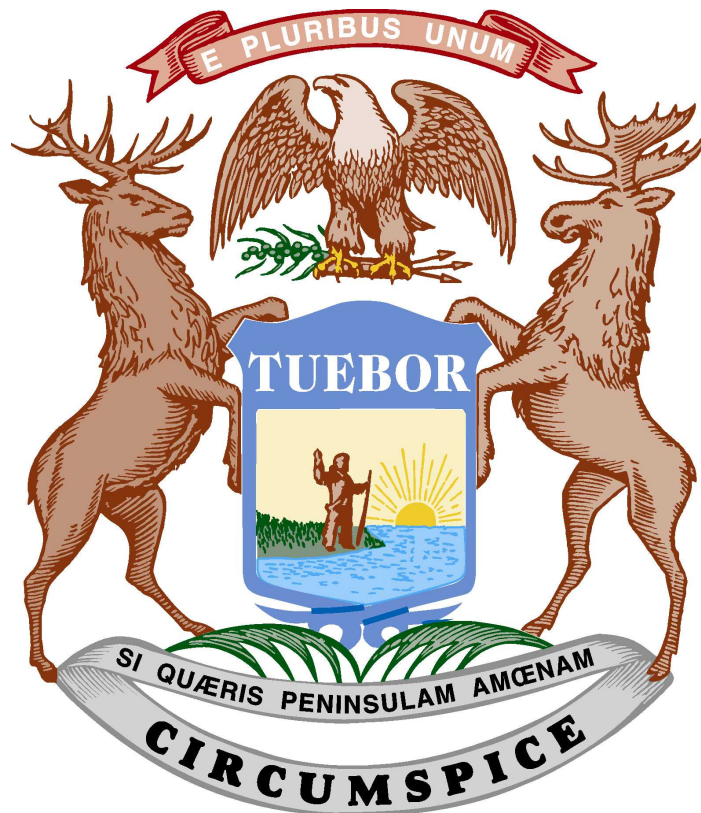


Economic and Revenue Outlook

FY 2019-20, FY 2020-21 and FY 2021-22

Michigan Department of Treasury



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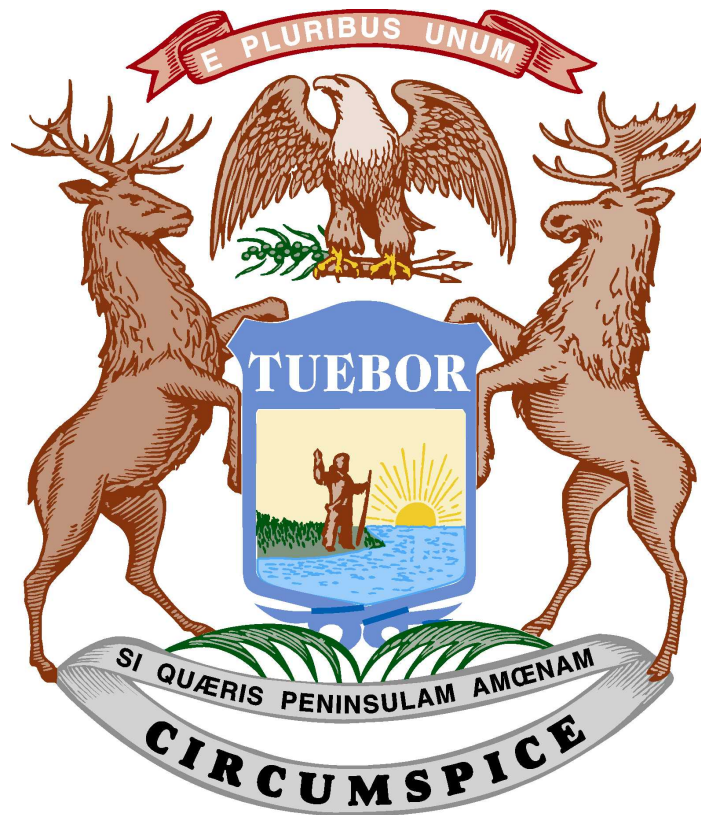
Thomas Patchak-Schuster, Economic Specialist

May 15, 2020

Economic and Revenue Outlook

FY 2019-20, FY 2020-21 and FY 2021-22

Michigan Department of Treasury



Acknowledgements

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Table of Contents

SECTION I: Administration Estimates--Executive Summary	1
<u>Administration Estimates--Executive Summary</u>	2
Revenue Review and Outlook	2
2020, 2021 and 2022 U.S. Economic Outlook	3
2020, 2021 and 2022 Michigan Economic Outlook	3
Forecast Risks	4
SECTION II: Economic Review	5
<u>Economic Review</u>	6
Current U.S. Economic Situation	6
Pre-Pandemic Recent History	6
COVID-19 Economic Impact	6
Monetary/Fiscal Policy Actions.....	9
Current Michigan Economic Conditions	11
Pre-Pandemic Recent History	11
COVID-19 Economic Impact	11
SECTION III: Administration Economic Outlook	14
Administration Economic Forecast Summary	14
2020, 2021 and 2022 U.S. Economic Outlook	14
2020, 2021 and 2021 Michigan Economic Outlook	17
Fiscal Year Economics	19
Forecast Risks	20
SECTION IV: Administration Revenue Estimates	21

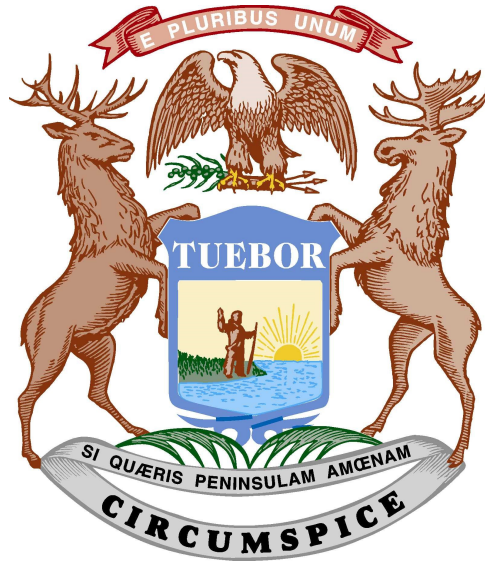
<u>Administration Revenue Estimates</u>	22
Revenue Estimate Overview	22
FY 2020 Revenue Outlook	23
FY 2021 Revenue Outlook	24
FY 2022 Revenue Outlook	25
Constitutional Revenue Limit	26
Budget Stabilization Fund Calculation	26
School Aid Fund Revenue Adjustment Factor	27
Revenue Detail	28

List of Tables

Table 1 Administration Economic Forecast	16
Table 2 FY 2019-20 Administration Revenue Estimates	23
Table 3 FY 2020-21 Administration Revenue Estimates	24
Table 4 FY 2021-22 Administration Revenue Estimates	25
Table 5 Administration Revenue Limit Calculation	26
Table 6 Administration School Aid Revenue Adjustment Factor for FY 2021	27
Table 7 Administration School Aid Revenue Adjustment Factor for FY 2022	28
Table 8 Administration General Fund General Purpose Revenue Detail	29
Table 9 Administration School Aid Fund Revenue Detail	30
Table 10 Administration Major Tax Totals	30

SECTION I

Administration Estimates Executive Summary

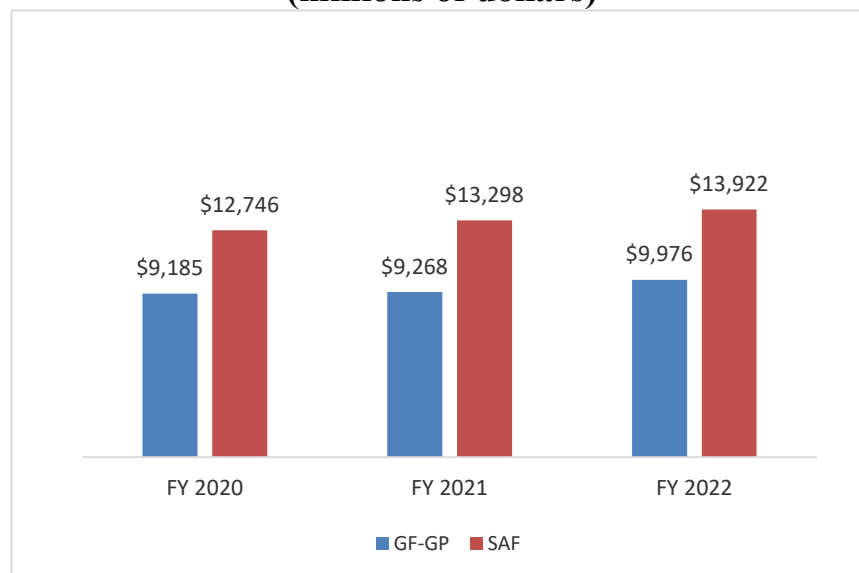


**Administration Estimates
Executive Summary
May 15, 2020**

Revenue Review and Outlook

- The COVID-19 pandemic will cause a significant decline in revenue in FY 2020 and throughout the forecast period. Earmarking changes from GF-GP income tax will also restrain growth of that fund.
- FY 2020 GF-GP revenue is forecast to decrease 17.4 percent to \$9,184.8 million, down \$1,827.3 million from the January 2020 Consensus estimate. FY 2020 SAF revenue is forecast to decrease 5.9 percent to \$12,746.3 million, down \$1,179.2 million from the January 2020 Consensus estimate.
- FY 2021 GF-GP revenue is forecast to increase 0.9 percent to \$9,267.6 million, down \$1,926.9 million from the January 2020 Consensus estimate. FY 2021 SAF revenue is forecast to increase 4.3 percent to \$13,927.5 million, down \$1,020.0 million from the January 2020 Consensus estimate.
- FY 2022 GF-GP revenue is forecast to increase 7.6 percent to \$9,975.8 million, down \$1,542.7 million from the January 2020 Consensus estimate. FY 2022 SAF revenue is forecast to increase 4.7 percent to \$13,922.0 million, down \$718.1 million from the January 2020 Consensus estimate.

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



2020, 2021 and 2022 U.S. Economic Outlook

- Real GDP is forecast to drop 4.8 percent in 2020 – the largest calendar year decline since 1946. Real GDP is forecast to rise 4.1 percent both in 2021 and in 2022.
- U.S. employment is projected to drop 4.1 percent in 2020 and then rise 3.3 percent in 2021 and 3.5 percent in 2022.
- The national unemployment rate is forecasted to soar from a 50-year low of 3.7 percent in 2019 to 9.1 percent in 2020. The U.S. rate is then expected to decline to 8.3 percent in 2021 and 7.2 percent in 2022
- Housing starts are forecast to drop 24.1 percent in 2020 and then rise 13.4 percent in 2021 and 14.4 percent in 2022.
- Light vehicle sales are projected to fall to 13.5 million units in 2020 and then rise to 15.1 million units in 2021 and 15.8 million units in 2022.
- The U.S. CPI is forecast to fall 0.5 percent in 2020 and then rise 1.4 percent in 2021 and 2.0 percent in 2022.

2020, 2021 and 2022 Michigan Economic Outlook

- In 2020, Michigan wage and salary employment is forecast to decline 9.1 percent, which is the largest annual Michigan employment decline since 1958. Michigan employment is then forecast to increase 6.0 percent in 2021 and 0.6 percent in 2022.
- The Michigan unemployment rate is forecast to rise from 4.1 percent in 2019 to 11.4 percent in 2020, and then decline to 8.6 percent in 2021 and 8.4 percent in 2022.
- Michigan wages and salaries are forecast to drop 7.9 percent in 2020 and then increase 7.3 percent in 2021 and 5.7 percent in 2022.
- Michigan personal income is projected to increase 0.4 percent in 2020, decrease 0.3 percent in 2021 and rise 3.0 percent in 2022. Personal income is being boosted by federal stimulus action in 2020.

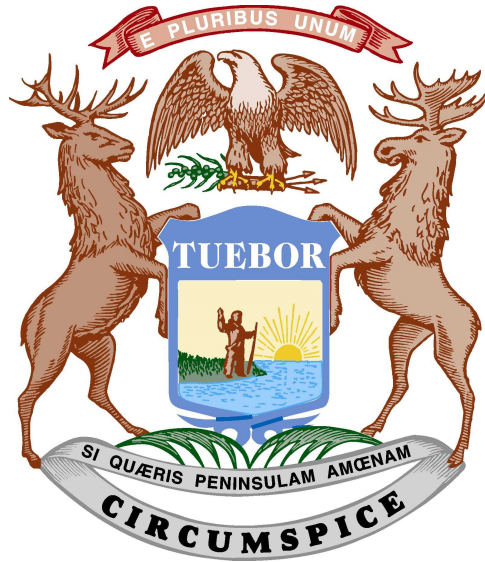
Forecast Risks

The risks are likely weighed to the downside and include:

- A new wave of COVID-19 cases could come as businesses, schools or other public places are reopened. Additional waves would likely require a new round of economic shutdowns.
- Workers may remain hesitant about returning to work even with safeguards in place. Similarly, many consumers will likely remain wary about returning to stores, restaurants, air and ground travel, hotels or other places of business.
- Monetary and fiscal actions taken to date may not offset the negative economic impacts of COVID-19.
- In general, both the depth and length of the downturn could be considerably greater than forecast. Similarly, the recovery could take considerably longer and be considerably weaker than expected.

SECTION II

Economic Review



Economic Review **May 15, 2020**

Current U.S. Economic Situation

Pre-Pandemic Recent History

Just prior to COVID-19 pandemic in recent months, the U.S. economy had reported modest but steady growth over a lengthy expansion:

- 2019 marked the 10th straight year of economic growth with 2.3 percent growth – slowing from 2.9 percent growth in 2018.
- The Institute for Supply Management’s (ISM) Purchasing Managers’ Index (PMI) signaled that the overall U.S. economy expanded for a record 131st straight month in early March 2020.
- In 2019, U.S. employment increased for the ninth straight year increasing 1.4 percent, following a 1.6 percent rise in 2018. Overall U.S. employment increased for a record 113th consecutive month in February 2020. Over the 113 months, employment rose 22.1 million jobs, averaging 195,000 jobs increase per month. In 2018 and 2019, monthly gains averaged 185,000 jobs. Monthly gains exceeded 200,000 in both January 2020 and February 2020.
- In 2019, the U.S. unemployment rate fell for the 9th straight year to 3.7 percent – 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.
- Vehicle sales fell to just under 17.0 million units in 2019 – down slightly (1.5 percent) from 17.2 million units in 2018. In 2019, light trucks’ share of vehicle sales increased for the 7th straight year – rising to a record 72.2 percent of sales in 2019.
- Through 2019, housing starts rose each year since falling to an all-time low in 2009. In 2019, starts rose to 1.29 million units, up 3.2 percent from 2018.
- The Standard and Poor’s Stock Index ended 2019 up 28.9 percent from the end of 2018 – this followed a 6.2 percent decline in 2018.

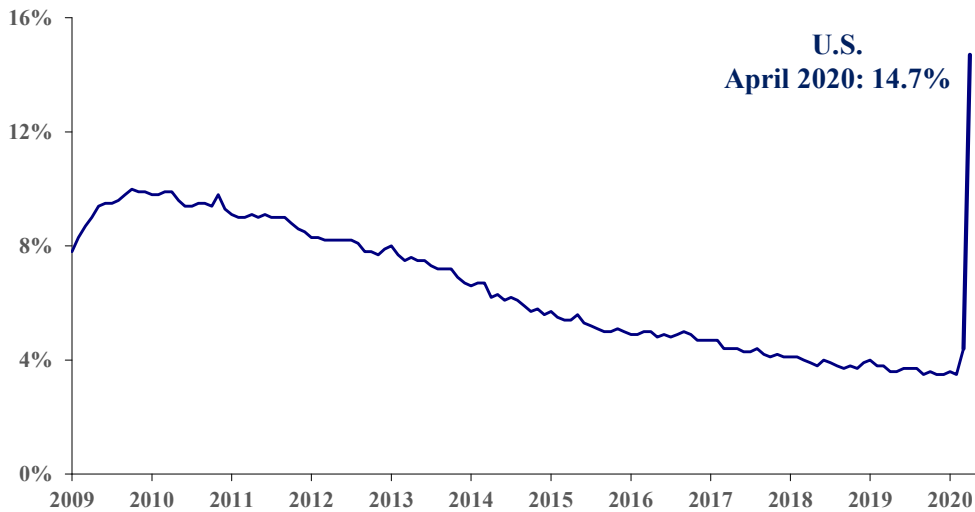
COVID-19 Economic Impact

With the outbreak of the COVID-19 virus and measures to contain the virus impacting the U.S. economy largely only in the quarter’s second half, 2020Q1 U.S. gross domestic product declined at a still sharp 4.8 percent annual rate. Further, data to date strongly indicates that GDP will plummet in the second quarter.

In April 2020, the U.S. unemployment rate rose by a record 10.8 percentage points to 14.7 percent, the highest monthly unemployment rate since monthly data were tracked in 1948. With an additional 11.5 million initial unemployment claims recorded since the April employment

survey and still more initial unemployment claims likely to be added before May survey, the May unemployment rate will be considerably higher than the 14.7 percent rate recorded in April.

U.S. Unemployment Rate Soars to Record High

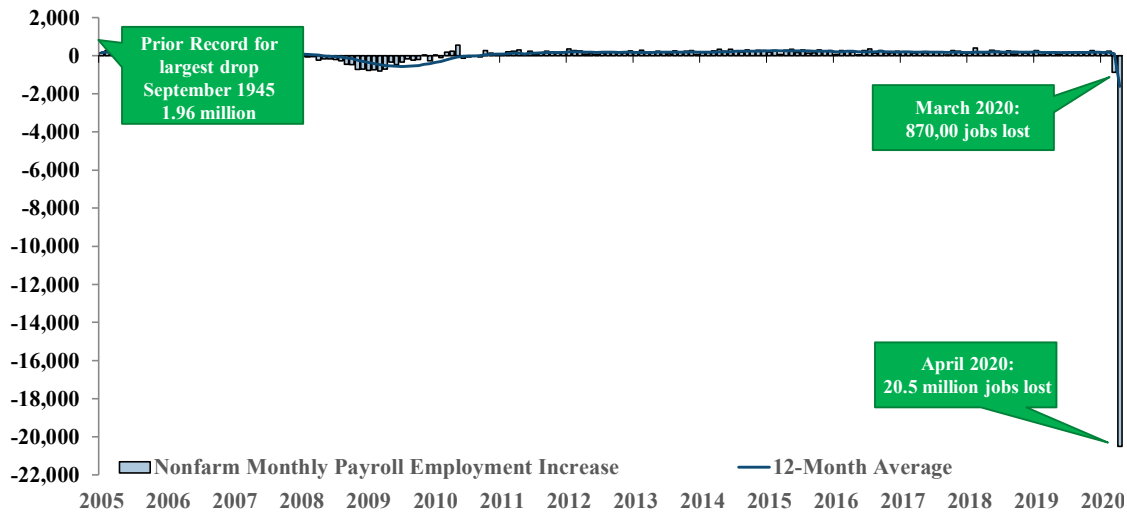


Source: U.S. Bureau of Labor Statistics, 5/8/2020.

Accompanying the record unemployment rate, U.S. payroll employment plummeted in April by a record 20.5 million jobs (-13.5 percent). With records available back to 1939, the April 2020 job loss dwarfs the previous largest monthly decline record of 1.96 million (-4.8 percent) in September 1945 following the end of World War II.

The 21.4 million jobs decline over the past two months erased all the directly preceding nine years of consecutive monthly employment gains. While the leisure and hospitality sector accounted for the largest share of the overall April 2020 employment drop, job losses were widespread with substantial declines across most major sectors.

U.S. Payroll Employment Plummet



Source: U.S. Bureau of Labor Statistics, 5/8/2020. Thousands of jobs.

The COVID-19 pandemic has substantially weakened consumer sentiment over the past two months. In March and April, the consumer sentiment index plummeted a combined 29.2 points – 50 percent larger than the previous largest two-month sentiment drop. In April, the index fell to 71.8 points – its lowest reading in nearly nine years. With the pandemic continuing to weigh on consumers, sentiment is very likely to fall even farther in May.

The pandemic and measures taken to contain COVID-19 have weighed heavily on vehicle sales. Over the past two months, light vehicle sales have dropped by 50 percent from their February 2020 levels. In April 2020, light vehicle sales fell to an 8.6-million-unit annual rate – the lowest monthly sales rate since 1970.

Both the ISM manufacturing index and ISM non-manufacturing index have fallen to levels pointing to recession in both individual sectors and the overall economy. In April 2020, the manufacturing sector index fell to 41.8 and the non-manufacturing index dropped to 41.5. The manufacturing index is down 9.4 points over the past three months and was last this low in April 2009.

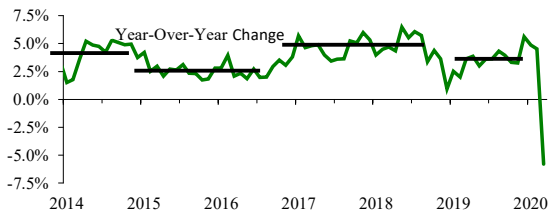
Consumer sentiment has largest decline on record

The March and April combined decline of nearly 30 index-points is 50% larger than the prior recorded drop, driven by consumer's opinion on current conditions



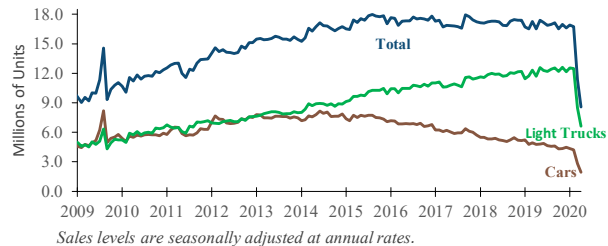
Retail sales begin to decline in March

Year-over-year growth at -4.8%, after February's solid growth of 5.8%. Further declines are expected for April



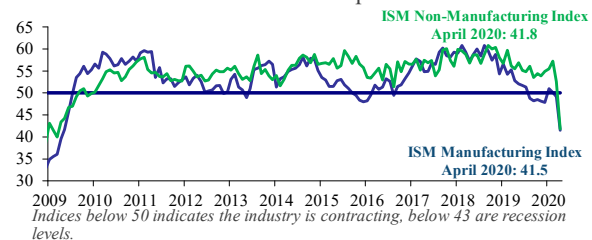
U.S. light vehicles sales drop by nearly half in two months

Total light vehicle sales estimates of 8.6 million: 6.6 million light trucks; and 1.9 million cars. The 8.6-million-unit sales rate represents the lowest sales rate since 1970.



ISM indices declining

Manufacturing and non-manufacturing drop to recession levels. Manufacturing is down 9.4 points in the past three months and was last this low in April of 2009



Sources: University of Michigan, Survey of Consumers, Michigan Department of Treasury, Bureau of Economic Analysis; U.S. Bureau of the Census; Institute for Supply Management; Moody's Analytics.

Monetary and Fiscal Policy Actions

The Federal Reserve took the earliest U.S. macroeconomic policies designed to combat the sharp negative economic impact on the U.S. economy from COVID-19 and the actions taken to lessen the virus' health care impact. In two unscheduled meetings in March the Fed lowered the federal funds rate to a 0.00 to 0.25 percent interest rate range. In addition, the Fed sharply increased its asset holdings. Fed holdings skyrocketed from \$4.2 trillion in February to over \$6.0 trillion in early April with holdings on schedule to more than double by mid-year. Finally, reaching outside its usual scope, the Fed created or expanded numerous lending programs.

The CARES Act, enacted in late March 2020, represents the most significant piece of fiscal legislation implemented to combat the negative economic impacts of COVID-19 and the measures taken to contain the virus.

The major elements of the CARES Act are as follows:

- (1) **Payroll Protection Program (PPP)/Economic Injury Disaster Advances.** The Act provides for loans to be administered through the Small Business Administration for businesses intended to lessen the pandemic's negative impact on employment, worker hours and compensation. The loans are primarily for maintaining a loan recipient's

payroll and other basic operating expenses over the two months following receipt of the loan. The loan's principal and accrued interest can be completely forgiven. The amount forgiven declines the more employees and/or compensation an employer cuts. The CARES Act also made small businesses across the U.S. eligible for a \$10,000 advance under the Economic Injury Disaster Loan (EIDL) Program. The \$349 billion allocated for the Payroll Protection Program were completely obligated by mid-April 2020 and funds under the EIDL program were depleted. In response, subsequent legislation was enacted that authorized an additional \$310 billion for loans under the PPP with \$60 billion explicitly earmarked for small, midsized and community lenders. The additional legislation also authorized an additional \$60 billion for the EIDL program.

- (2) **Recovery Rebates.** The Act provides rebates of up to \$1,200 for most adults that cannot be claimed as dependents and additional rebates of \$500 per child under age 17. The rebates begin to phase out at an income of \$75,000 for individuals and \$150,000 for joint filers. Income levels are determined based on 2019-year income (or 2018 if filers have not yet filed their 2019 taxes). Low-income persons with incomes not requiring them to file federal taxes qualify for a rebate. A lower 2020 income may increase a person's rebate amount, but a higher 2020 income cannot reduce the rebate amount.
- (3) **Unemployment Insurance (UI) Expansion.** For (a portion of) 2020, the Act
 - a. Provides federal funding for an additional \$600 per week to be paid to UI recipients for up to four months.
 - b. Expands coverage of UI to include previously excluded individuals, including the self-employed and sole proprietorships.
 - c. Increases the number of weeks for which a UI recipient is eligible from 26 weeks to 39 weeks.
- (4) **Funding Emergency Facilities** established by the Federal Reserve. The Act provides money necessary for likely losses from loans the Federal Reserve makes under the numerous lending facilities that were newly established or expanded in the respond to the pandemic.
- (5) **Payments to State, Local and Tribal Governments.** The Act provides each state with monies that may be spent only on direct expenditures for handling the COVID-19 pandemic. A state's share of the overall \$150 billion is based on a state's share of the U.S. population with each state receiving a minimum of \$1.25 billion. In addition, counties and municipalities larger than 500,000 people are eligible for a share of a state's allocation equal to 45 percent times the city's/county's share of a state's population with a county's allocation reduced by the amount received by eligible municipalities in the county.
- (6) **Temporary Changes to Federal Individual and Corporate Tax Law.** Notable among these are the increased limits on loss for corporations. The Act also provides for an employment retention credit and extends the federal income tax filing deadline for 2019 for all taxpayers to July 15, 2020.

Current Michigan Economic Situation

Pre-Pandemic Recent History

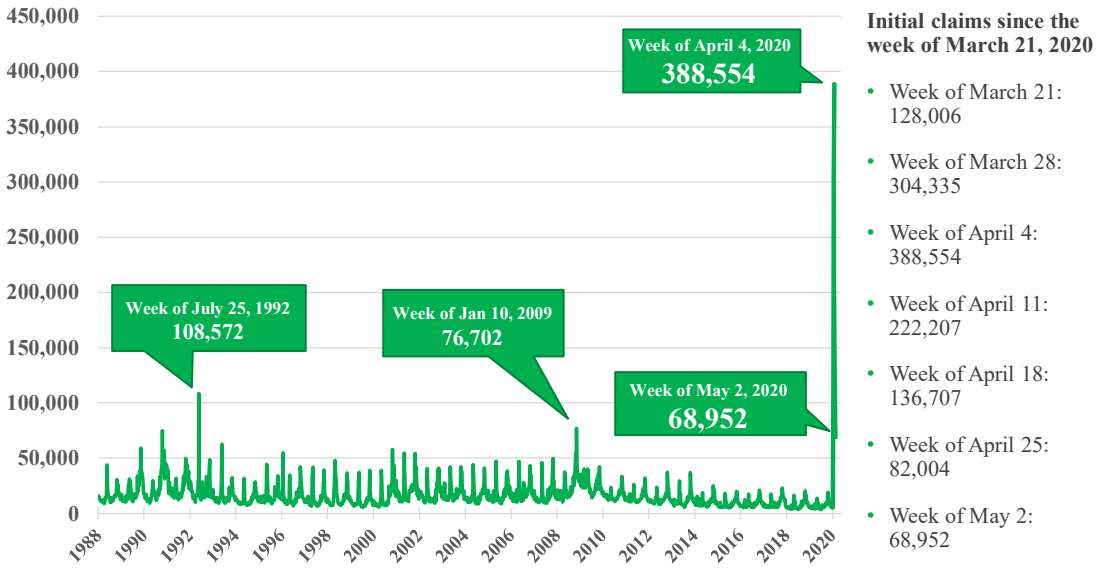
Similarly, prior to the current pandemic, Michigan's economy had posted a decade of economic growth:

- In 2019, both Michigan wage and salary income and overall Michigan personal income increased for the tenth straight year. Wage and salary income grew 2.7 percent in 2019, slowing from 3.7 percent growth in 2018. Similarly, personal income increased 3.8 percent in 2019, slowing from 4.9 percent growth in 2018.
- Real Michigan gross domestic product (GDP) increased for the tenth straight year in 2019. In 2019, real Michigan GDP rose 0.7 percent, slowing from 2.5 percent growth in 2018 and representing the slowest real Michigan GDP growth over the 10 years.
- In 2019, Michigan wage and salary employment grew for the ninth straight year. Employment grew 0.3 percent, slowing from 1.1 percent growth both in 2017 and in 2018 and representing the slowest annual growth over the nine years.
- After declining in each of the preceding nine years, the annual Michigan unemployment rate remained unchanged at 4.1 percent in 2019. The 4.1 percent rate represented the lowest annual Michigan unemployment rate since CY 2000.
- In 2019, real (inflation adjusted) personal income grew for the 6th straight year, growing 2.5 percent – matching growth in 2018.
- Michigan motor vehicle production increased 4.4 percent in 2019. In 2019, approximately 1,914,000 vehicles were produced in Michigan compared to the 1,832,000 vehicles produced in 2018 and well above the historical low of 1,146,000 units produced in 2009.

COVID-19 Economic Impact

The impact of COVID-19 and mitigation efforts on the Michigan economy has been sharp and sudden. The massive rise in the state's unemployment insurance claims best illustrates COVID-19's swift negative impact on Michigan's economy. In mid-March, Michigan initial unemployment claims jumped from just over 5,000 to 128,006. The following week, initial claims climbed to 304,335 before rising to a record high 388,554 in early April. Between mid-March and mid-April, cumulative initial unemployment claims surpassed 1.0 million. This huge jump strongly indicates that Michigan's April 2020 unemployment rate will be even higher than the national 14.7 percent rate. Further, while initial claims have fallen in recent weeks, they still remain substantially higher than prior to the COVID-19 pandemic.

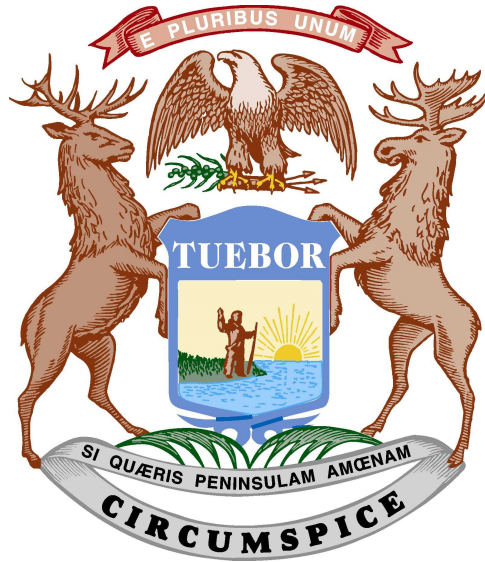
Michigan Weekly Initial Unemployment Claims Skyrocket



Source: U.S. Employment and Training Administration, 4/10/2020; Michigan, UIA, 5/4/2020.

SECTION III

Administration Economic Forecast



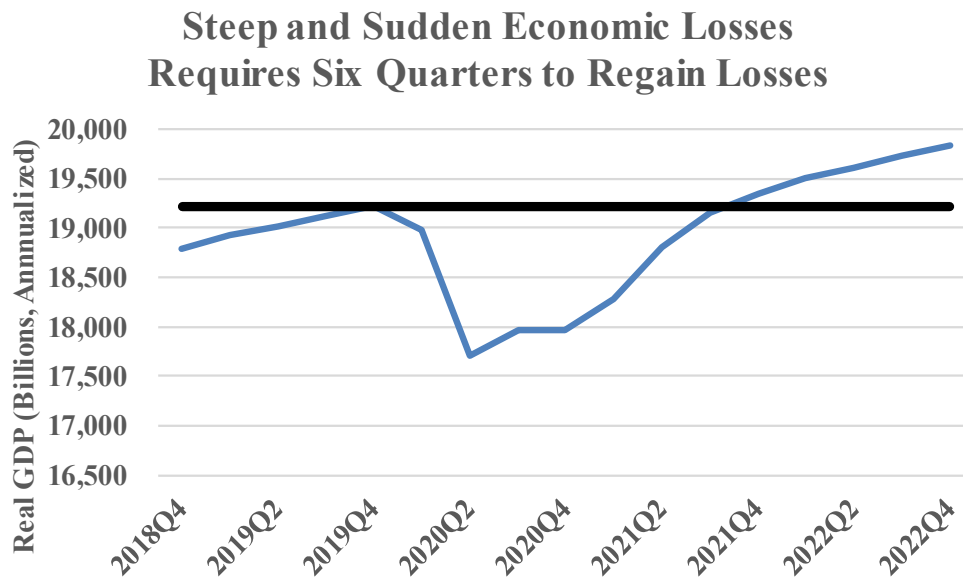
Administration Economic Forecast Summary

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

2020, 2021 and 2022 U.S. Economic Outlook

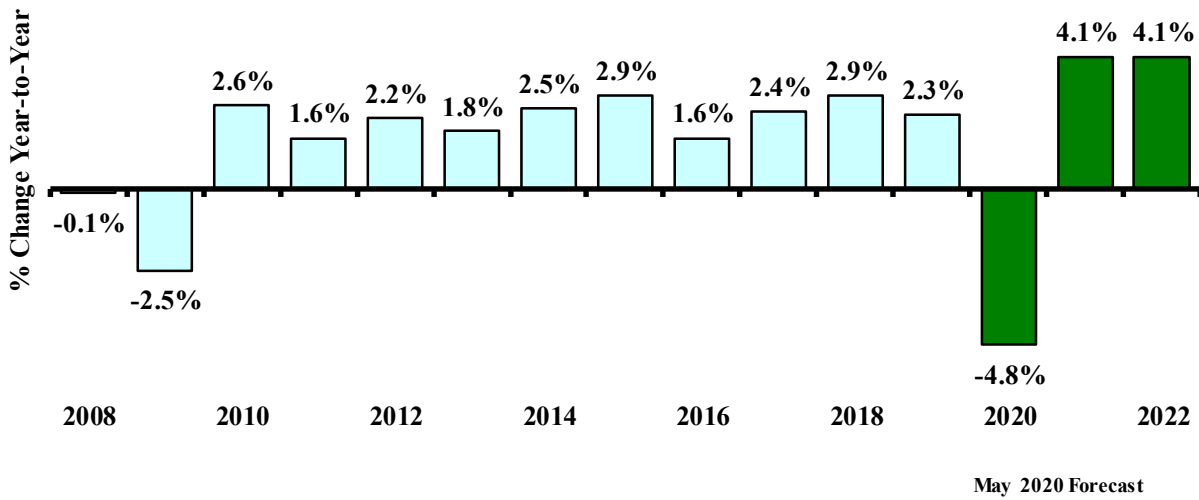
Summary

Real (inflation adjusted) GDP is expected to decline at a record 24.5 percent annual rate in 2020Q2. With records back to 1947, the previous largest recorded quarterly decline was a 10.0 percent annual decline in 1958Q1. The economy is expected to take a year and a half to recoup its losses from the sudden drop. As a result, real GDP is forecast to decline 4.8 percent in calendar year 2020 -- the steepest annual decline since 1946. Real GDP is forecast to grow 4.1 percent in both 2021 and 2022.



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, May 2020.

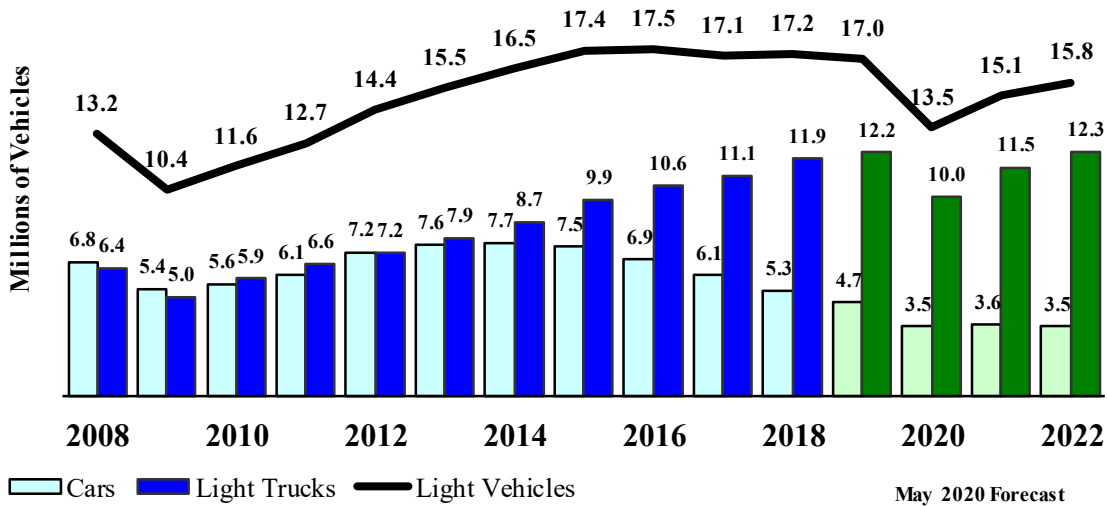
Real GDP Falls Sharply in 2020 Grows in 2021 and 2022



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, May 2020.

With a sharp decline in the second quarter, **light vehicle sales** are forecast to decline to 13.5 million units in 2020. Light vehicle sales are expected to rebound modestly to 15.1 million units in 2021 and 15.8 million units in 2022.

Vehicle Sales Fall Sharply in 2020, Rebound Partially in 2021, 2022



Source Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, May 2020.

Table 1
Administration Economic Forecast

May 2020

	Calendar 2019 Actual	Percent Change from Prior Year	Calendar 2020 Forecast	Percent Change from Prior Year	Calendar 2021 Forecast	Percent Change from Prior Year	Calendar 2022 Forecast	Percent Change from Prior Year
United States								
Real Gross Domestic Product (Billions of Chained 2012 Dollars)	\$19,073	2.3%	\$18,158	-4.8%	\$18,902	4.1%	\$19,677	4.1%
Implicit Price Deflator GDP (2012 = 100)	112.3	1.7%	113.4	0.9%	114.5	1.0%	116.4	1.7%
Consumer Price Index (1982-84 = 100)	255.657	1.8%	254.505	-0.5%	257.945	1.4%	263.113	2.0%
Consumer Price Index - Fiscal Year (1982-84 = 100)	254.376	1.9%	255.333	0.4%	256.602	0.5%	261.904	2.1%
Personal Consumption Deflator (2012 = 100)	109.7	1.4%	110.4	0.7%	111.5	1.0%	113.2	1.5%
3-month Treasury Bills Interest Rate (percent)	2.1		0.4		0.1		0.4	
Unemployment Rate - Civilian (percent)	3.7		9.1		8.3		7.2	
Wage and Salary Employment (millions)	150.939	1.4%	144.750	-4.1%	149.530	3.3%	154.760	3.5%
Housing Starts (millions of starts)	1.290	3.2%	0.979	-24.1%	1.110	13.4%	1.270	14.4%
Light Vehicle Sales (millions of units)	17.0	-1.5%	13.5	-20.4%	15.1	11.9%	15.8	4.6%
Passenger Car Sales (millions of units)	4.7	-11.1%	3.5	-25.8%	3.6	2.9%	3.5	-2.8%
Light Truck Sales (millions of units)	12.2	2.8%	10.0	-18.3%	11.5	15.0%	12.3	7.0%
Big 3 Share of Light Vehicles (percent)	41.0		40.5		41.7		41.1	
Michigan								
Wage and Salary Employment (thousands)	4,433	0.3%	4,029	-9.1%	4,271	6.0%	4,297	0.6%
Unemployment Rate (percent)	4.1		11.4		8.6		8.4	
Personal Income (millions of dollars)	\$502,540	3.8%	\$500,027	-0.5%	\$501,527	0.3%	\$526,102	4.9%
Real Personal Income (millions of 1982-84 dollars)	\$213,604	2.5%	\$214,483	0.4%	\$213,837	-0.3%	\$220,151	3.0%
Wages and Salaries (millions of dollars)	\$246,802	2.7%	\$227,305	-7.9%	\$243,898	7.3%	\$257,800	5.7%
Detroit Consumer Price Index (1982-84 = 100)	235.267	1.3%	233.131	-0.9%	234.537	0.6%	238.973	1.9%
Detroit CPI - Fiscal Year (1982-84 = 100)	233.840	1.0%	234.927	0.5%	233.382	-0.7%	237.950	2.0%

The **U.S. unemployment rate** is forecast to jump from 3.8 percent in 2020Q1 to 13.6 percent in 2020Q2 before declining to 9.6 percent in 2020Q3 and 9.4 percent in 2020Q4. As a result, the U.S. unemployment rate is forecast to average 9.1 percent in 2020. In 2021, the average U.S. rate is forecast to fall to 8.3 percent and then decline to 7.2 percent in 2022.

U.S. wage and salary employment is expected to plummet in 2020Q2. Employment is forecast to recover slightly more than half its losses in 2020Q3 and then steadily increase in each following quarter. Consequently, employment is expected to decline 4.1 percent in 2020. Employment is then forecast to rise 3.3 percent in 2021 and 3.5 percent in 2022.

The **U.S. consumer price index (CPI)** is forecast to decline 0.5 percent in 2020 and then increase 1.4 percent in 2021. In 2022, the CPI is expected to rise 2.0 percent. The personal consumption price deflator rate is projected to rise 0.7 percent in 2020 and then increase 1.0 percent in 2021. In 2022, the consumption price deflator is forecast to rise 1.5 percent.

As a result of cuts in the federal funds rate, the **three-month Treasury bill rate** is forecast to decrease to 0.4 percent in 2020. With the federal funds rate remaining close to zero through mid-2022 and then rising only slightly, the Treasury bill rate is expected to average 0.1 percent in 2021 and 0.4 percent in 2022.

Housing starts are expected to drop sharply in 2020Q2 and then regain about one-third of their losses in 2020Q3. Starts are then forecast to rise over most of the balance of the forecast horizon. In 2020, housing starts are forecast to drop 24.1 percent. Starts are then forecast to increase 13.4 percent in 2021 and 14.4 percent in 2022.

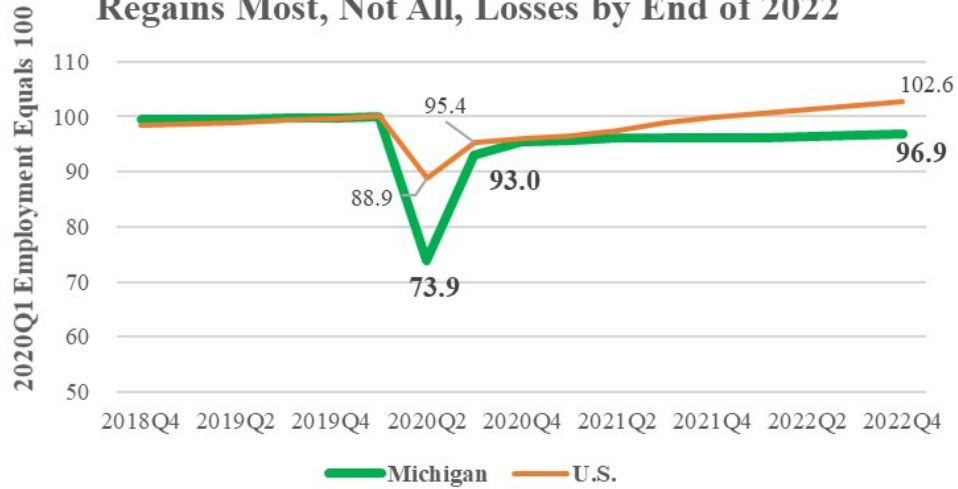
2020, 2021 and 2022 Michigan Economic Outlook

Michigan wage and salary employment is forecast to drop 26.1 percent in 2020Q2 – a decline more than twice the national decrease (11.1 percent). Michigan employment is expected to recoup a substantial share of its second quarter employment losses in 2020Q3 (73.0 percent) and then regain an additional 9.4 percent of its second quarter losses in 2020Q4. However, employment is forecast to remain essentially flat over the balance of the forecast horizon.

As a result, Michigan employment at the end of 2022 remains down 3.1 percent from its 2020Q1 level. Average annual 2020 Michigan wage and salary employment is forecast to decline 9.1 percent -- the largest annual Michigan employment decline since 1958. Michigan employment is expected to rise 6.0 percent in 2021 and then increase 0.6 percent in 2022.

In 2020, annual **Michigan manufacturing employment** is forecast to drop 13.6 percent. Michigan manufacturing employment is then expected to increase 3.9 percent in 2021 and 1.1 percent in 2022.

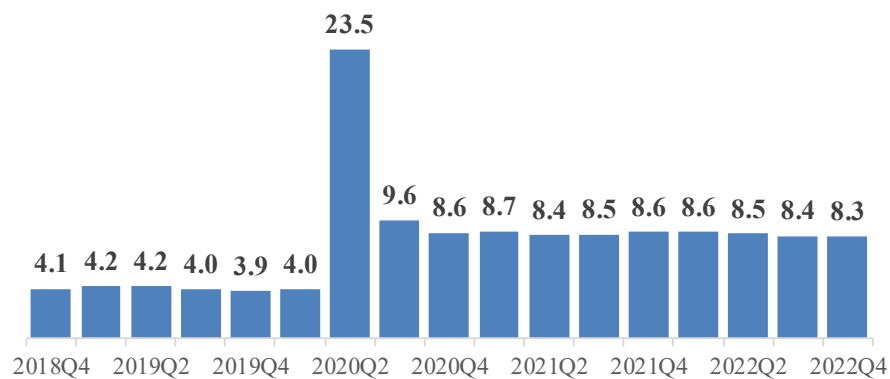
Michigan Employment Plummets in 2020Q2 Regains Most, Not All, Losses by End of 2022



Source: Michigan Department of Technology, Management, & Budget, U.S. Bureau of Labor Statistics and May 2020 Administration Forecast.

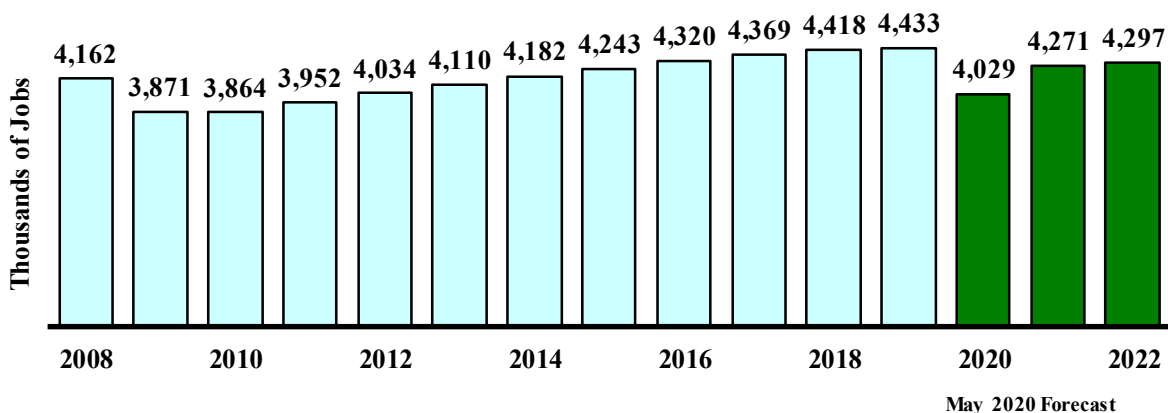
The **Michigan unemployment rate** is forecast to soar from 4.0 percent in 2020Q1 to a record high 23.5 percent in 2020Q2 before dropping to 9.6 percent in 2020Q3 and to 8.6 percent in 2020Q4. Over the balance of the forecast, the quarterly Michigan unemployment rate is forecast to range between 8.3 percent and 8.7 percent. As a result, the Michigan unemployment rate is forecast to average 11.4 percent in 2020, 8.6 percent in 2021 and 8.4 percent in 2022.

State Unemployment Rate Soars in 2020Q2 Remains Well Above Pre-Pandemic Levels



Source: Michigan Department of Technology, Management, & Budget, U.S. Bureau of Labor Statistics and May 2020 Administration Forecast.

Michigan Wage and Salary Employment Plummets in 2020 Rebounds Partially in 2021, 2022



Source: Michigan Department of Technology, Management, & Budget, U.S. Bureau of Labor Statistics and May 2020 Administration Forecast.

Michigan wages and salaries are forecast to drop 7.9 percent in 2020 before rising 7.3 percent in 2021 and 5.7 percent in 2022.

Michigan personal income is forecast to decline 0.5 percent in 2020 and then increase 0.3 percent in 2021 and 4.9 percent in 2022.

The **Detroit CPI** is forecast to drop 0.9 percent in 2020 and then rise 0.6 percent in 2021 and 1.9 percent in 2022. **Real (inflation adjusted) Michigan personal income** is forecast to rise 0.4 percent in 2020, fall 0.3 percent in 2021 and then rise 3.0 percent in 2022.

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** are projected to drop 6.1 percent in FY 2020 and then increase 5.2 percent in FY 2021 and 5.7 percent in 2022.

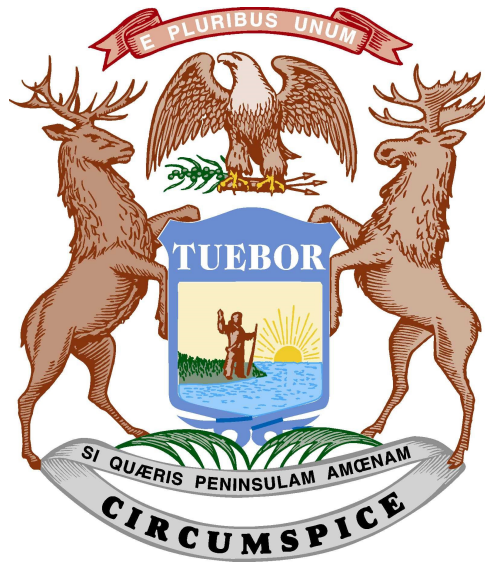
Sales and use taxes depend, in part, on **Michigan disposable (after tax) income** and inflation. Disposable income is forecast to increase 1.9 percent in FY 2020, fall 0.2 percent in FY 2021 and then rise 4.9 percent in FY 2022. Prices, as measured by the **Detroit CPI**, are forecast to rise 0.4 percent in FY 2020, to fall 0.7 percent in FY 2021 and to rise 2.0 percent in FY 2022.

Forecast Risks

The risks are likely weighed to the downside and include:

- (1) The possibility of a new wave of COVID-19 cases as businesses, schools or other public places are reopened. Additional waves would likely require a new round of economic shutdowns.
- (2) Workers may remain hesitant about returning to work even with safeguards in place. Similarly, many consumers will likely remain wary about returning to stores, restaurants, air and ground travel, hotels or other places of business.
- (3) Monetary and fiscal actions taken to date may not have been adequate to address the negative economic impact of COVID-19.
- (4) In general, both the depth and length of the downturn could be considerably greater than forecast. Similarly, the recovery could take considerably longer and be considerably weaker than expected.

SECTION IV
Administration
Revenue Estimates



Administration Revenue Estimates

May 15, 2020

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 2019 is the base year. Any non-economic changes to the taxes occurring in FY 2020, FY 2021 and FY 2022 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 2020 Revenue Outlook

FY 2020 GF-GP revenue is estimated to be \$9,184.8 million, down 17.4 percent compared to FY 2019. The FY 2020 GF-GP revenue estimate is \$1,827.3 million below the January 2020 Consensus estimate. SAF revenue is forecast to be \$12,746.3 million, a 5.9 percent decrease compared to FY 2019. The FY 2020 SAF estimate is \$1,179.2 million below the January 2020 Consensus estimate (see Table 2).

Table 2
FY 2019-20 Administration Revenue Estimates
(millions)

	Administration May 15, 2020		Change from January 2020 Consensus
	Amount	Growth	
General Fund - General Purpose			
Baseline Revenue	\$11,090.0	-10.2%	---
Tax Cut Adjustments	(\$1,905.2)	---	---
Net Resources	\$9,184.8	-17.4%	(\$1,827.3)
School Aid Fund			
Baseline Revenue	\$12,615.0	-7.3%	---
Tax Cut Adjustments	\$131.3	---	---
Net Resources	\$12,746.3	-5.9%	(\$1,179.2)
Combined			
Baseline Revenue	\$23,705.0	-8.7%	---
Tax Cut Adjustments	(\$1,773.9)	---	---
Net Resources	\$21,931.1	-11.1%	(\$3,006.5)

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

FY 2021 Revenue Outlook

FY 2021 GF-GP revenue is estimated to be \$9,267.6 million, a 0.9 percent increase compared to FY 2020. The FY 2021 GF-GP revenue estimate is \$1,926.9 million below the January 2020 Consensus estimate. SAF revenue is forecast to be \$13,297.5 million, a 4.3 percent increase compared to FY 2020. The FY 2021 SAF estimate is \$1,020.0 million below the January 2020 Consensus estimate (see Table 3).

Table 3
FY 2020-21 Administration Revenue Estimates
(millions)

	Administration May 15, 2020		Change from January 2020 Consensus
	Amount	Growth	
General Fund - General Purpose			
Baseline Revenue	\$11,361.3	2.4%	---
Tax Cut Adjustments	(\$2,093.7)	---	---
Net Resources	\$9,267.6	0.9%	(\$1,926.9)
School Aid Fund			
Baseline Revenue	\$13,091.5	3.8%	---
Tax Cut Adjustments	\$206.0	---	---
Net Resources	\$13,297.5	4.3%	(\$1,020.0)
Combined			
Baseline Revenue	\$24,452.8	3.2%	---
Tax Cut Adjustments	(\$1,887.7)	---	---
Net Resources	\$22,565.1	2.9%	(\$2,946.9)

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 \$9,975.8 million, a 7.6 percent increase compared to FY 2021. The FY 2022 GF-GP revenue estimate is 1,542.7 million below the January 2020 Consensus estimate. SAF revenue is forecast to be \$13,922.0 million, a 4.7 percent increase compared to FY 2021. The FY 2022 SAF estimate is \$718.1 million below the January 2020 Consensus estimate (see Table 4).

Table 4
FY 2021-22 Administration Revenue Estimates
(millions)

	Administration May 15, 2020		Change from January 2020 Consensus
	Amount	Growth	
General Fund - General Purpose			
Baseline Revenue	\$11,865.0	4.4%	---
Tax Cut Adjustments	(\$1,889.2)	---	---
Net Resources	\$9,975.8	7.6%	(\$1,542.7)
School Aid Fund			
Baseline Revenue	\$13,620.3	4.0%	---
Tax Cut Adjustments	\$301.7	---	---
Net Resources	\$13,922.0	4.7%	(\$718.1)
Combined			
Baseline Revenue	\$25,485.3	4.2%	---
Tax Cut Adjustments	(\$1,587.5)	---	---
Net Resources	\$23,897.8	5.9%	(\$2,260.8)

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 2017 revenue is compared to CY 2015 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 2018 revenues were \$8.7 billion below the revenue limit. State revenues will also be well below the limit for FY 2019 through FY 2022. FY 2019 revenues are expected to be about \$10.0 billion below the limit, FY 2020 revenues \$14.6 billion below the limit, FY 2021 revenues \$15.5 billion below the limit, and FY 2022 revenues \$13.8 billion below the limit (See Table 5).

Table 5
Administration Revenue Limit Calculation
(millions)

	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
	<u>Final</u>	<u>Admin</u>	<u>Admin</u>	<u>Admin</u>	<u>Admin</u>
	<u>June 2018</u>	<u>May 2020</u>	<u>May 2020</u>	<u>May 2020</u>	<u>May 2020</u>
Revenue Subject to Limit	\$32,956.1	\$33,728.9	\$31,289.9	\$32,183.5	\$33,680.8
Revenue Limit	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>	<u>CY 2020</u>
Personal Income	\$439,361	\$460,270	\$484,030	\$502,423	\$500,027
Ratio	9.49%	9.49%	9.49%	9.49%	9.49%
Revenue Limit	\$41,695.4	\$43,679.6	\$45,934.4	\$47,679.9	\$47,452.6
<u>Amount Under (Over) Limit</u>	\$8,739.3	\$9,950.7	\$14,644.5	\$15,496.4	\$13,771.8

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 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 less transfer payments is projected to be below 0% in 2020. Therefore, a payout of \$287.2 million is calculated, which is the maximum 25% that can be paid out during the fiscal year. Real calendar year personal income is projected to be above 2 percent in 2021. This results in a pay-in for FY 2022 of \$159.2 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. For example, the FY 2021 SAF revenue adjustment factor is calculated by dividing the sum of FY 2020 and FY 2021 SAF revenue by the sum of FY 2019 and FY 2020 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 2021, the SAF revenue adjustment factor is calculated to be 0.9804 (See Table 6). For FY 2022, the SAF revenue adjustment factor is calculated to be 1.0382 (See Table 7).

Table 6
Administration School Aid Revenue Adjustment Factor
For Fiscal Year 2021

	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>
Baseline SAF Revenue	\$13,614.2	\$12,615.0	\$13,091.5
Balance Sheet Adjustments	(\$61.8)	\$131.3	\$206.0
Net SAF Estimates	\$13,552.4	\$12,746.3	\$13,297.5
Subtotal Adjustments to FY 2021 Base	\$267.8	\$74.7	\$0.0
Baseline Revenue on a FY 2021 Base	\$13,820.2	\$12,821.0	\$13,297.5

School Aid Fund Revenue Adjustment Calculation for FY 2021

Sum of FY 2019 & FY 2020	\$13,820.2	+	\$12,821.0	=	\$26,641.2
Sum of FY 2020 & FY 2021	\$12,821.0	+	\$13,297.5	=	\$26,118.5

FY 2021 Revenue Adjustment Factor	0.9804
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Note: Factor is calculated off a FY 2021 base year.

Table 7
Administration School Aid Revenue Adjustment Factor
For Fiscal Year 2022

	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
Baseline SAF Revenue	\$12,615.0	\$13,091.5	\$13,620.3
Balance Sheet Adjustments	<u>\$131.3</u>	<u>\$206.0</u>	<u>\$301.7</u>
Net SAF Estimates	\$12,746.3	\$13,297.5	\$13,922.0
Subtotal Adjustments to FY 2021 Base	<u>\$170.4</u>	<u>\$95.7</u>	<u>\$0.0</u>
Baseline Revenue on a FY 2021 Base	\$12,916.7	\$13,393.2	\$13,922.0

School Aid Fund Revenue Adjustment Calculation for FY 2022

Sum of FY 2020 & FY 2021	\$12,916.7	+	\$13,393.2	=	\$26,309.9
Sum of FY 2021 & FY 2022	\$13,393.2	+	\$13,922.0	=	\$27,315.2

FY 2022 Revenue Adjustment Factor	1.0382
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Note: Factor is calculated off a FY 2022 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 2020		FY 2021		FY 2022	
	Amount	Growth	Amount	Growth	Amount	Growth
GF-GP Tax Amounts						
Income Tax	\$6,126.0	-15.5%	\$6,054.4	-1.2%	\$6,533.1	7.9%
Sales	\$1,187.5	-6.6%	\$1,294.9	9.0%	\$1,357.6	4.8%
Use	\$509.0	-32.4%	\$515.6	1.3%	\$580.3	12.5%
Cigarette	\$170.1	-4.4%	\$166.4	-2.2%	\$163.3	-1.9%
Beer & Wine	\$48.0	-4.4%	\$50.5	5.2%	\$51.0	1.0%
Liquor Specific	\$55.0	-10.3%	\$59.0	7.3%	\$60.0	1.7%
Insurance Co. Premium	\$341.8	8.5%	\$367.4	7.5%	\$380.9	3.7%
CIT/MBT	\$306.3	-23.7%	\$295.3	-3.6%	\$356.5	20.7%
Telephone & Telegraph	\$30.0	-1.0%	\$30.0	0.0%	\$30.0	0.0%
Oil & Gas Severance	\$14.0	-37.2%	\$12.0	-14.3%	\$15.0	25.0%
Essential Services Assess.	\$121.0	8.8%	\$125.0	3.3%	\$133.0	6.4%
Penalties and Interest	\$108.0	-13.9%	\$112.0	3.7%	\$115.0	2.7%
Railroad/Car Loaning	\$2.0	0.0%	\$2.0	0.0%	\$2.0	0.0%
Enhanc. Enforce/ACS	(\$150.0)	1.9%	(\$152.0)	1.3%	(\$154.0)	1.3%
Total GF-GP Taxes	\$8,868.7	-17.3%	\$8,932.5	0.7%	\$9,623.7	7.7%
GF-GP Non-Tax Revenue						
Federal Aid	\$10.0	376.2%	\$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	1066.7%	\$7.0	0.0%	\$7.0	0.0%
From Licenses & Permits	\$14.0	50.5%	\$14.0	0.0%	\$14.0	0.0%
Miscellaneous	\$10.0	-41.2%	\$10.0	0.0%	\$10.0	0.0%
Interfund Interest	\$4.0	-61.2%	\$2.0	-50.0%	\$2.0	0.0%
Liquor Purchase	\$190.0	-24.9%	\$210.0	10.5%	\$225.0	7.1%
Charitable Games	\$2.0	5.3%	\$2.0	0.0%	\$2.0	0.0%
Transfer From Escheats	\$79.0	-6.8%	\$80.0	1.3%	\$82.0	2.5%
Other Non Tax	\$0.0	0.0%	\$0.0	0.0%	\$0.0	0.0%
Total Non Tax	\$316.1	-16.6%	\$335.1	6.0%	\$352.1	5.1%
Total GF-GP Revenue	\$9,184.8	-17.3%	\$9,267.6	0.9%	\$9,975.8	7.6%

Table 9
Administration School Aid Fund Revenue Detail

	FY 2020		FY 2021		FY 2022	
	Amount	Growth	Amount	Growth	Amount	Growth
School Aid Fund						
Income Tax	\$2,780.5	-2.3%	\$2,817.9	1.3%	\$2,980.5	5.8%
Sales Tax	\$5,526.5	-8.0%	\$5,931.6	7.3%	\$6,245.8	5.3%
Use Tax	\$490.5	-18.6%	\$506.6	3.3%	\$553.1	9.2%
Liquor Excise Tax	\$54.6	-9.3%	\$58.6	7.3%	\$59.6	1.7%
Cigarette & Tobacco	\$319.4	-2.4%	\$310.7	-2.7%	\$303.9	-2.2%
Marijuana Excise Tax	\$4.2	0.0%	\$27.3	550.0%	\$52.9	93.8%
State Education Tax	\$2,160.9	2.3%	\$2,168.0	0.3%	\$2,196.4	1.3%
Real Estate Transfer	\$300.6	-14.1%	\$310.7	3.4%	\$327.4	5.4%
Industrial Facilities Tax	\$34.5	-12.7%	\$33.0	-4.3%	\$36.0	9.1%
Casino (45% of 18%)	\$71.4	-39.1%	\$122.8	72.0%	\$144.5	17.7%
Commercial Forest	\$3.8	-2.6%	\$3.8	0.0%	\$3.8	0.0%
Other Spec Taxes	\$23.0	4.5%	\$23.0	0.0%	\$23.0	0.0%
Subtotal Taxes	\$11,769.9	-5.8%	\$12,314.0	4.6%	\$12,926.9	5.0%
Lottery Transfer	\$976.4	-8.8%	\$983.5	0.7%	\$995.1	1.2%
Total SAF Revenue	\$12,746.3	-6.0%	\$13,297.5	4.3%	\$13,922.0	4.7%

Table 10
Administration Major Tax Totals

	FY 2020		FY 2021		FY 2022	
	Amount	Growth	Amount	Growth	Amount	Growth
Major Tax Totals (Includes all Funds)						
Income Tax	\$9,444.3	-9.5%	\$9,542.1	1.0%	\$10,183.4	6.7%
Sales Tax	\$7,597.8	-7.9%	\$8,139.2	7.1%	\$8,568.2	5.3%
Use Tax	\$1,465.4	-18.3%	\$1,513.7	3.3%	\$1,654.7	9.3%
CIT/MBT	\$306.3	-23.7%	\$295.3	-3.6%	\$356.5	20.7%
Cigarette and Tobacco	\$858.8	-3.2%	\$839.1	-2.3%	\$823.9	-1.8%
Casino Tax	\$71.4	1.6%	\$122.8	72.0%	\$144.5	17.7%