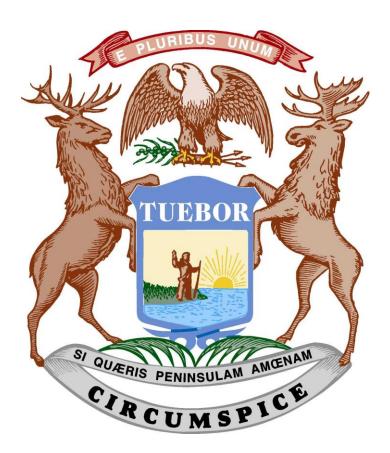
Economic and Revenue Outlook

FY 2020-21, FY 2021-22 and FY 2022-23

Michigan Department of Treasury



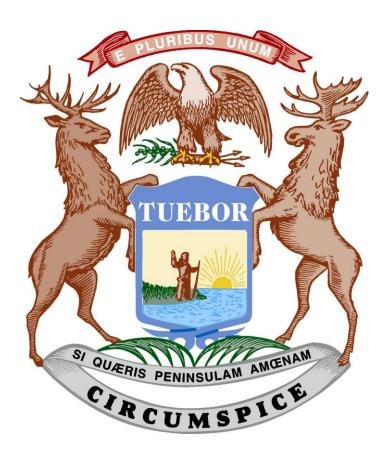
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Economic and Revenue Outlook

FY 2020-21, FY 2021-22 and FY 2022-23

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SECTION I

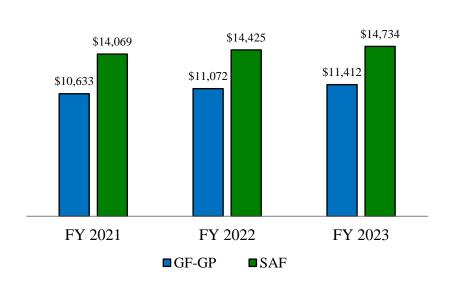
Administration Estimates Executive Summary



Administration Estimates Executive Summary January 15, 2021

Revenue Review and Outlook

- Preliminary FY 2020 GF-GP revenue is 10,771.2 million, a decrease of 3.1 percent from FY 2019. Preliminary FY 2020 SAF revenue is \$14,010.5 million, an increase of 3.4 percent from FY 2019.
- FY 2021 GF-GP revenue is forecast to decrease 1.3 percent to \$10,632.9 million, up \$1,096.2 million from the August 2020 Consensus estimate. FY 2021 SAF revenue is forecast to increase 0.4 percent to \$14,069.25 million, up \$567.3 million from the August 2020 Consensus estimate.
- FY 2022 GF-GP revenue is forecast to increase 4.1 percent to \$11,072.1 million, up \$679.6 million from the August 2020 Consensus estimate. FY 2022 SAF revenue is forecast to increase 2.5 percent to \$14,425.0 million, up \$371.5 million from the August 2020 Consensus estimate.
- FY 2023 GF-GP revenue is forecast to increase 3.1 percent to \$11,411.9 million. FY 2023 SAF revenue is forecast to increase 2.1 percent to \$14,734.4.



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

2021, 2022 and 2023 U.S. Economic Outlook

- Real GDP is estimated to have dropped 3.6 percent in calendar year 2020 the largest calendar year decline since 1946. Real GDP is forecast to rise 4.0 percent in 2021, 2.7 percent in 2022, and 2.6 percent in 2023.
- U.S. employment dropped a record 5.8 percent in 2020, but is forecasted to increase 2.6 percent in 2021, 2.3 percent in 2022, and 1.7 percent in 2023.
- In 2020, the national unemployment rate soared from a 50-year low of 3.7 percent in 2019 to 8.1 percent in 2020. The U.S. rate is forecast to decline to 6.3 percent in 2021, 5.8 percent in 2022 and 5.3 percent in 2023.
- Housing starts rose an estimated 3.6 percent in 2020. Starts are expected to rise 1.9 percent in 2021, decline 0.2 percent in 2022, and then increase 2.9 percent in 2023.
- In 2020, light vehicle sales fell to an estimated 14.5 million units down from 17.0 million units in 2019. Light vehicle sales are forecast to rise to 16.0 million units in 2021, 16.2 million units in 2022, and 16.4 million units in 2023.
- The U.S. CPI rose an estimated 1.2 percent in 2020 and is forecast to increase 2.2 percent in 2021 and 2.1 percent both in 2022 and in 2023.

2021, 2022 and 2023 Michigan Economic Outlook

- In 2020, Michigan wage and salary employment declined an estimated 9.5 percent, which is the largest annual Michigan employment decline since 1958. Michigan employment is forecast to increase 2.7 percent in 2021, 2.5 percent in 2022 and 1.7 percent in 2023.
- The Michigan unemployment rate rose from 4.1 percent in 2019 to an estimated 9.8 percent in 2020. The Michigan unemployment rate is forecast to decline to 7.1 percent in 2021, 6.2 percent in 2022 and 5.3 percent in 2023.
- Michigan wages and salaries dropped an estimated 4.7 percent in 2020 and are forecast to increase 1.7 percent in 2021, 5.4 percent in 2022 and 4.0 percent in 2023.
- Boosted by federal stimulus actions, Michigan personal income increased an estimated 6.0 percent in 2020 and is forecast to decline 3.5 percent in 2021, increase 2.8 percent in 2022, and increase 4.0 percent in 2023.

Forecast Risks

The risks to the forecast fall primarily on the upside and include:

- Two tested effective vaccines have recently been released for distribution in the United States. In August, there was great uncertainty as to when vaccines would be approved and released. Successful early roll-out of the vaccine would help the economic recovery.
- Fiscal policy could be stronger than expected in the short term as additional stimulus bills could spur economic growth and speed recovery.
- Trade policy may likely become more consistent, allowing for more efficient business planning and greater investment.
- On the downside, the current recovery could be slowed or another downturn could occur if COVID-19 resurges or the vaccine rollout is unsuccessful.

SECTION II

Economic Review



Economic Review January 15, 2021

Current U.S. Economic Situation

Pre-Pandemic Recent History

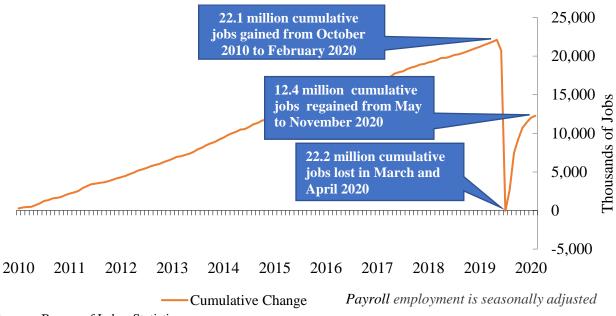
In order to place recent economic activity in perspective, it is helpful to review where the U.S. and Michigan economies stood prior to the COVID19 pandemic. Prior to the pandemic, the U.S. economy had reported modest but steady growth over a lengthy expansion:

- 2019 marked the 10th straight year of economic growth with 2.2 percent growth slowing from 3.0 percent growth in 2018.
- The Institute for Supply Management's (ISM) Purchasing Managers' Index (PMI) signaled that the 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. U.S. employment increased for a record 113th consecutive month in February 2020, rising a total of 22.1 million jobs and averaging 195,000 jobs increase per month. In 2018 and 2019, monthly gains averaged 185,000 jobs.
- 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.
- Vehicle sales fell to 17.0 million units in 2019 down 1.5 percent from 2018. In 2019, light trucks' share of vehicle sales, which includes SUVs, increased for the 7th straight year rising to a record 72.2 percent of sales in 2019.
- Since falling to an all-time low in 2009, housing starts have risen each year through 2019. Starts rose to 1.29 million units in 2019, up 3.2 percent from 2018.

COVID-19 Economic Impact

Midway through the first quarter of 2020, the COVID-19 pandemic began to take hold. As a result of COVID-19 and measures to contain the virus, the U.S. economy stalled with real GDP declining at a 5.0 percent annual rate in the first quarter of calendar year 2020 and plummeting in the second quarter at a record 31.4 percent annual rate. The economy rebounded in the third quarter with real GDP growing at a record 33.4 percent annual rate. However, real GDP in 2020Q3 remained 2.8 percent below its year-ago level (2019Q3).

After rising for 113 consecutive months and gaining a cumulative 22.1 million jobs, U.S. employment fell by 1.4 million jobs in March 2020 and then plummeted a record 20.8 million jobs in April. Wage and salary employment rose each month from May through November regaining slightly more than half (12.4 million) of the 22.2 million jobs lost in March and April. The U.S. economy regained 2.8 million jobs in May and 4.8 million jobs in June. However, employment gains slowed each subsequent month, with the economy adding only 1.8 million jobs in July, 1.5 million jobs in August, 711,00 jobs in September, 610,000 jobs in October, and just 245,000 jobs in November.

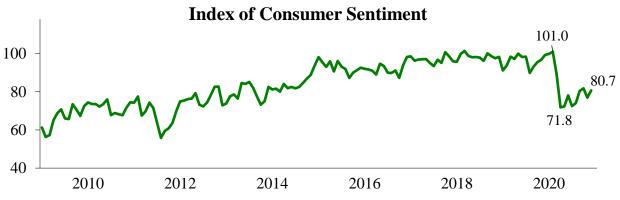


Cumulative Change in U.S. Payroll Employment

Source: Bureau of Labor Statistics.

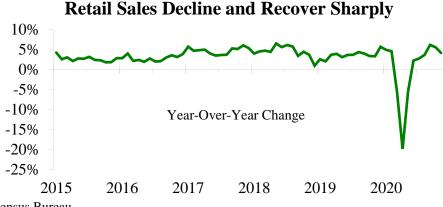
With the massive job losses in March and April, the unemployment rate rose sharply from 3.5 percent in February to a record high 14.8 percent in April. With the partial employment recovery, the unemployment rate fell each month between May and November and remained flat in December. In December, the unemployment rate was 6.7 percent, 3.2 percent higher than February and 3.1 percent higher than a year earlier.

Consumer sentiment was hit hard by the pandemic and its economic fallout. In March and April, University of Michigan index of consumer sentiment fell a combined 29.2 points -50 percent larger than any previous two-month sentiment drop, since recording began. April's reading represented the index's lowest level in almost nine years. While consumer sentiment has recovered partially, December's reading remained 20.3 points below February's level.



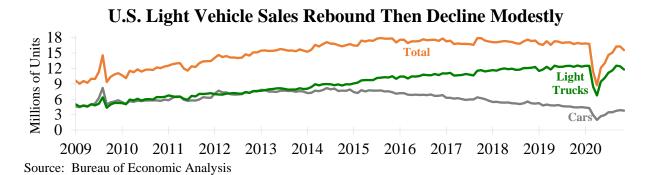
Source: University of Michigan, Survey Research Center

In April, retail sales fell a record 19.9 percent year-over-year. However, since June, sales have been up compared to a year earlier – in large part because of stepped-up government assistance programs combined with pent-up demand. Year-over-year percent gains peaked in September at 6.1 percent. In November, retail sales were up 4.1 percent from the prior November.



Source: U.S. Census Bureau.

Light vehicle sales dropped sharply in March and April 2020, with annualized sales plummeting from 16.8 million units in February to 8.7 million units in April – a near 50-year low. Annualized light vehicle sales rose each month between July and September – rising to 16.3 million units by September. Light vehicle sales fell very slightly in October and dropped modestly in November. In November annualized light vehicle sales equaled 15.6 million units.



In April, motor vehicle production came to a standstill because of the ongoing pandemic. Motor vehicle production partially restarted in May, picked up significantly in June and rose further in July, but declined in August and September. Production did rise in October but fell again in November. All told, cumulative vehicle production from June to November was down just 1.1 percent from the prior year. However, with cumulative production in April and May down a striking 83.8 percent year-over-year, year-to-date national vehicle production through November was down 18.9 percent.

After falling modestly in February, housing starts dropped sharply in both March and April. As a result, annualized starts dropped to a five-year monthly low of 934,000. However, housing starts then rose in all but one of the following months (August). In November, starts rose to 1,547,000 – just slightly below February's level and up 12.8 percent from November 2019.

Monetary and Fiscal Policy Actions

Monetary Policy

The Federal Reserve has taken aggressive action to combat the impact of the pandemic and containment restrictions on the economy. In mid-March, 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.

In mid-December, the Fed announced that the federal funds rate would remain near zero "until labor market conditions have reached levels consistent with the Committee's assessments of maximum employment and inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time." In addition, the Fed pledged to continue its monthly purchases of \$80 billion in Treasury bonds and \$40 billion in mortgage bond securities until "substantial further progress has been made toward the committee's maximum employment and price-stability goals." Finally, the Fed also assured markets "we will say so, undoubtedly, well in advance of any time when we would actually consider gradually tapering the pace of purchases."

Fiscal Policy

In response to the pandemic, the federal government enacted a \$2 trillion-plus economic stimulus package (CARES Act) in late March 2020. 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.

The major elements of the CARES Act are as follows:

(1) Payroll Protection Program (PPP)/Economic Injury Disaster Advances. The Act provided for loans 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 provided rebates of up to \$1,200 for most adults that could not be claimed as dependents and additional rebates of \$500 per child under age 17. The rebates phased out at an income above \$75,000 for individuals and \$150,000 for joint filers.
- (3) Unemployment Insurance (UI) Expansion. The Act provided federal funding for
 - a. An additional \$600 per week to be paid to UI recipients for up to four months (through late July 2020).
 - b. Expanded coverage of UI to include previously excluded individuals, including the self-employed and sole proprietorships (through late December 2020).
 - c. Increasing the number of weeks for which a UI recipient is eligible from 26 weeks to 39 weeks (through late December 2020).
- (4) Funding Emergency Facilities established by the Federal Reserve. The Act provided money for losses from loans the Federal Reserve makes under the numerous lending facilities that were newly established or expanded in the respond to the pandemic. In December, funding for many Fed loan programs was suspended.
- (5) Payments to State, Local and Tribal Governments. The Act provided 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 was based on a state's share of the U.S. population with each state receiving a minimum of \$1.25 billion.
- (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 extended the federal income tax filing deadline for 2019 for all taxpayers to July 15, 2020.

In late December 2020, the U.S. Congress passed and the President signed an additional \$900 billion COVID aid package. The package included:

- (1) Another round of stimulus checks of up to \$600 to individuals (\$1,200 to couples) half the size of the CARES Act recovery rebates and \$500 per child.
- (2) Through March 2021, funded
 - a. An additional \$300 per week for unemployment insurance half the amount that the CARES Act had increased UI payments through late July.
 - b. An 11-week extension of both the coverage to previously uncovered individuals and the duration (to 50 weeks) of unemployment insurance.
- (3) An additional \$284 billion for Payroll Protection loan/grant program along with \$15 billion in aid for airlines and \$15 billion for theater owner/operators grants.
- (4) Funding for public and private schools totaling \$82 billion.
- (5) \$25 billion in rental assistance and an extension of the moratorium on evictions through January 31, 2021, \$10 billion for childcare. \$13 billion in funds for food-stamp and child-nutrition benefits.
- (6) \$30 billion for the procurement and distribution of a vaccine, as well as \$22 billion for testing and tracing.

Current Michigan Economic Situation

Pre-Pandemic Recent History

Similar to the U.S. as a whole, Michigan's economy had posted a decade of economic growth that was showing signs of slowing prior to the current pandemic.

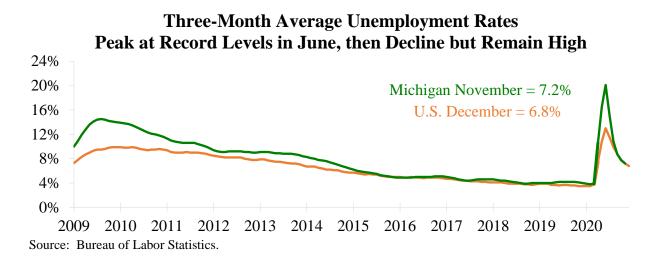
In 2019:

- 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 3.1 percent, slowing from 4.1 percent growth in 2018.
- Real Michigan gross domestic product (GDP) increased for the tenth straight year, rising 0.8 percent, slowing from 2.3 percent growth in 2018 and representing the slowest real Michigan GDP growth over the 10 years.
- 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.
- The annual Michigan unemployment rate remained unchanged at 4.1 percent, after declining in each of the preceding nine years. The 4.1 percent rate represented the lowest annual Michigan unemployment rate since CY 2000.
- Real (inflation adjusted) personal income grew for the 6th straight year, growing 1.7 percent matching growth in 2018.
- Approximately 1,914,000 vehicles were produced in Michigan, an increase of 4.4 percent from 2018, and well above the historical low of 1,146,000 units produced in 2009.

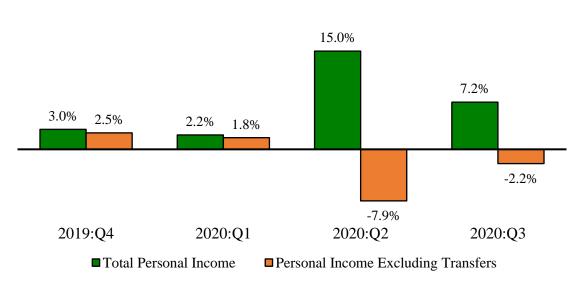
COVID-19 Economic Impact

The pandemic's impact on Michigan's economy mirrored the national impact. After rising to a 17-year monthly high in February 2020, Michigan wage and salary employment fell modestly in March (-38,700 jobs) and then plummeted in April – losing a record 1.0 million jobs. Between May and November, Michigan has regained a net 622,700 jobs (58.7 percent) of the jobs lost in March and April.

With the massive employment losses, Michigan's three-month average unemployment rate trended sharply upward starting in April, when the average rose from 3.9 percent to 10.6 percent. The three-month average peaked in June at 20.1 percent and has since trended downward – dropping to 7.2 percent in November. While down substantially from June, November's average was 3.4 percentage points above February's average of 3.8 percent.



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 12.0 percent from a year earlier, personal income *rose* 15.0 percent year-over-year. While slowing significantly, Michigan personal income still increased at a still strong 7.2 percent y-o-y in 2020Q3. However, excluding transfer payments, which encompass the CARES Act's direct relief payments and all unemployment insurance payments, Michigan personal income fell 7.9 percent y-o-y in 2020Q2 and 2.2 percent y-o-y in 2020Q3 and Michigan real GDP was down 4.4 percent.



Michigan Personal Income Change From Year Ago

Source: Bureau of Economic Analysis.

SECTION III

Administration Economic Forecast



Administration Economic Forecast January 15, 2021

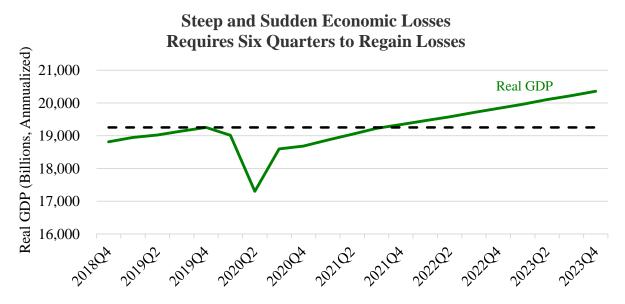
Administration Economic Forecast Summary

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

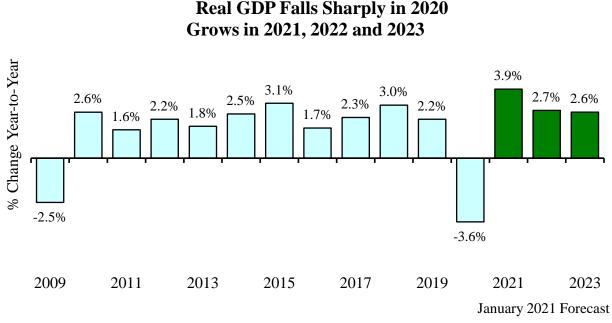
2021, 2022 and 2023 U.S. Economic Outlook

Real (inflation adjusted) GDP is expected to increase at a strong pace through most of 2021. As a result, real GDP is expected to regain its pandemic losses by the end of 2021. After declining at an estimated 3.6 percent in 2020 (the largest annual decline since 1946), real GDP is forecast to rise 3.9 percent in calendar year 2021, grow 2.7 percent in 2022, and increase 2.6 percent in 2023.

The forecast projects that real GDP will fully regain the losses from the first two quarters of 2020 by then end of 2021 – six quarters following the steep drop. Real GDP already regained 70.8 percent of its losses by the end of 2020. However, with moderate growth, it requires an additional four quarters to fully recoup the steep real GDP drop from the first half of 2020. By the end of the forecast (2023Q4), real GDP is projected to be up 5.7 percent from its level directly before the pandemic in 2019Q4.

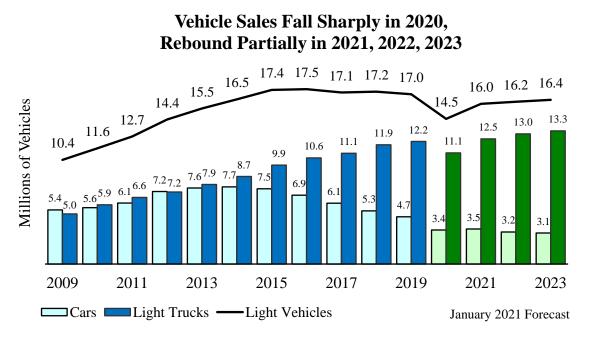


Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, January 2021.



Source: Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, January 2021.

As a result of sharp declines over the first half of 2020, **light vehicle sales** are estimated to have declined to 14.5 million units in 2020 – down from 17.0 million units in 2019. Light vehicle sales are expected to rebound to 16.0 million units in 2021, 16.2 million units in 2022 and 16.4 million units in 2023. Light trucks continue to dominate the light vehicle market over the forecast horizon.



Source Bureau of Economic Analysis, U.S. Department of Commerce, and Administration Forecast, January 2021.

January 2021										
	Calendar 2019 Actual	Percent Change from Prior Year	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
United States										
Real Gross Domestic Product (Billions of Chained 2012 Dollars)	\$19,092	2.2%	\$18,399	-3.6%	\$19,116	3.9%	\$19,632	2.7%	\$20,142	2.6%
Implicit Price Deflator GDP (2012 = 100)	112.3	1.8%	113.6	1.2%	115.6	1.8%	117.9	2.0%	120.4	2.1%
Consumer Price Index (1982-84 = 100)	255.657	1.8%	258.811	1.2%	264.259	2.1%	269.883	2.1%	275.567	2.1%
Consumer Price Index - Fiscal Ye (1982-84 = 100)	254.376	1.9%	258.014	1.4%	262.724	1.8%	268.519	2.2%	274.104	2.1%
Personal Consumption Deflator (2012 = 100)	109.9	1.5%	111.1	1.2%	113.2	1.9%	115.5	2.0%	117.8	2.0%
3-month Treasury Bills Interest Rate (percent)	2.1		0.4		0.1		0.1		0.1	
Unemployment Rate - Civilian (percent)	3.7		8.1		6.3		5.8		5.3	
Wage and Salary Employment (millions)	150.939	1.4%	142.218	-5.8%	145.920	2.6%	149.280	2.3%	151.820	1.7%
Housing Starts (millions of starts)	1.290	3.2%	1.336	3.6%	1.362	1.9%	1.360	-0.2%	1.399	2.9%
Light Vehicle Sales (millions of units)	17.0	-1.5%	14.5	-14.5%	16.0	10.3%	16.2	1.3%	16.4	1.2%
Passenger Car Sales (millions of units)	4.7	-11.1%	3.4	-27.9%	3.5	2.9%	3.2	-8.6%	3.1	-3.1%
Light Truck Sales (millions of units)	12.2	2.8%	11.1	-9.3%	12.5	12.6%	13.0	4.0%	13.3	2.3%
Big 3 Share of Light Vehicles (percent)	41.0		40.5		40.8		41.0		40.7	
Michigan										
Wage and Salary Employment (thousands)	4,433	0.3%	4,012	-9.5%	4,120	2.7%	4,223	2.5%	4,295	1.7%
Unemployment Rate (percent)	4.1		9.8		7.1		6.2		5.3	
Personal Income (millions of dollars)	\$491,632	3.1%	\$521,130	6.0%	\$502,890	-3.5%	\$516,971	2.8%	\$539,201	4.3%
Real Personal Income (millions of 1982-84 dollars)	\$208,968	1.7%	\$219,276	4.9%	\$206,739	-5.7%	\$208,198	0.7%	\$212,569	2.1%
Wages and Salaries (millions of dollars)	\$246,831	2.6%	\$235,123	-4.7%	\$239,020	1.7%	\$251,884	5.4%	\$261,933	4.0%
Detroit Consumer Price Index (1982-84 = 100)	235.267	1.3%	237.659	1.0%	243.249	2.4%	248.308	2.1%	253.659	2.2%
Detroit CPI - Fiscal Year (1982-84 = 100)	233.843	1.0%	237.432	1.5%	242.013	1.9%	247.052	2.1%	252.264	2.1%

Table 1Administration Economic Forecast

The **U.S. unemployment rate** is forecast to decline over the forecast horizon. As a result, after rising to an estimated 8.1 percent average in 2020, the U.S. unemployment rate is forecast to average 6.3 percent in 2021. In 2022, the average U.S. rate is forecast to fall to 5.8 percent and then decline to 5.3 percent in 2023.

U.S. wage and salary employment is forecast to continue recovering its steep 2020Q2 losses over the forecast horizon, but is not expected to fully recover its losses until 2023Q3. Annual employment is expected to rise 2.6 percent in 2021 and then grow 2.4 percent in 2022 and rise 1.7 percent in 2023.

The **U.S. consumer price index (CPI)** rose 1.2 percent in 2020. The CPI is forecast to increase 2.1 percent in each of the three forecast years (2021, 2022 and 2023). The personal consumption price deflator rate is projected to rise 1.9 percent in 2021 and then increase 2.0 percent both in 2022 and in 2023.

The **three-month Treasury bill rate** is estimated to have decreased to 0.4 percent in 2020, during which the federal funds rate was lowered to near zero. With the federal funds rate remaining close to zero throughout the forecast horizon, the Treasury bill rate is expected to average 0.1 percent in each year of the forecast (2021, 2022 and 2023).

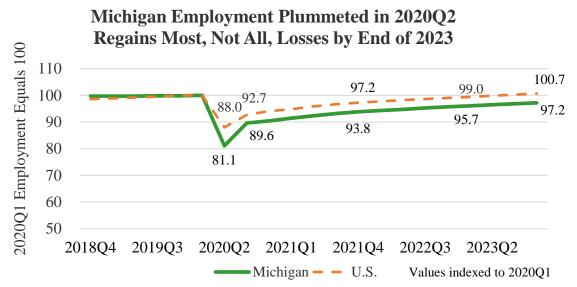
Housing starts are estimated to have risen 3.6 percent in 2020. In 2021, housing starts are forecast to increase 1.9 percent. Starts are forecast to decline 0.2 percent in 2022 and then rise 2.9 percent in 2023.

2021, 2022 and 2023 Michigan Economic Outlook

Michigan wage and salary employment is forecast to rise over each quarter of the forecast horizon. By 2020Q4, Michigan employment had regained roughly half of its 18.9 percent decline in 2020Q2. As a result, 2020Q4 Michigan employment remains 9.6 percent below its 2020Q1 level. Michigan employment does not fully regain its 2020Q2 losses by the end of the forecast horizon. Michigan employment is expected to be down 4.3 percent from its pre-pandemic level by the end of 2022 and still be 2.8 percent below its pre-pandemic level in 2023Q4.

Average annual 2020 Michigan wage and salary employment declined an estimated 9.5 percent -- the largest annual Michigan employment decline since 1958. Michigan employment is expected to rise 2.7 percent in 2021, increase 2.5 percent in 2022 and grow1.7 percent in 2023.

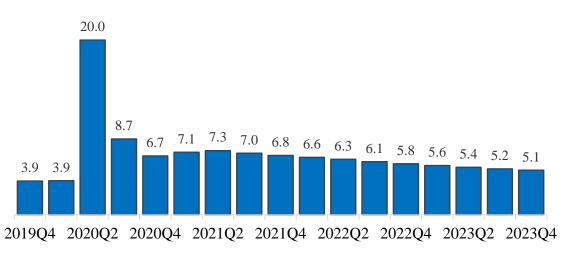
In 2020, annual **Michigan manufacturing employment** dropped an estimated 10.7 percent. Michigan manufacturing employment is expected to increase 5.2 percent in 2021, 4.1 percent in 2022 and 1.5 percent in 2023.



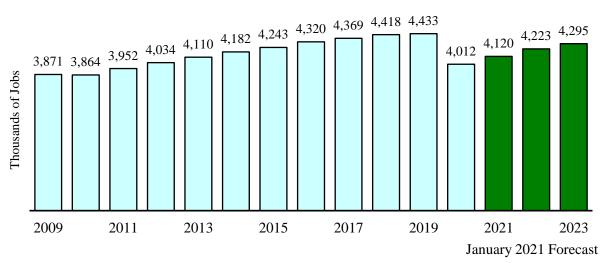
Source: Michigan Department of Technology, Management, & Budget, U.S. Bureau of Labor Statistics and January 2021 Administration Forecast.

After soaring to 20.0 percent in 2020Q2 and then dropping to 8.7 percent in 2020Q3, the **Michigan unemployment rate** fell to an estimated 6.7 percent in 2020Q4. The Michigan unemployment rate is expected to rise slightly in each of the first two quarters of 2021 before declining in each of the remaining forecast quarters. In 2023Q4, the Michigan unemployment rate drops to 5.1 percent. The Michigan unemployment rate averaged an estimated 9.8 percent in 2020. The average annual Michigan unemployment rate is forecast to drop to 7.1 percent in 2021, 6.2 percent in 2022 and 5.3 percent in 2023.





Source: Michigan Department of Technology, Management, & Budget, U.S. Bureau of Labor Statistics and January 2021 Administration Forecast.



Michigan Wage and Salary Employment Plummets in 2020 Rebounds Partially in 2021, 2022, 2023

Source: Michigan Department of Technology, Management, & Budget, U.S. Bureau of Labor Statistics and January 2021 Administration Forecast.

Michigan wages and salaries are estimated to have declined 4.7 percent in 2020 and are forecast to rise 1.7 percent in 2021, 5.4 percent in 2022 and 4.0 percent in 2023.

Michigan personal income is estimated to have risen 6.0 percent in 2020 but is forecast to decline 3.5 percent in 2021. Personal income is then expected to increase 2.8 percent in 2022 and rise 4.3 percent in 2023.

The **Detroit CPI** rose an estimated 1.0 percent in 2020 and is forecast to increase 2.4 percent in 2021, 2.1 percent in 2022 and 2.2 percent in 2023. After rising an estimated 4.9 percent in 2020, **Real (inflation adjusted) Michigan personal income** is forecast to drop 5.7 percent in 2021 and then rise 0.7 percent in 2022 followed by a 2.1 percent increase in 2023.

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** declined 2.4 percent in FY 2020. In FY 2021, wages and salaries are forecast to drop 1.1 percent. Wages and salaries then are projected to rise 5.4 percent in FY 2022 and to increase 4.0 percent in FY 2023.

Sales and use taxes depend, in part, on **Michigan disposable (after tax) income** and inflation. Disposable income rose 7.8 percent in FY 2020. In FY 2021, disposable income is forecast to drop 4.3 percent. Disposable income is then projected to increase 1.6 percent in FY 2022 and to rise 4.0 percent in FY 2023. Prices, as measured by the **Detroit CPI**, rose 1.5 percent in FY 2020.

The Detroit CPI is forecast to increase 1.9 percent in FY 2021, 2.1 percent in FY 2022, and 2.1 percent in FY 2023.

Forecast Risks

The risks to the forecast fall primarily on the upside and include:

- Two tested effective vaccines have recently been released for distribution in the United States. In August, there was great uncertainty as to when vaccines would be approved and released. Successful early roll-out of the vaccine would help the economic recovery.
- Fiscal policy could be stronger than expected in the short term as additional stimulus bills could spur economic growth and speed recovery.
- Trade policy may likely become more consistent, allowing for more efficient business planning and greater investment.
- On the downside, the current recovery could be slowed or another downturn could occur if COVID-19 resurges or the vaccine rollout is unsuccessful.

SECTION IV

Administration Revenue Estimates



Administration Revenue Estimates January 15, 2021

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 2020 is the base year. Any non-economic changes to the taxes occurring in FY 2021, FY 2022 and FY 2023 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 Preliminary Revenue

FY 2020 GF-GP revenue is estimated to be \$10,771.2 million, down 3.1 percent compared to FY 2019. SAF revenue is forecast to be \$14,010.5 million, a 3.4 percent increase compared to FY 2019 (see Table 2).

		Preliminary FY 2020		
	Amount	Growth	Consensus	
General Fund - General Purpose				
Baseline Revenue	\$12,009.9	-2.7%		
Tax Cut Adjustments	(\$1,238.7)			
Net Resources	\$10,771.2	-3.1%	\$474.4	
School Aid Fund				
Baseline Revenue	\$14,100.8	3.6%		
Tax Cut Adjustments	(\$90.3)			
Net Resources	\$14,010.5	3.4%	\$296.1	
Combined				
Baseline Revenue	\$26,110.7	0.6%		
Tax Cut Adjustments	(\$1,329.0)			
Net Resources	\$24,781.7	0.5%	\$770.5	

Table 2 FY 2019-20 Preliminary Final Revenue Estimates (millions)

FY 2021 Revenue Outlook

FY 2021 GF-GP revenue is estimated to be \$10,632.9 million, a 1.3 percent decrease compared to FY 2020. The FY 2021 GF-GP revenue estimate is \$1,096.2 million above the August 2020 Consensus estimate. SAF revenue is forecast to be \$14,069.2 million, a 0.4 percent increase compared to FY 2020. The FY 2021 SAF estimate is \$567.3 million above the August 2020 Consensus estimate (see Table 3).

	(millions)				
	Prelimi January 1	Change from Aug 2020			
	Amount	Growth	Consensus		
General Fund - General Purpose					
Baseline Revenue	\$12,292.1	2.3%			
Tax Cut Adjustments	(\$1,659.2)				
Net Resources	\$10,632.9	-1.3%	\$1,096.2		
School Aid Fund					
Baseline Revenue	\$14,143.7	0.3%			
Tax Cut Adjustments	(\$74.5)				
Net Resources	\$14,069.2	0.4%	\$567.3		
Combined					
Baseline Revenue	\$26,435.8	1.2%			
Tax Cut Adjustments	(\$1,733.7)				
Net Resources	\$24,702.1	-0.3%	\$1,663.5		

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

FY 2022 Revenue Outlook

FY 2022 GF-GP revenue is estimated to be \$11,072.1 million, a 4.1 percent increase compared to FY 2021. The FY 2022 GF-GP revenue estimate is 679.6 million above the August 2020 Consensus estimate. SAF revenue is forecast to be \$14,425.0 million, a 2.5 percent increase compared to FY 2021. The FY 2022 SAF estimate is \$371.5 million above the August 2020 Consensus estimate (see Table 4).

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

		Preliminary January 15, 2021	
	Amount	Growth	Consensus
General Fund - General Purpose			
Baseline Revenue	\$12,556.2	2.1%	
Tax Cut Adjustments	(\$1,484.1)		
Net Resources	\$11,072.1	4.1%	\$679.6
School Aid Fund			
Baseline Revenue	\$14,415.8	1.9%	
Tax Cut Adjustments	\$9.2		
Net Resources	\$14,425.0	2.5%	\$371.5
Combined			
Baseline Revenue	\$26,972.0	2.0%	
Tax Cut Adjustments	(\$1,474.9)		
Net Resources	\$25,497.1	3.2%	\$1,051.1

FY 2023 Revenue Outlook

FY 2023 GF-GP revenue is estimated to be \$11,411.9 million, a 3.1 percent increase compared to FY 2022. SAF revenue is forecast to be \$14,734.4 million, a 2.1 percent increase compared to FY 2021 (see Table 5).

Table 5 FY 2022-23 Administration Revenue Estimates (millions)

	Prelimi January 1	e
	Amount	Growth
General Fund - General Purpose		
Baseline Revenue	\$12,843.1	2.3%
Tax Cut Adjustments	(\$1,431.2)	
Net Resources	\$11,411.9	3.1%
School Aid Fund		
Baseline Revenue	\$14,701.6	2.0%
Tax Cut Adjustments	\$32.8	
Net Resources	\$14,734.4	2.1%
Combined		
Baseline Revenue	\$27,544.7	2.1%
Tax Cut Adjustments	(\$1,398.4)	
Net Resources	\$26,146.3	2.5%

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 2019 revenues were \$9.7 billion below the revenue limit. State revenues will also be well below the limit for FY 2020 through FY 2023. FY 2020 revenues are expected to be about \$11.4 billion below the limit, FY 2021 revenues \$11.8 billion below the limit, FY 2022 revenues \$13.6 billion below the limit, and FY 2023 revenues \$11.0 billion below the limit (See Table 6).

Table 6 Administration Revenue Limit Calculation

(millions)

	FY 2020 Admin Jan 2021	FY 2021 Admin Jan 2021	FY 2022 Admin Jan 2021	FY 2023 Admin Jan 2021
Revenue Subject to Limit	\$34,574.0	\$34,810.6	\$35,849.9	\$36,707.8
<u>Revenue Limit</u>	CY 2018	CY 2019	CY 2020	CY 2020
Personal Income	\$484,030	\$491,632	\$521,130	\$502,890
Ratio	9.49%	9.49%	9.49%	9.49%
Revenue Limit	\$45,934.4	\$46,655.9	\$49,455.2	\$47,724.3
<u>Amount Under (Over) Limit</u>	\$11,360.4	\$11,845.3	\$13,605.3	\$11,016.4

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 less transfer payments is projected to be below 0% in 2020 and 2021. Therefore, a payout of \$287.2 million is calculated, which is the maximum 25% that can be paid out during FY 2021. Real calendar year personal income is projected to be above 2 percent in 2022. This results in a pay-in for FY 2023 of \$21.0 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 2022, the SAF revenue adjustment factor is calculated to be 1.0111 (See Table 7). For FY 2023, the SAF revenue adjustment factor is calculated to be 1.0195 (See Table 8).

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

	FY 2020	FY 2021	_	FY 2022
Baseline SAF Revenue	\$14,100.8	\$14,143.7		\$14,415.8
Balance Sheet Adjustments	(\$90.3)	(\$74.5)		\$9.2
Net SAF Estimates	\$14,010.5	\$14,069.2		\$14,425.0
Subtotal Adjustments to FY 2021 Base	\$99.5	\$83.7	_	\$0.0
Baseline Revenue on a FY 2021 Base	\$14,110.0	\$14,152.9		\$14,425.0
School Aid Fund Revenue Adjustment Calcu	lation for FY 2	022		
Sum of FY 2020 & FY 2021	\$14,110.0	+ \$14,152.9	=	\$28,263.0
Sum of FY 2021 & FY 2022	\$14,152.9	+ \$14,425.0	=	\$28,578.0
FY 2022 Revenue Adjustment Factor				1.0111

Note: Factor is calculated off a FY 2022 base year.

Table 8Administration School Aid Revenue Adjustment FactorFor Fiscal Year 2023

	FY 2021	FY 2022	FY 2023
Baseline SAF Revenue	\$14,143.7	\$14,415.8	\$14,701.6
Balance Sheet Adjustments	(\$74.5)	\$9.2	\$32.8
Net SAF Estimates	\$14,069.2	\$14,425.0	\$14,734.4
Subtotal Adjustments to FY 2023 Base	\$107.3	\$23.6	\$0.0
Baseline Revenue on a FY 2023 Base	\$14,176.5	\$14,448.6	\$14,734.4
School Aid Fund Revenue Adjustment Calc	culation for FY 20	<u>)23</u>	
Sum of FY 2021 & FY 2022	\$14,176.5 +	- \$14,448.6 =	\$28,625.2
Sum of FY 2022 & FY 2023	\$14,448.6 +	- \$14,734.4 =	\$29,183.1
FY 2023 Revenue Adjustment Factor			1.0195
Note: Easter is calculated off a EV 2023 base year			

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

Revenue Detail

The estimated tax and revenue totals include the effects of all enacted tax changes. The revenue totals by tax are presented separately for GF-GP and for the SAF (See Tables 9 and 10). Tax totals for the income, sales, use, CIT/MBT, tobacco and casino taxes for all funds are also included (See Table 11).

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

	FY 2021		FY 2	022	FY 2023	
	Amount	Growth	Amount	Growth	Amount	Growth
GF-GP Tax Amounts						
Income Tax	\$6,847.7	-0.1%	\$7,064.7	3.2%	\$7,262.3	2.8%
Sales	\$1,312.4	0.9%	\$1,352.1	3.0%	\$1,370.7	1.4%
Use	\$787.8	1.8%	\$802.2	1.8%	\$792.2	-1.2%
Cigarette	\$173.5	-3.3%	\$170.3	-1.8%	\$168.5	-1.1%
Beer & Wine	\$52.0	1.2%	\$53.0	1.9%	\$54.0	1.9%
Liquor Specific	\$68.0	-7.0%	\$66.0	-2.9%	\$67.5	2.3%
Insurance Co. Premium	\$400.4	-12.3%	\$422.9	5.6%	\$432.9	2.4%
CIT/MBT	\$470.5	17.3%	\$578.7	23.0%	\$682.7	18.0%
Telephone & Telegraph	\$32.0	-1.2%	\$32.0	0.0%	\$30.0	-6.3%
Oil & Gas Severance	\$10.0	-21.9%	\$16.0	60.0%	\$20.0	25.0%
Essential Services Assess.	\$129.0	5.7%	\$137.0	6.2%	\$143.0	4.4%
Penalties and Interest	\$120.0	32.3%	\$125.0	4.2%	\$130.0	4.0%
Railroad/Car Loaning	\$2.5	0.0%	\$2.0	0.0%	\$2.0	0.0%
Enhanc. Enforce/ACS	(\$152.0)	8.7%	(\$154.0)	1.3%	(\$156.0)	1.3%
Total GF-GP Taxes	\$10,253.8	-1.1%	\$10,667.9	4.0%	\$10,999.8	3.1%
GF-GP Non-Tax Revenu	e					
Federal Aid	\$10.0	-33.3%	\$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	16.7%	\$7.0	0.0%	\$7.0	0.0%
From Licenses & Permits	\$14.0	16.7%	\$14.0	0.0%	\$14.0	0.0%
Miscellaneous	\$10.0	0.0%	\$10.0	0.0%	\$10.0	0.0%
Interfund Interest	\$2.0	11.1%	\$2.0	0.0%	\$2.0	0.0%
Liquor Purchase	\$260.0	-9.5%	\$280.0	7.7%	\$285.0	1.8%
Charitable Games	\$1.0	25.0%	\$1.0	0.0%	\$2.0	100.0%
Transfer From Escheats	\$75.0	0.9%	\$80.0	6.7%	\$82.0	2.5%
Other Non Tax	\$0.0	0.0%	\$0.0	0.0%	\$0.0	0.0%
Total Non Tax	\$379.1	-6.9%	\$404.1	6.6%	\$412.1	2.0%
Total GF-GP Revenue	\$10,632.9	-1.3%	\$11,072.0	4.1%	\$11,411.9	3.1%

	FY 2021		FY 2022		FY 2023	
	Amount	Growth	Amount	Growth	Amount	Growth
School Aid Fund						
Income Tax	\$3,081.9	-0.5%	\$3,196.3	3.7%	\$3,278.8	2.6%
Sales Tax	\$6,159.0	1.8%	\$6,316.3	2.6%	\$6,414.1	1.5%
Use Tax	\$642.7	3.2%	\$664.0	3.3%	\$672.3	1.3%
Liquor Excise Tax	\$67.6	-4.7%	\$65.6	-3.0%	\$67.1	2.3%
Cigarette & Tobacco	\$319.1	-3.8%	\$312.3	-2.1%	\$308.2	-1.3%
Marijuana Excise Tax	\$19.3	0.0%	\$42.0	117.6%	\$52.5	25.0%
State Education Tax	\$2,223.0	1.5%	\$2,251.4	1.3%	\$2,291.4	1.8%
Real Estate Transfer	\$340.0	1.4%	\$350.0	2.9%	\$363.9	4.0%
Industrial Facilities Tax	\$38.0	-7.1%	\$37.0	-2.6%	\$36.0	-2.7%
Casino (45% of 18%)	\$98.0	46.3%	\$139.0	41.8%	\$158.8	14.2%
Commercial Forest	\$3.4	3.0%	\$3.5	2.9%	\$3.8	8.6%
Other Spec Taxes	\$23.0	-3.0%	\$23.0	0.0%	\$23.0	0.0%
Subtotal Taxes	\$13,015.0	1.4%	\$13,400.4	3.0%	\$13,669.9	2.0%
Lottery Transfer	\$1,054.2	-10.7%	\$1,024.7	-2.8%	\$1,064.5	3.9%
Total SAF Revenue	\$14,069.2	0.4%	\$14,425.1	2.5%	\$14,734.4	2.1%

Table 10Administration School Aid Fund Revenue Detail

Table 11Administration Major Tax Totals

	FY 2021		FY 2022		FY 2023				
	Amount	Growth	Amount	Growth	Amount	Growth			
Major Tax Totals (Includes all Funds)									
Income Tax	\$10,599.4	1.0%	\$10,930.8	3.1%	\$11,210.9	2.6%			
Sales Tax	\$8,445.0	1.7%	\$8,659.8	2.5%	\$8,792.8	1.5%			
Use Tax	\$1,922.0	4.2%	\$1,987.5	3.4%	\$2,012.5	1.3%			
CIT/MBT	\$470.5	17.3%	\$578.7	23.0%	\$682.7	18.0%			
Cigarette and Tobacco	\$872.1	-3.3%	\$856.2	-1.8%	\$847.2	-1.1%			
Casino Tax	\$98.0	1.6%	\$139.0	41.8%	\$158.8	14.2%			