. On net, Michigan regained 926,200 jobs between May 2020 and April 2022 – 87.9 percent of the jobs lost in March and April 2020.

With the massive employment losses, Michigan's unemployment rate rose sharply in April 2020, from 3.8 percent to 22.7 percent. The rate quickly dropped to 7.0 percent by December 2020 and declined to 4.3 percent in April 2022.

Monthly Unemployment Rates Have Trended Down Since Peaking in April 2020

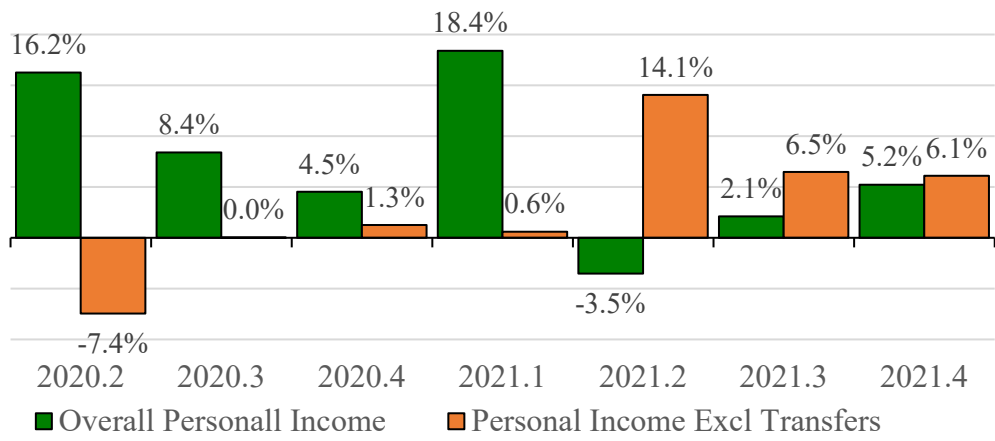


Source: Bureau of Labor Statistics.

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 13.2 percent from a year earlier, personal income *rose* 16.2 percent y-o-y. Michigan personal income increased at a still strong 8.4 percent y-o-y in 2020Q3 before slowing to 4.5 percent in 2020Q4. Then, in 2021, with the convergence of two federal stimulus packages, Michigan personal income rose 18.4 percent y-o-y before falling 3.5 percent from 2020Q2, when the massive CARES package was implemented. Michigan personal income increased 2.1 percent y-o-y in 2021Q3 and then rose 5.2 percent in 2021Q4.

Excluding transfer payments, which encompass the federal stimulus direct relief payments and all unemployment insurance payments, Michigan personal income dropped 7.4 percent y-o-y in 2020Q2, was essentially unchanged y-o-y in 2020Q3 and rose slightly y-o-y both in 2020Q4 and in 2021Q1. Michigan personal income excluding transfer payments rebounded sharply from a year earlier in 2021Q2. While slowing, state personal income excluding transfers still rose substantially in both 2021Q3 and 2021Q4 – increasing 6.5 percent and 6.1 percent, respectively.

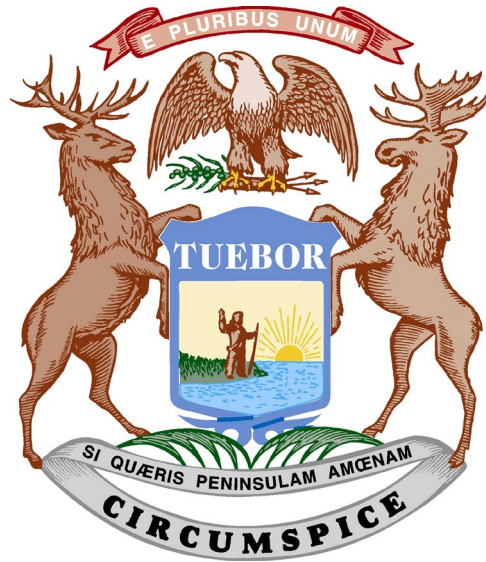
Michigan Personal Income Year-over-Year Change



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

SECTION III

Administration Economic Forecast



Administration Economic Forecast May 20, 2022

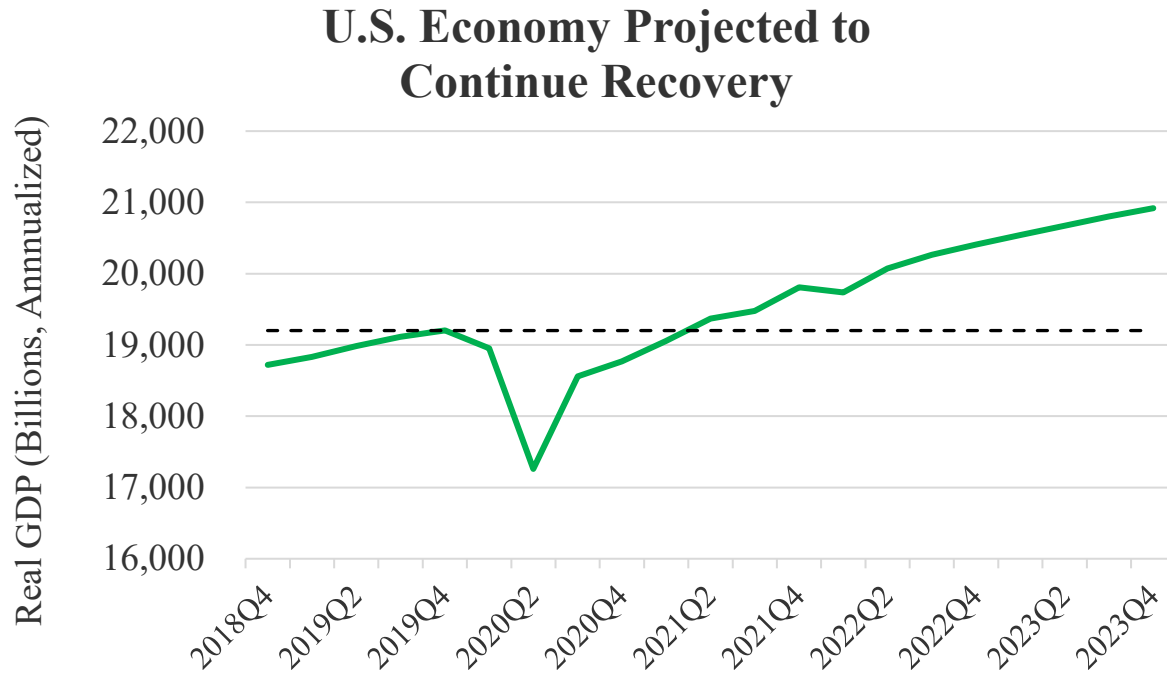
Administration Economic Forecast Summary

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

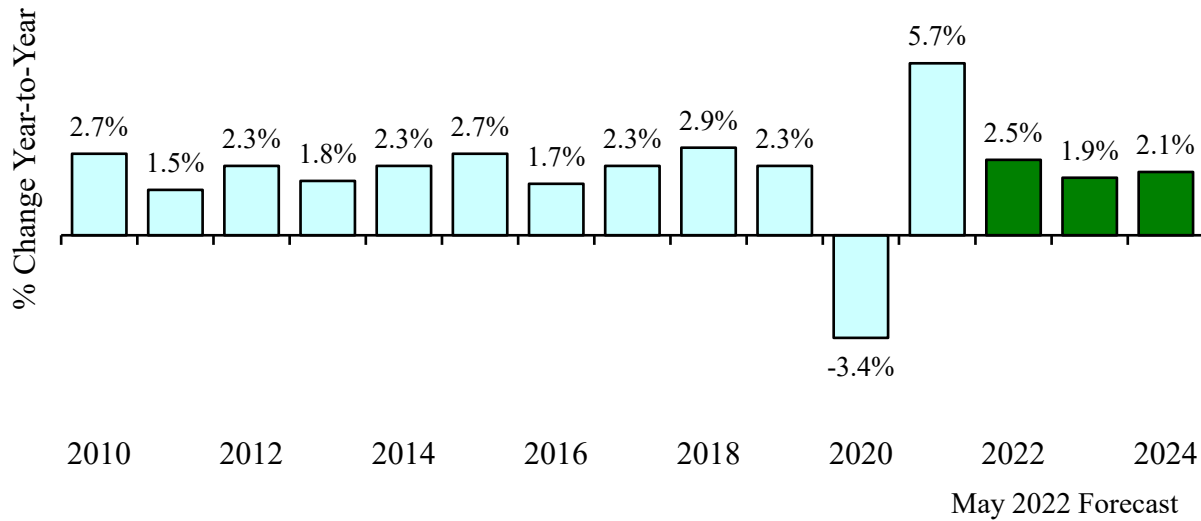
Real (inflation adjusted) GDP is expected to increase over the forecast horizon. After declining 3.4 percent in 2020 (the largest annual decline since 1946), real GDP rose 5.7 percent in calendar year 2021 – the fastest annual real GDP growth since 1984. Real GDP is forecast to rise 2.5 percent in 2022, increase 1.9 percent in 2023 and rise 2.1 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 8.7 percent from its level five years earlier, directly before the pandemic in 2019Q4.



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

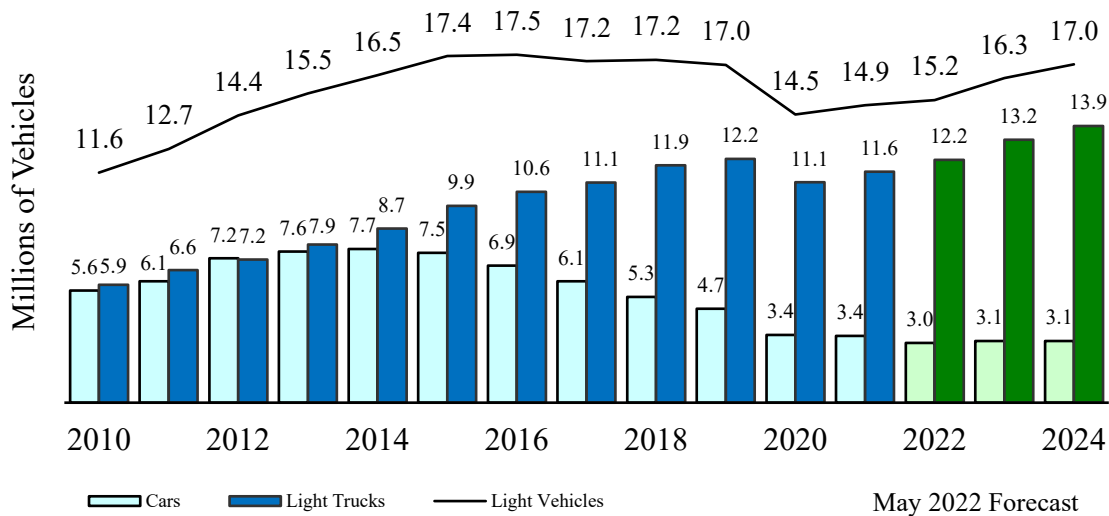
Real GDP Growth Continues Across the Forecast At a Modest Pace



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, May 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 gradually over the forecast horizon – rising to 15.2 million units in 2022, 16.3 million units in 2023 and 17.0 million units in 2024. Light trucks continue to dominate the light vehicle market over the forecast horizon.

Vehicle Sales Rebound Gradually in 2022, 2023, 2024



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

Table 1
Administration Economic Forecast

May 20, 2022

	Calendar 2020 Actual	Percent Change from Prior Year	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
United States										
Real Gross Domestic Product (Billions of Chained 2012 Dollars)	\$18,385	-3.4%	\$19,427	5.7%	\$19,913	2.5%	\$20,291	1.9%	\$20,717	2.1%
Implicit Price Deflator GDP (2012 = 100)	113.6	1.2%	118.4	4.2%	125.5	6.0%	130.1	3.7%	133.4	2.5%
Consumer Price Index (1982-84 = 100)	258.811	1.2%	270.970	4.7%	290.649	7.3%	302.432	4.1%	310.638	2.7%
Consumer Price Index - Fiscal Year (1982-84 = 100)	258.014	1.4%	266.616	3.3%	286.260	7.4%	299.977	4.8%	308.733	2.9%
Personal Consumption Deflator (2012 = 100)	111.2	1.2%	115.5	3.9%	122.1	5.7%	126.1	3.3%	129.3	2.5%
3-month Treasury Bills Interest Rate (percent)	0.4		0.1		1.4		3.1		3.3	
Unemployment Rate - Civilian (percent)	8.1		5.3		3.6		3.8		3.9	
Wage and Salary Employment (millions)	142.186	-5.8%	146.124	2.8%	151.970	4.0%	153.950	1.3%	154.870	0.6%
Housing Starts (millions of starts)	1.380	6.9%	1.601	16.0%	1.647	2.9%	1.551	-5.8%	1.550	-0.1%
Light Vehicle Sales (millions of units)	14.5	-14.7%	14.9	3.3%	15.2	1.7%	16.3	7.2%	17.0	4.3%
Passenger Car Sales (millions of units)	3.4	-27.9%	3.4	-1.5%	3.0	-10.4%	3.1	3.3%	3.1	0.0%
Light Truck Sales (millions of units)	11.1	-9.6%	11.6	4.8%	12.2	5.2%	13.2	8.2%	13.9	5.3%
Big 3 Share of Light Vehicles (percent)	40.5		35.9		38.8		38.1		37.3	
Michigan										
Wage and Salary Employment (thousands)	4,039	-9.1%	4,194	3.8%	4,353	3.8%	4,427	1.7%	4,467	0.9%
Unemployment Rate (percent)	10.0		5.9		4.4		4.4		4.1	
Personal Income (millions of dollars)	\$530,809	7.9%	\$558,330	5.2%	\$573,405	2.7%	\$607,235	5.9%	\$632,132	4.1%
Real Personal Income (millions of 1982-84 dollars)	\$223,349	6.8%	\$225,310	0.9%	\$215,783	-4.2%	\$219,769	1.8%	\$222,811	1.4%
Wages and Salaries (millions of dollars)	\$242,644	-1.8%	\$264,563	9.0%	\$290,490	9.8%	\$306,177	5.4%	\$317,199	3.6%
Detroit Consumer Price Index (1982-84 = 100)	237.659	1.0%	247.805	4.3%	265.732	7.2%	276.306	4.0%	283.708	2.7%
Detroit CPI - Fiscal Year (1982-84 = 100)	237.292	1.5%	244.089	2.9%	261.886	7.3%	274.070	4.7%	281.978	2.9%

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 3.6 percent in 2022 and then rise to 3.8 percent in 2023 before rising slightly to 3.9 percent in 2024.

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 4.0 percent in 2022, increase 1.3 percent in 2023 and rise 0.6 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 7.3 percent in 2022, increase 4.1 percent in 2023 and increase 2.7 percent in 2024. The personal consumption price deflator rate is projected to rise 5.7 percent in 2022, 3.3 percent in 2023, and 2.5 percent in 2024.

The **three-month Treasury bill rate** averaged 0.1 percent in 2021, during which the federal funds rate remained near zero. With the Fed expected to raise the federal funds rate through mid-2023, the Treasury bill rate is expected to average 1.4 percent in 2022, 3.1 percent in 2023 and 3.3 percent in 2024.

Housing starts jumped 16.0 percent in 2021. In 2022, housing starts are forecast to increase 2.9 percent, and then fall 5.8 percent in 2023 before declining very slightly in 2024.

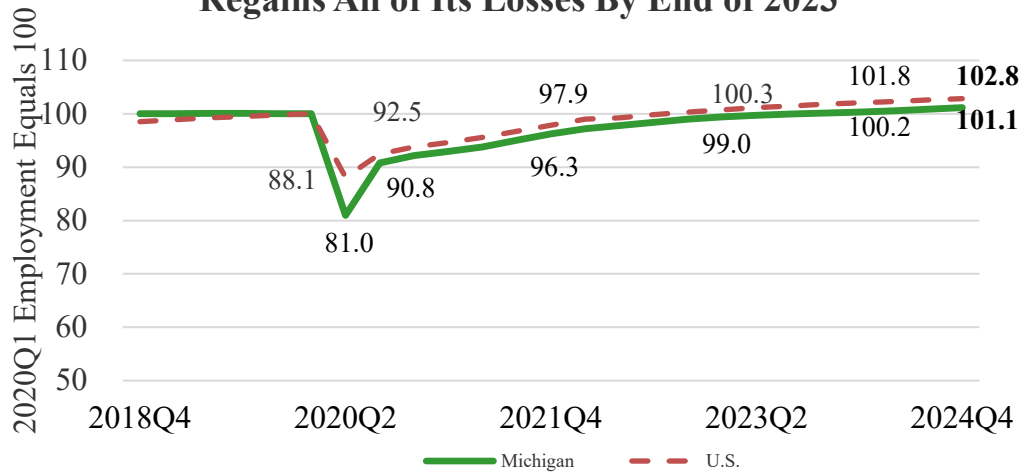
2022, 2023 and 2024 Michigan Economic Outlook

Michigan wage and salary employment is forecast to rise over each quarter of the forecast horizon. By 2022Q1, Michigan employment had regained 97.2 percent of its 19.0 percent decline in 2020Q2. As a result, 2022Q1 Michigan employment remained 2.8 percent below its 2020Q1 level. Michigan employment is expected to be down 1.0 percent from its pre-pandemic level at the end of 2022 but be 0.2 percent above its pre-pandemic level in 2023Q4.

In 2020, annual Michigan wage and salary employment declined 9.1 percent -- the largest annual Michigan employment decline since 1958. Michigan employment rose 3.8 percent in 2021 and is forecast to rise 3.8 percent in 2022, 1.7 percent in 2023 and 0.9 percent in 2024.

In 2020, annual **Michigan manufacturing employment** dropped 11.1 percent. Michigan manufacturing employment increased 4.8 percent in 2021 and is forecast to rise 4.7 percent in 2022, 2.6 percent in 2023 and 0.1 percent in 2024.

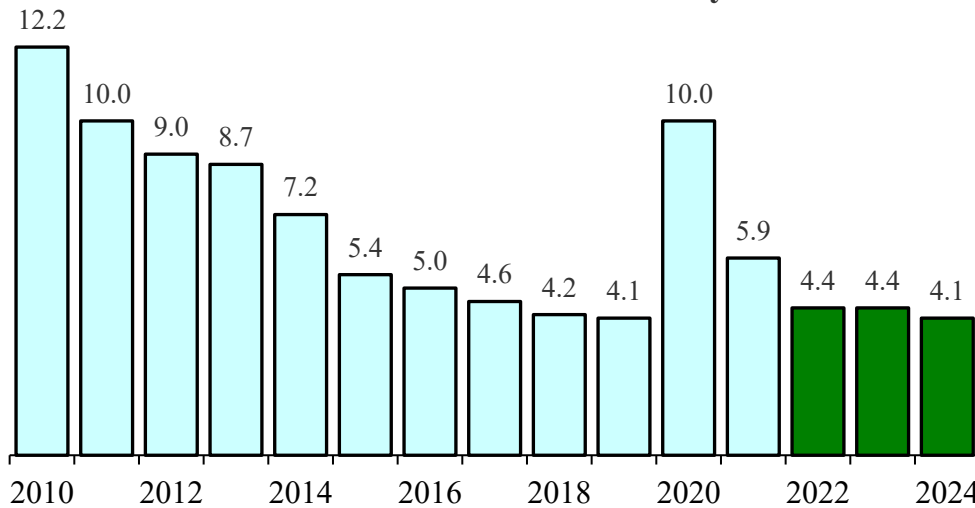
Michigan Employment Plummeted in 2020Q2 Regains All of Its Losses By End of 2023



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

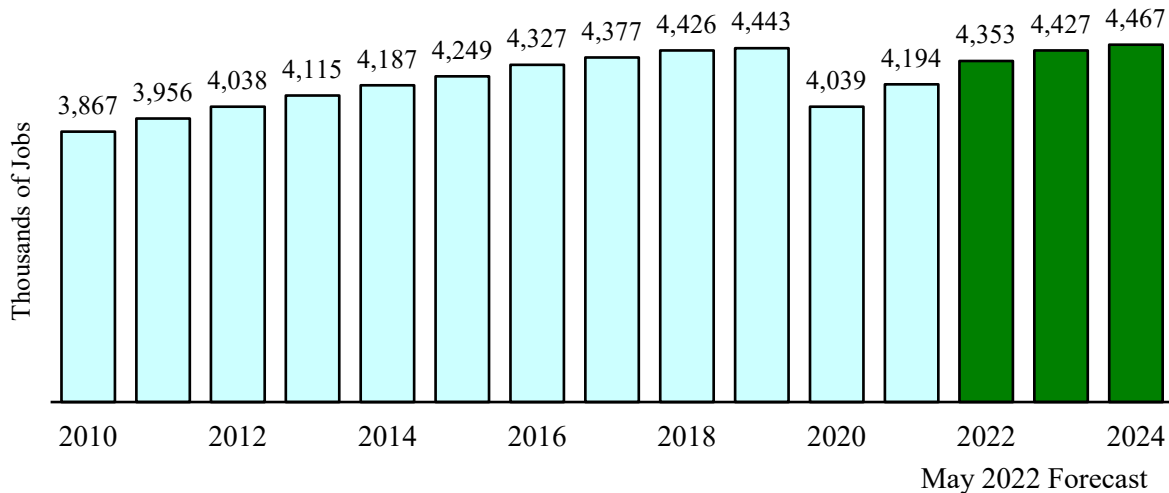
The **Michigan unemployment rate** rose to 10.0 percent in 2020 before falling to 5.9 percent in 2021. The rate is forecast to decline to 4.4 percent in 2022, remain unchanged in 2023 at 4.4 percent and decline to 4.1 percent in 2024.

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



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

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



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

Michigan wages and salaries rose 9.0 percent in 2021 and are forecast to rise 9.8 percent in 2022, 5.4 percent in 2023 and 3.6 percent in 2024.

Michigan personal income rose 5.2 percent in 2021 and is forecast to increase 2.7 percent in 2022. Personal income is then expected to rise 5.9 percent in 2023 and rise 4.1 percent in 2024.

The **Detroit CPI** rose 4.3 percent in 2021 and is forecast to increase 7.2 percent in 2022, 4.0 percent in 2023 and 2.7 percent in 2024. After rising 0.9 percent in 2021, **real (inflation adjusted) Michigan personal income** is forecast to fall 4.2 percent in 2022 and then increase 1.8 percent in 2023, followed by a 1.4 percent increase in 2024.

Fiscal Year Economics

Michigan’s largest taxes are the individual income tax (\$14.5 billion in FY 2021) and sales and use taxes (\$12.0 billion). Income tax withholding is the largest component of the income tax. Withholding (\$11.1 billion) is most affected by growth in wages and salaries. **Michigan wages and salaries** increased 7.1 percent in FY 2021. In FY 2022, wages and salaries are forecast to increase 9.8 percent. Wages and salaries then are projected to rise 6.3 percent in FY 2023 and to increase 4.2 percent in FY 2023.

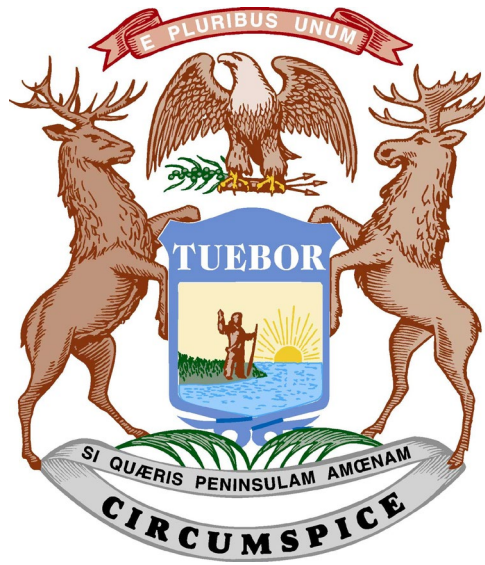
Sales and use taxes depend, in part, on **Michigan disposable (after tax) income** and inflation. Disposable income rose 4.3 percent in FY 2021. In FY 2022, disposable income is forecast to rise 0.5 percent, and is then projected to increase 6.1 percent in FY 2023 and to rise 4.8 percent in FY 2024. Prices, as measured by the **Detroit CPI**, rose 2.9 percent in FY 2021. The Detroit CPI is forecast to increase 7.3 percent in FY 2022, 4.7 percent in FY 2023, and 2.9 percent in FY 2024.

Forecast Risks

The risks to the baseline forecast are weighted to the downside and include:

- Given the high level of current inflation and the numerous external challenges the Fed is currently facing, the Fed may raise interest rates substantially higher and/or accelerate quantitative tightening substantially faster than expected. The more restrictive monetary policy coupled with unforeseen shocks related to the global pandemic and/or the Russia-Ukraine conflict could push the U.S. economy into a recession.
- The baseline forecast assumes that supply chain problems and supply chain shortages induced by the pandemic and policies to contain the virus both domestically and abroad and by the Russia-Ukraine war will subside and thus moderate inflation and support continued economic growth. If the supply-side challenges fail to subside or worsen, the U.S. economy could be pushed into a period of stagflation (high inflation along with a shrinking domestic economy).
- The Russia-Ukraine conflict and economic sanctions could accelerate and sustain inflation at faster rates than forecast and could also have a greater negative impact on domestic economic activity.
- 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.
- Demand for new vehicles will be high this coming year, which could drive sales 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 along with increasing inflation faster than expected.

SECTION IV
Administration
Revenue Estimates



Administration Revenue Estimates **May 20, 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 2022 Revenue Outlook

FY 2022 GF-GP revenue is estimated to be \$14,268.6 million, a 9.7 percent increase compared to FY 2021. The FY 2022 GF-GP revenue estimate is \$1,818.9 million above the January 2022 Consensus estimate. SAF revenue is forecast to be \$17,408.9 million, a 8.4 percent increase compared to FY 2021. The FY 2022 SAF estimate is \$1,330.7 million above the January 2022 Consensus estimate (see Table 2).

Table 2
FY 2021-22 Administration Revenue Estimates
 (millions)

	Administration May 20, 2022		Change from Jan 2022 Consensus
	Amount	Growth	
General Fund - General Purpose			
Baseline Revenue	\$16,029.6	7.8%	---
Tax Cut Adjustments	(\$1,761.0)	---	---
Net Resources	\$14,268.6	9.7%	\$1,818.9
School Aid Fund			
Baseline Revenue	\$17,341.5	7.0%	---
Tax Cut Adjustments	\$67.4	---	---
Net Resources	\$17,408.9	8.4%	\$1,330.7
Combined			
Baseline Revenue	\$33,371.1	7.4%	---
Tax Cut Adjustments	(\$1,693.6)	---	---
Net Resources	\$31,677.5	9.0%	\$3,149.6

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 \$14,063.2 million, a 1.4 percent decrease compared to FY 2022. The FY 2023 GF-GP revenue estimate is \$1,171.1 million above the January 2022 Consensus estimate. SAF revenue is forecast to be \$17,637.0 million, a 1.3 percent increase compared to FY 2022. The FY 2023 SAF estimate is \$1,390.4 million above the January 2022 Consensus estimate (see Table 3).

Table 3
FY 2022-23 Administration Revenue Estimates
(millions)

	Administration May 20, 2022		Change from Jan 2022 Consensus
	Amount	Growth	
General Fund - General Purpose			
Baseline Revenue	\$15,436.2	-3.7%	---
Tax Cut Adjustments	(\$1,373.0)	---	---
Net Resources	\$14,063.2	-1.4%	\$1,171.1
School Aid Fund			
Baseline Revenue	\$17,782.3	2.5%	---
Tax Cut Adjustments	(\$145.3)	---	---
Net Resources	\$17,637.0	1.3%	\$1,390.4
Combined			
Baseline Revenue	\$33,218.5	-0.5%	---
Tax Cut Adjustments	(\$1,518.3)	---	---
Net Resources	\$31,700.2	0.1%	\$2,561.5

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

FY 2024 Revenue Outlook

FY 2024 GF-GP revenue is forecast to decrease 0.4 percent to \$14,010.9 million from FY 2023. The FY 2024 GF-GP revenue estimate is \$696.6 million above the January 2022 Consensus estimate. FY 2024 SAF revenue is forecast to increase 0.9 percent to \$17,798.9. from FY 2023. The FY 2024 SAF estimate is \$1,241.1 million above the January 2022 Consensus estimate (see Table 4).

Table 4
FY 2023-24 Administration Revenue Estimates
(millions)

	May 20, 2022		Change from Jan 2022 Consensus
	Amount	Growth	
General Fund - General Purpose			
Baseline Revenue	\$15,290.8	-0.9%	---
Tax Cut Adjustments	(\$1,279.9)	---	---
Net Resources	\$14,010.9	-0.4%	\$696.6
School Aid Fund			
Baseline Revenue	\$17,951.3	1.0%	---
Tax Cut Adjustments	(\$152.4)	---	---
Net Resources	\$17,798.9	0.9%	\$1,241.1
Combined			
Baseline Revenue	\$33,242.1	0.1%	---
Tax Cut Adjustments	(\$1,432.3)	---	---
Net Resources	\$31,809.8	0.3%	\$1,937.7

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

Constitutional Revenue Limit

Article IX, Section 26, of the Michigan Constitution establishes a limit on the amount of revenue State government can collect in any given fiscal year. The revenue limit for a given fiscal year is equal to 9.49 percent of the State’s personal income for the calendar year prior to the year in which the fiscal year begins. For example, FY 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 \$11.9 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 \$8.1 billion below the limit, FY 2022 revenues \$8.7 billion below the limit, FY 2023 revenues \$11.0 billion below the limit, and FY 2023 revenues \$12.0 billion below the limit (See Table 5).

Table 5
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>Actual</u>	<u>Admin</u>	<u>Admin</u>	<u>Admin</u>	<u>Admin</u>
	<u>June 2021</u>	<u>May 2022</u>	<u>May 2022</u>	<u>May 2022</u>	<u>May 2022</u>
Revenue Subject to Limit	\$34,052.0	\$38,554.5	\$41,699.8	\$42,030.4	\$42,418.4
<u>Revenue Limit</u>	<u>CY 2018</u>	<u>CY 2019</u>	<u>CY 2020</u>	<u>CY 2021</u>	<u>CY 2022</u>
Personal Income	\$484,030	\$491,632	\$530,809	\$558,411	\$573,405
Ratio	9.49%	9.49%	9.49%	9.49%	9.49%
Revenue Limit	\$45,934.4	\$46,655.9	\$50,373.8	\$52,993.2	\$54,416.1
<u>Amount Under (Over) Limit</u>	\$11,882.5	\$8,101.4	\$8,674.0	\$10,962.8	\$11,997.7

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 and 2023. This results in a pay-in for FY 2022 of \$36.4 million and a pay-in for FY 2024 of \$11.3 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 1.0473 (See Table 6). For FY 2024, the SAF revenue adjustment factor is calculated to be 1.0175 (See Table 7).

Table 6
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	\$16,208.9	\$17,341.5	\$17,782.3
Balance Sheet Adjustments	(\$152.3)	\$67.4	(\$145.3)
Net SAF Estimates	<u>\$16,056.6</u>	<u>\$17,408.9</u>	<u>\$17,637.0</u>
Subtotal Adjustments to FY 2023 Base	<u>\$7.0</u>	<u>(\$212.7)</u>	<u>\$0.0</u>
Baseline Revenue on a FY 2023 Base	\$16,063.6	\$17,196.2	\$17,637.0

School Aid Fund Revenue Adjustment Calculation for FY 2023

Sum of FY 2021 & FY 2022	\$16,063.6	+	\$17,196.2	=	\$33,259.8
Sum of FY 2022 & FY 2023	\$17,196.2	+	\$17,637.0	=	\$34,833.3

FY 2023 Revenue Adjustment Factor	1.0473
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Note: Factor is calculated off a FY 2023 base year.

Table 7
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	\$17,341.5	\$17,782.3	\$17,951.3
Balance Sheet Adjustments	<u>\$67.4</u>	<u>(\$145.3)</u>	<u>(\$152.4)</u>
Net SAF Estimates	\$17,408.9	\$17,637.0	\$17,798.9
Subtotal Adjustments to FY 2024 Base	<u>(\$219.8)</u>	<u>(\$7.1)</u>	<u>\$0.0</u>
Baseline Revenue on a FY 2024 Base	\$17,189.1	\$17,629.9	\$17,798.9

School Aid Fund Revenue Adjustment Calculation for FY 2023

Sum of FY 2022 & FY 2023	\$17,189.1	+	\$17,629.9	=	\$34,819.0
Sum of FY 2023 & FY 2024	\$17,629.9	+	\$17,798.9	=	\$35,428.8

FY 2024 Revenue Adjustment Factor	1.0175
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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 8 and 9). Tax totals for the income, sales, use, CIT/MBT, tobacco and casino taxes for all funds are also included (See Table 10).

Table 8
Administration General Fund General Purpose Revenue Detail
(millions)

	FY 2022		FY 2023		FY 2024	
	Amount	Growth	Amount	Growth	Amount	Growth
GF-GP Tax Amounts						
Income Tax	\$8,993.1	16.6%	\$8,834.0	-1.8%	\$8,781.7	-0.6%
Sales	\$1,593.9	8.4%	\$1,684.6	5.7%	\$1,709.6	1.5%
Use	\$1,209.1	-3.9%	\$1,221.5	1.0%	\$1,209.1	-1.0%
Cigarette	\$170.1	-3.9%	\$167.6	-1.5%	\$165.0	-1.6%
Beer & Wine	\$52.0	1.0%	\$53.0	1.9%	\$54.0	1.9%
Liquor Specific	\$77.0	-4.3%	\$78.0	1.3%	\$80.0	2.6%
Insurance Co. Premium	\$380.0	7.1%	\$390.0	2.6%	\$405.0	3.8%
CIT/MBT	\$1,167.3	-3.7%	\$1,002.4	-14.1%	\$962.9	-3.9%
Telephone & Telegraph	\$32.0	-1.2%	\$32.0	0.0%	\$31.0	-3.1%
Oil & Gas Severance	\$36.0	72.2%	\$35.0	-2.8%	\$35.5	1.4%
Essential Services Assess.	\$135.0	7.3%	\$143.0	5.9%	\$152.0	6.3%
Penalties and Interest	\$136.0	1.0%	\$138.0	1.5%	\$142.0	2.9%
Railroad/Car Loaning	\$3.0	0.0%	\$3.0	0.0%	\$3.0	0.0%
Enhanc. Enforce/ACS	(\$150.0)	5.2%	(\$152.0)	1.3%	(\$155.0)	2.0%
Total GF-GP Taxes	\$13,834.5	10.7%	\$13,630.1	-1.5%	\$13,575.8	-0.4%
GF-GP Non-Tax Revenue						
Federal Aid	\$10.0	20.5%	\$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	-80.7%	\$10.0	0.0%	\$10.0	0.0%
Interfund Interest	\$2.0	400.0%	\$2.0	0.0%	\$2.0	0.0%
Liquor Purchase	\$305.0	-2.7%	\$300.0	-1.6%	\$300.0	0.0%
Charitable Games	\$1.0	-77.8%	\$2.0	100.0%	\$2.0	0.0%
Transfer From Escheats	\$85.0	-10.4%	\$88.0	3.5%	\$90.0	2.3%
Other Non Tax	\$0.0	0.0%	\$0.0	0.0%	\$0.0	0.0%
Total Non Tax	\$434.1	-13.1%	\$433.1	-0.2%	\$435.1	0.5%
Total GF-GP Revenue	\$14,268.6	9.7%	\$14,063.2	-1.4%	\$14,010.9	-0.4%

Table 9
Administration School Aid Fund Revenue Detail

	FY 2022		FY 2023		FY 2024	
	Amount	Growth	Amount	Growth	Amount	Growth
School Aid Fund						
Income Tax	\$3,977.1	14.9%	\$3,742.3	-5.9%	\$3,748.2	0.2%
Sales Tax	\$7,621.1	11.1%	\$7,893.9	3.6%	\$7,974.9	1.0%
Use Tax	\$867.9	-0.9%	\$887.5	2.3%	\$888.2	0.1%
Liquor Excise Tax	\$76.6	-0.1%	\$77.6	1.3%	\$79.6	2.6%
Cigarette & Tobacco	\$307.8	-4.4%	\$302.1	-1.9%	\$296.1	-2.0%
Marijuana Excise Tax	\$50.0	0.0%	\$59.0	18.0%	\$67.9	15.0%
State Education Tax	\$2,396.0	6.2%	\$2,549.9	6.4%	\$2,609.9	2.4%
Real Estate Transfer	\$525.0	7.1%	\$505.0	-3.8%	\$495.0	-2.0%
Industrial Facilities Tax	\$41.0	-2.1%	\$41.0	0.0%	\$41.0	0.0%
Casino (45% of 18%)	\$108.6	19.9%	\$111.8	2.9%	\$113.5	1.5%
iGaming, Sports Betting	\$210.8	133.0%	\$209.9	-0.4%	\$212.6	1.3%
Commercial Forest	\$4.0	-4.8%	\$4.0	0.0%	\$4.0	0.0%
Other Spec Taxes	\$23.0	0.9%	\$23.0	0.0%	\$23.0	0.0%
Subtotal Taxes	\$16,208.9	11.1%	\$16,407.0	1.2%	\$16,553.8	0.9%
Lottery Transfer	\$1,200.0	-15.5%	\$1,230.0	2.5%	\$1,245.0	1.2%
Total SAF Revenue	\$17,408.9	8.7%	\$17,637.0	1.3%	\$17,798.8	0.9%

Table 10
Administration Major Tax Totals

	FY 2022		FY 2023		FY 2024	
	Amount	Growth	Amount	Growth	Amount	Growth
Major Tax Totals (Includes all Funds)						
Income Tax	\$13,640.0	15.2%	\$13,246.1	-2.9%	\$13,199.7	-0.4%
Sales Tax	\$10,453.6	11.0%	\$10,823.5	3.5%	\$10,934.2	1.0%
Use Tax	\$2,599.3	-0.9%	\$2,658.0	2.3%	\$2,660.0	0.1%
CIT/MBT	\$1,167.3	-3.7%	\$1,002.4	-14.1%	\$962.9	-3.9%
Cigarette and Tobacco	\$853.0	-4.1%	\$840.4	-1.5%	\$827.0	-1.6%
Casino Tax	\$108.6	1.6%	\$111.8	2.9%	\$113.5	1.5%