

The Michigan Economic Outlook for 2023–2025

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Introduction

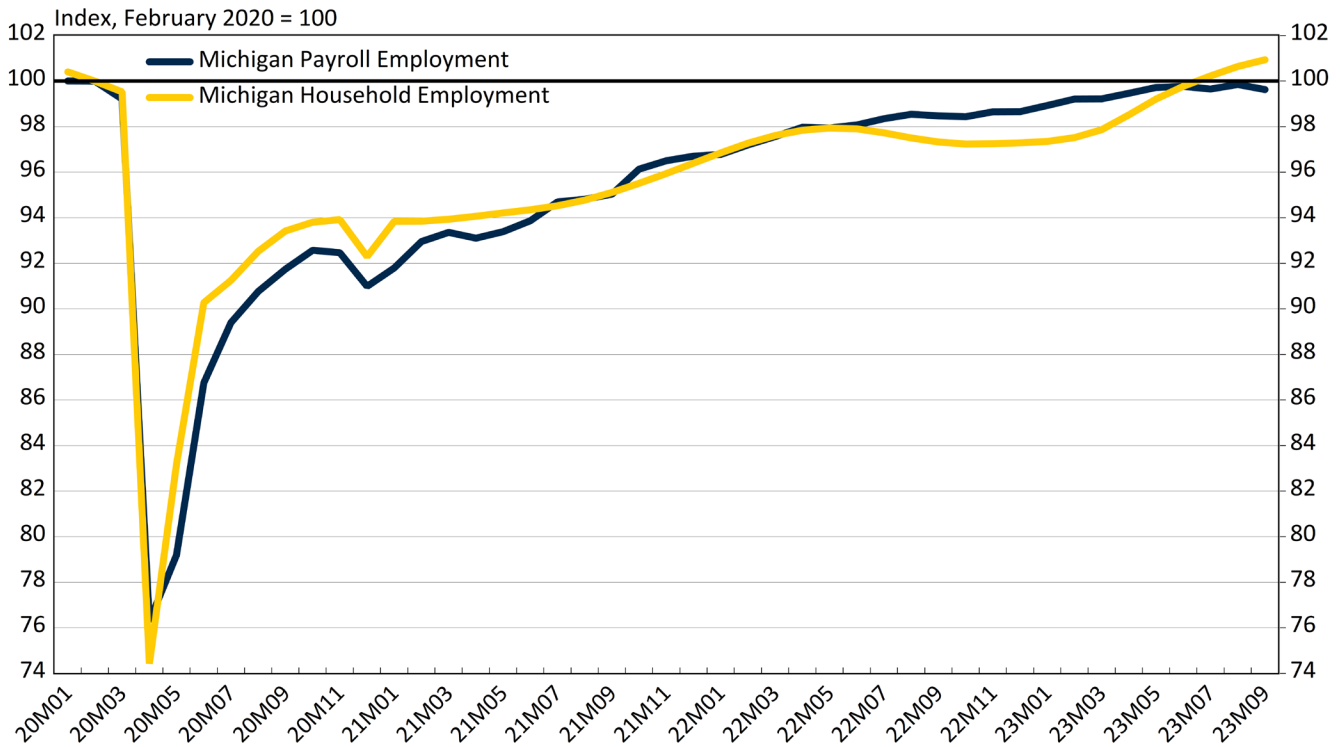
Michigan's economy took center stage in national headlines this fall amid the UAW's "Stand Up Strike" against the Detroit Three automakers. Despite the heated rhetoric surrounding the strike, its economic fallout could have been far more severe. The UAW's strategy of starting with a limited number of strike targets, the generally strong economy, and the strike's relatively timely resolution all combined to limit its spillover effects on the broader economy. If the tentative agreements are ratified as expected, the signing bonuses and higher wages should more than offset the loss of personal income due to the strike.

The strike's resolution comes as Michigan's economy is nearing a complete recovery from the pandemic recession. Figure 1 shows that, as of September, the count of employed Michiganders stood nearly one percent higher than just before the pandemic.¹ The state's payroll jobs count had seemed as though it would surpass its pre-pandemic level this fall, but we suspect that a surprising loss of 10,000 jobs in September, along with the UAW strike, has pushed that milestone back to the first quarter of 2024. Still, Michigan's recovery from the pandemic recession stands in welcome contrast to its experience following the dot-com recession and Great Recession, from which it still has not recovered.

¹ This report was written prior to the release of updated state employment information scheduled for November 16th.

The end of the UAW's Stand-Up Strike removes a major risk confronting Michigan's economy. There are certainly other risks on the horizon, but they are less localized, which in our assessment lowers the odds of a state-specific downturn here in Michigan.

Figure 1
Michigan's Employment Recovery



Our economic outlook for Michigan therefore follows the same broad contours as our outlook for the U.S. economy over the next two years, with growth continuing but at a slower pace than we have seen recently. We project statewide payroll job gains to moderate from 66,000 this year to 40,000 next year and 42,000 in 2025. Our forecast takes Michigan's payroll job count at the end of 2025 to its highest level since the third quarter of 2001. That level would be 3.6 percent below the state's all-time peak reached in the second quarter of 2000. We expect Michigan's unemployment rate to hover just above 4 percent during our forecast period; the local labor market remains tight despite moderating labor demand. Michigan's aging workforce and limited population growth will act as speed limits to job growth.

Although the outlook for the labor market is largely sunny, high inflation continues to cast a shadow over our forecast. Local inflation has been running ahead of the national rate this year, and we expect that gap to persist in 2024 before both national and local inflation slow to the mid-2 percent range

by 2025. Stubbornly high inflation will continue to whittle away at Michigan's real income gains. Real disposable income per capita takes a small step back next year before growing at a 1.0 percent pace in 2025 as inflation subsides. Our forecast calls for real disposable income per capita to stand just 1.3 percent higher in 2025 than it did prior to the pandemic in 2019.

Our forecast highlights the improving resilience of Michigan's economy. The state has mounted a vigorous comeback from the pandemic recession in the face of severe supply chain shortages, high inflation, rising interest rates, and now a major strike in its marquee industry. We expect that the next two years should feature steady growth and declining inflation. We would classify that as a positive outlook for the Great Lakes State.

Review of the Previous Year's Forecast

RSQE has been presenting its forecast of the Michigan economy at the Economic Outlook Conference for fifty years. Table A.1 in the Appendix at the back of this report presents our track record for each of our previous forecasts for employment and personal income growth.

Last November, we forecast that Michigan's payroll job count would rise by 1.2 percent on a calendar year average basis from 2022 to 2023. We now estimate that employment rose 1.5 percent, producing an absolute forecast error of 0.3 percentage points. That is well below our historical average absolute forecast error of 1.5 percentage points. Our forecast error for employment translates to an underestimate of 12,900 job gains, but that topline figure masks partially offsetting forecast errors for various industries. We were too optimistic about Michigan's private goods-producing industries, forecasting 22,700 job gains relative to the 16,000 we now expect. In contrast, we were nearly spot on for Michigan's private services industries, forecasting 28,600 job gains relative to the 29,000 we now expect. Our largest forecast error came in the government sector, where we had projected just 1,700 job gains; government now appears to be on pace to add 21,000 jobs this year.

As of last November, we were projecting state personal income to grow by 4.7 percent this year as the gyrations of the pandemic era moved further into the rearview mirror. We now estimate that personal income grew by 4.3 percent. That produces an absolute forecast error of 0.4 percentage points,

well below our historical average absolute forecast error of 1.7 percentage points for personal income. Our forecast error stemmed largely from an overestimate in property income.

Overall, we are pleased with our errors from last year's forecast given the economic uncertainty that clouded the outlook one year ago.

Special Section—The Impacts of the 2023 UAW Detroit Three Autoworkers' Strike

One of the most important economic stories for Michigan this fall has been the UAW contract negotiations with the Detroit Three automakers, the ensuing strike, and the implications for the national and state economies. The previous contracts, signed in 2019, expired at 11:59 pm on September 14. Although contract negotiations formally began in mid-July, a strike seemed all but inevitable to outside observers. Indeed, UAW workers at three vehicle assemblies, one for each company, began striking at the precise moment that the previous contracts expired. At the time this report was written, the UAW had secured tentative agreements with each of the Detroit Three automakers, and workers had ended their strikes and headed back to work during the ratification process. For the purposes of this analysis, we have assumed that the tentative agreements will be adopted with no further strikes.

RSQE released a report on Sept 13, 2023 on the economic impacts of different UAW strike scenarios.² The scenarios we considered initially were similar to all previous contract-related strikes in which UAW workers at all facilities for a single automaker went on strike at the same time. This year's "Stand Up Strike" strategy broke the mold and featured UAW strikes at selected facilities for all three automakers. Workers at facilities that were not targeted continued to work as usual. Due to the unconventional nature of this year's strike, we have revised our analysis of the economic impacts of the strike to reflect the way it unfolded. We present our results here.

While the UAW's initial list of contract demands covered many topics, the union's primary concerns focused on two main themes. First, workers wanted to see their wage gains catch up and keep pace with high inflation, record automaker profits, and sizeable executive bonuses and raises. Second, workers were apprehensive about the EV transformations currently underway in the auto sector and what it implies for labor demand at both existing and planned facilities. This transition is likely to cost jobs in

² The report is available on our website [here](#).

the industry over the long run because electric vehicles have fewer parts than internal combustion engine vehicles. The EV transition will also challenge the Detroit Three's ability to maintain their current market shares of vehicle sales.

On September 15, when the existing contract expired, the UAW struck GM's Wentzville Assembly in Missouri, Ford's Michigan Assembly in Michigan, and Stellantis' Toledo Assembly in Ohio. The UAW struck additional facilities at each automaker as the strike progressed. Table 1 shows the chronology of the strikes by plant.

Table 1
Timeline of the 2023 UAW Strike

| Date | Company | Plant | State | Striking Workers | Products |
|------------|-------------------|---------------------------|--------------|------------------|---|
| 9/15/2023 | Ford | Michigan Assembly | MI | 4,800 | Ford Ranger and Bronco |
| 9/15/2023 | GM | Wentzville Assembly | MO | 3,900 | Chevrolet Colorado and Express; GMC Canyon and Savana |
| 9/15/2023 | Stellantis | Toledo Assembly | OH | 5,300 | Jeep Gladiator, Wrangler, and Wrangler 4xe |
| 9/22/2023 | GM and Stellantis | Part Distribution Centers | MI | 3,900 | Warehousing/shipping of parts for customer repairs to dealerships and other retailers |
| | | | Rest of U.S. | 2,400 | |
| 9/29/2023 | Ford | Chicago Assembly | IL | 4,500 | Ford Explorer; Police Interceptor Utility; Lincoln Aviator |
| 9/29/2023 | GM | Lansing Delta | MI | 2,600 | Buick Enclave; Chevy Traverse |
| 10/11/2023 | Ford | Kentucky Truck | KY | 8,700 | Ford F-250–F-550, Expedition; Lincoln Navigator |
| 10/23/2023 | Stellantis | Sterling Heights Assembly | MI | 6,200 | Ram 1500 |
| 10/24/2023 | GM | Arlington Assembly | TX | 5,000 | Tahoe/Suburban; Yukon/Yukon XL; Escalade/Escalade-V |
| 10/28/2023 | GM | Spring Hill Assembly | TN | 3,600 | Cadillac XT5, XT6, Lyriq; GMC Acadia |

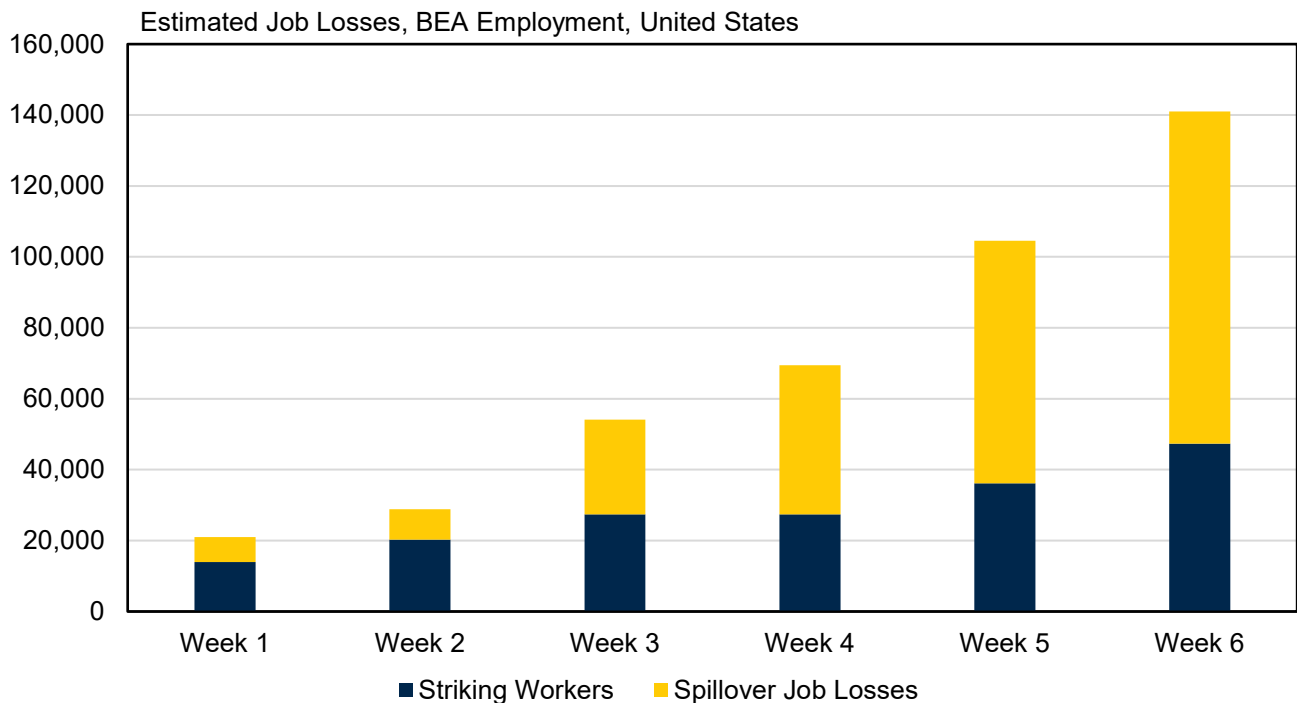
Note: Estimates of the number of striking workers are calculated from information on the automaker websites.

One of the most important considerations in our analysis was to determine how quickly job losses at automotive suppliers would ensue following the strikes at Detroit Three facilities. Given the tight labor market conditions, we assumed that suppliers would refrain from cutting jobs as long as they could. Specifically, we estimated that impacted suppliers would not begin to lay off workers until two weeks after the start of a strike against a particular plant, and that the full employment impact of the loss of sales to a particular assembly plant would not be felt until eight weeks after the start of the strike at that plant. The slow accumulation of the employment impact on suppliers, combined with the UAW's "Stand Up Strike" strategy of starting with a limited number of strike targets that grew over time, produced aggregate job and income losses that were minimal to start but accumulated as the strike went on.³

³ We used a combination of the [REMI PI+ model](#) and our own modeling to estimate the impacts of the strikes. Our September 13 report provides more detail of our methodology.

Figure 2 and Table 2 display our estimates of the strike's weekly impacts on U.S. employment. During the first two weeks of the strike, the striking workers accounted for most job losses. The spillover job losses, which include both the indirect and induced effects, begin to accumulate in substantial numbers starting in the third week.

Figure 2
Impact of the UAW Strike on National Employment



The Bureau of Labor Statistics' Current Establishment Survey (CES) results for October, released on November 3rd, measured wage and salary employment in the pay period including October 12th, corresponding to week 4 of the strike. We estimate that the UAW strike cost the U.S. economy 69,500 jobs in the October jobs report, including 27,400 striking workers and 42,100 spin-off job losses across the economy.⁴ On a month-over-month basis, the report showed losses of 33,200 jobs in motor vehicle and parts manufacturing, 11,400 jobs in warehousing and storage (including the striking workers at the parts distribution centers), 2,800 jobs in other durable goods manufacturing, and 5,000 jobs in truck transportation. There were also job losses reported in other sectors of the economy that may have partially reflected further induced effects, such as a loss of 7,500 jobs in food services and drinking

⁴ The spin-off job losses include workers who were laid-off by the Detroit Three as well as job losses at other companies.

places. Overall, we judge the results of the October CES report to be consistent with the impacts we have estimated from the strike.

Table 2
Economic and Fiscal Impacts of the 2023 UAW Strike

| | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 |
|--|--------|--------|--------|--------|---------|---------|
| United States | | | | | | |
| Total Employment Loss (BEA Measure) | 21,000 | 28,900 | 54,100 | 69,500 | 104,600 | 141,000 |
| Striking UAW Workers | 13,900 | 20,300 | 27,400 | 27,400 | 36,100 | 47,300 |
| Cumulative Personal Income Loss (\$ millions) | \$20 | \$43 | \$101 | \$182 | \$312 | \$485 |
| Michigan | | | | | | |
| Total Employment Loss (BEA Measure) | 6,100 | 10,600 | 16,800 | 20,000 | 24,700 | 37,100 |
| Striking UAW Workers | 4,800 | 8,700 | 11,400 | 11,400 | 11,400 | 17,600 |
| Cumulative Personal Income Loss (\$ millions) | \$5 | \$12 | \$27 | \$46 | \$73 | \$114 |
| Cumulative Non-Business Tax Revenue Loss (\$ millions) | \$0.4 | \$0.8 | \$1.8 | \$3.0 | \$4.7 | \$7.2 |

Notes: Simulated employment results and the number of striking workers are rounded to the nearest 100 workers. Estimates of the number of striking workers are calculated from information on the automaker websites.

On Wednesday, October 25, Ford and the UAW announced a tentative agreement on a new contract. Stellantis and GM announced tentative agreements on October 28 and October 30, respectively. After each announcement, the union directed all striking workers to return to their jobs when feasible for the duration of the ratification process. While it is likely that there will be plant-by-plant discrepancies and delays in the process of restarting production, we estimate that the final full week of strike impacts was the week beginning on Monday, October 23, the sixth week of the strike.⁵

Figure 2 shows that the strike's impact on U.S. employment grew steadily each week. We estimate that in its sixth week, the strike reduced total U.S. employment by 141,000 jobs, including 47,300 striking workers and 93,700 spillover jobs. We estimate that the strike reduced personal income in the United States by \$485 million cumulatively over those six weeks. If the strike had continued through the end of November, income losses would have reached over \$1 billion, and job losses would have been significantly larger, especially if the UAW had announced further additions to the strike. While the strike was painful to those who were directly involved, its resolution spared the economy from the larger spillover effects of a longer-lasting dispute.

⁵ As an example of delays in restarting production, Ford has announced a temporary layoff of 1,600 workers during much of November at its Louisville Assembly Plant, which builds Ford Escapes and Lincoln Corsairs. The company said the layoffs were due to parts-related issues. See, for instance, "[Ford to lay off 1,600 workers at Louisville Assembly Plant](#)," *Detroit Free Press*, November 4th, 2023.

We estimate that there are a total of 66,400 UAW workers employed at Detroit Three manufacturing facilities in Michigan, nearly half of the national total and more than in any other state by a wide margin. Therefore, Michigan's economic fortunes hinge more closely on the outcomes of the contract negotiations than any other state's. Over the course of this year's work stoppage, roughly 17,600 UAW workers in Michigan joined the strike. Kentucky and Ohio had the next highest numbers of striking workers, with 8,700 and 5,300, respectively. It is therefore not surprising that Michigan was the most impacted state in our analysis.

Figure 3
Impact of the UAW Strike on Michigan Employment

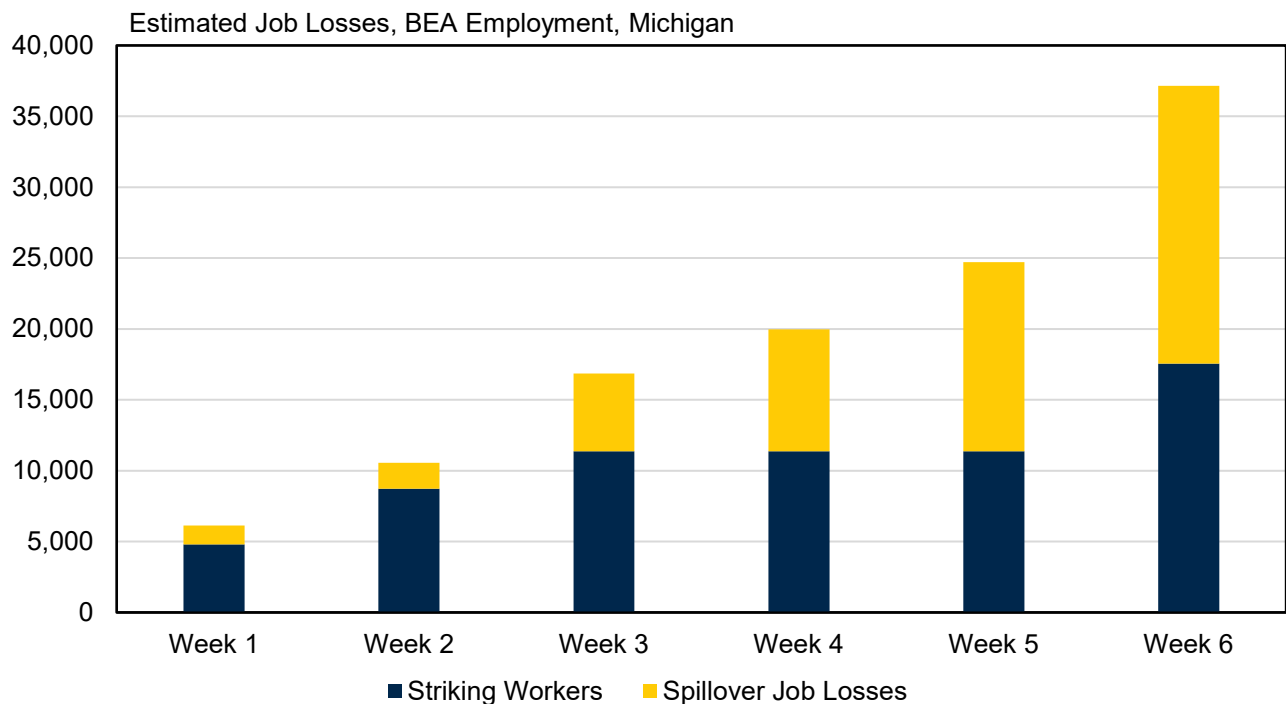


Figure 3 shows the job losses by week in Michigan due to the strike. By week four, Michigan is estimated to have lost 20,000 jobs, consisting of 11,400 striking workers and 8,600 spillover jobs. In other words, nearly 30 percent of all national strike-related job losses through week four occurred in Michigan. We estimate that job losses in Michigan grew to 37,100 by week six, slightly more than one-quarter of the national total. We estimate that Michigan residents lost about \$114 million of personal income cumulatively through the first six weeks of the strike, which reduced state non-business tax revenue by

\$7.2 million in turn.⁶ Those revenue impacts are comparatively minor in the context of the state's budget. Had the strike continued significantly longer, however, those losses would have increased significantly. Michigan is fortunate that the strike ended without stretching into the holiday season, which could have slowed negotiations and the process of restarting production.

Inputs to the Forecast

Major elements from our U.S. forecast dated November 16, 2023, include the following:

- The annualized pace of real economic growth surged to 4.9 percent in the third quarter of 2023, more than doubling the average pace during the first half the year. Despite the strong third-quarter reading, we anticipate that the pace of growth will slow considerably over the next several quarters as high interest rates bite and the labor market gradually cools. By late 2024, the slowdown in inflation allows the Federal Reserve to begin lowering rates, gradually spurring economic growth to 2.0 percent in 2025.
- The FOMC raised the target range for the federal funds rate by an additional 25 basis points in July to 5.25–5.5 percent and held it at that range during the September and November meetings. We anticipate that the Fed will keep the fed funds rate at that range until the end of 2024, given the slowdown we project for the national economy. We project the Fed to begin reducing rates slowly in late 2024, as unemployment edges up and inflation approaches the Fed's target. By the end of 2025, we expect the target range for the federal funds rate to stand at 4.25–4.5 percent, while inflation hovers just above the Fed's 2.0 percent target.
- Annualized headline CPI inflation increased to 3.6 percent in the third quarter of 2023, largely driven by a spike in energy prices. Core CPI inflation, however, slowed to a 2.8 percent annual rate in the third quarter. The shelter category remains the primary contributor to core inflation, although it has decelerated in recent months. We anticipate that inflation will gradually move closer to the Fed's 2 percent target over the next year as shelter costs slow down, energy prices stabilize, and consumer spending moderates. By the end of 2025, both headline and core inflation hover around 2.5 percent, while the Fed's preferred measure of inflation, the PCE deflator, registers 2.2 percent.
- On the employment side of the Fed's dual mandate, the labor market's resilience in the face of sharply higher interest rates continues to raise the odds of a "soft landing." The October headline reading of 150,000 payroll job gains was held down by the UAW strike, but even so, job gains were close to the 2019 monthly average of 163,000. Despite the robust labor market, job growth has been slowing down since the end of 2021. We anticipate this downward trend to persist as high interest rates continue to weigh on the economy and consumer spending slows.

⁶ Our estimates of the impacts on state tax revenue do not include effects on corporate income tax revenue or other business tax revenue. While the earnings of the Detroit Three automakers were negatively impacted by the strike, the global nature of their operations make it challenging to estimate the impacts on the taxes they owe to Michigan. It is further complicated by the complex assortment of incentives and tax credits available to the automakers (e.g., MEGA credits still available from the Michigan Business Tax system, which was replaced by the Corporate Income Tax for most businesses). Still, even without the tax credits, we would expect the overall impact on business tax revenue to be small relative to the scale of total business tax collections.

- Housing affordability has cratered as high mortgage rates have not made much impact on prices. We estimate that the portion of average wage income necessary for a mortgage payment on a newly purchased home reached 46.1 percent in the third quarter of this year, the highest level since 1989. We expect this share to increase to 46.9 percent in the fourth quarter of 2023 before gradually decreasing to 40.0 percent by the end of 2025 as mortgage rates decline.
- Single-family housing starts have begun to make a comeback despite increasing mortgage rates. Annualized starts increased from 834,000 units in the first quarter of 2023 to 961,000 in the third quarter. We expect that starts will fall to an annual pace of 910,000 units in the fourth quarter of 2023 and the first quarter of 2024 amid the deterioration of affordability. As the inventory shortage in the existing home market persists, single-family starts are expected to rise to 965,000 by the end of 2024 and reach 988,000 by the end of 2025.
- The federal deficit narrowed from 12.4 percent of GDP in fiscal 2021 to 4.4 percent in fiscal 2022, primarily due to a one-time boost in revenue and the phasing out of COVID-19 funds. In fiscal 2023, however, the federal deficit expanded to 5.8 percent of GDP, due largely to higher interest rates. Unfortunately, the prospect of meaningful future deficit reduction is nowhere in sight. With increasing interest expenses and no substantial plan for revenue growth, we anticipate the federal deficit will continue to grow over our forecast period, averaging 6.0 percent of GDP in fiscal 2024–25.

The Forecast of the State Economy

Detroit Three Light Vehicle Sales

After an unprecedented six-week strike at selected sites against all three Detroit automakers, the UAW has secured tentative agreements that allowed workers to return to work during the ratification process. A commonly reported theme among the striking workers was the feeling that they had never been adequately repaid for concessions they made during and after the Great Recession and auto bankruptcies, despite the companies' robust profits more recently.

In many respects, the strike was successful from the UAW's perspective—the companies agreed to historic wage increases of 25 percent over the course of the contract; Cost of Living Allowances (COLA) were reinstated; wage tiers were eliminated; a reduced timeline was instituted for newer hires to achieve the full pay rate; a quicker path was created for temp workers to transition to permanent jobs; and profit sharing calculations were either improved or more widely applied throughout the company.

We calculate expected bonuses, lump-sum payments, profit-sharing, and wage increases at the Detroit Three as inputs to our forecasting model. The tentative contract agreements, if ratified, will result in signing bonuses for full-time workers and temporary workers with at least 90 days of service of \$5,000 at Ford, GM, and Stellantis. At each of the Detroit Three automakers, workers are designated to receive

a general wage increase (GWI) of 11 percent upon ratification, a GWI of 3 percent in each of 2024–26, and a GWI of 5 percent in 2027. Although many lump-sum bonuses were reduced during this round of negotiating in favor of larger general wage gains, the profit-sharing bonus was not one of them. Profit-sharing bonuses will be more widely applied to temporary employees at each of the Detroit Three automakers, and Ford will have an enhanced profit-sharing formula that would have increased last year's payout by an average of \$1,200 if it were in place.

Figure 4
Quarterly Light Vehicle Sales, Total U.S. vs. Detroit Three

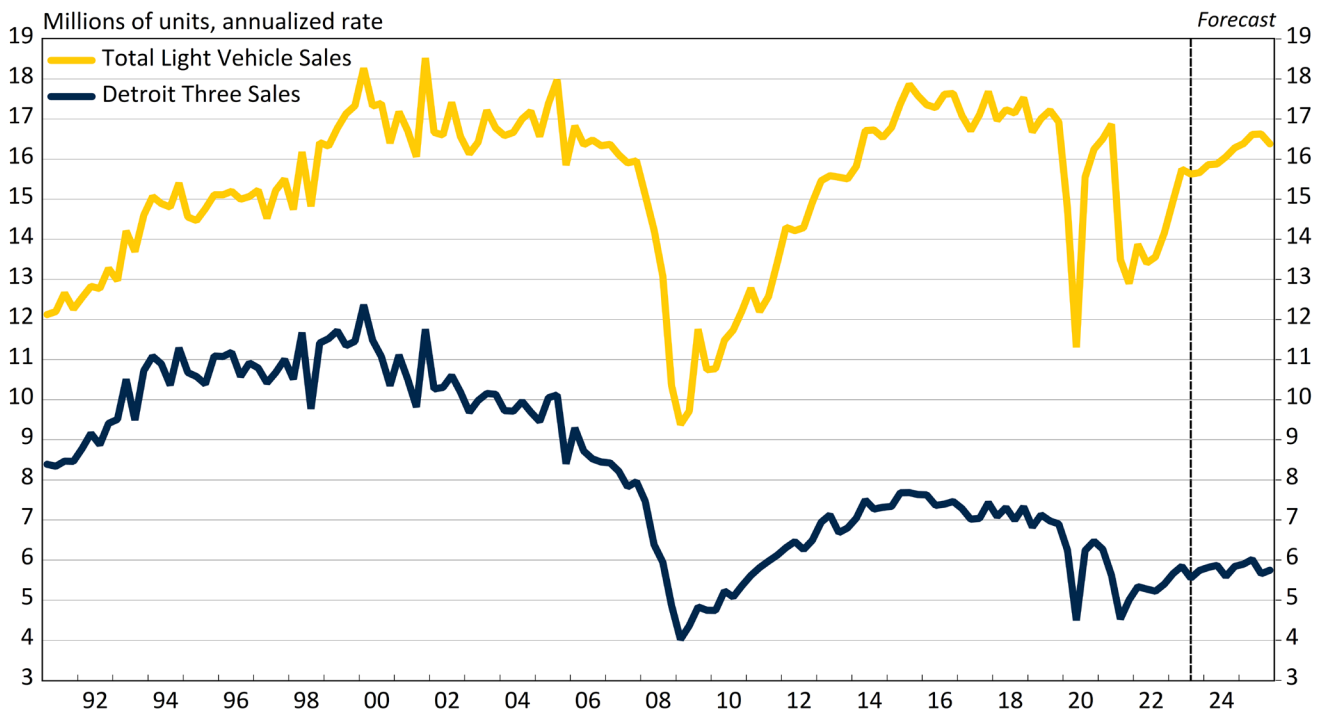


Figure 4 shows our quarterly forecast for total U.S. and Detroit Three light vehicle sales. Despite the setback caused by the UAW strike, the month-end inventory levels at the Detroit Three automakers remained relatively stable in September and October. The rest of the automotive industry, however, managed to increase its inventory by 11 percent during October, which hopefully will mark the end of the ongoing supply chain disruptions that have plagued this sector. We expect the pace of light vehicle sales to make a gradual recovery, growing from October's 15.5-million-unit pace to 16.2 million units in the second half of 2024. Although inventories are being restocked, the recovery in sales will be constrained by high unit prices, a soft patch in the national economy, and high vehicle financing rates. As economic

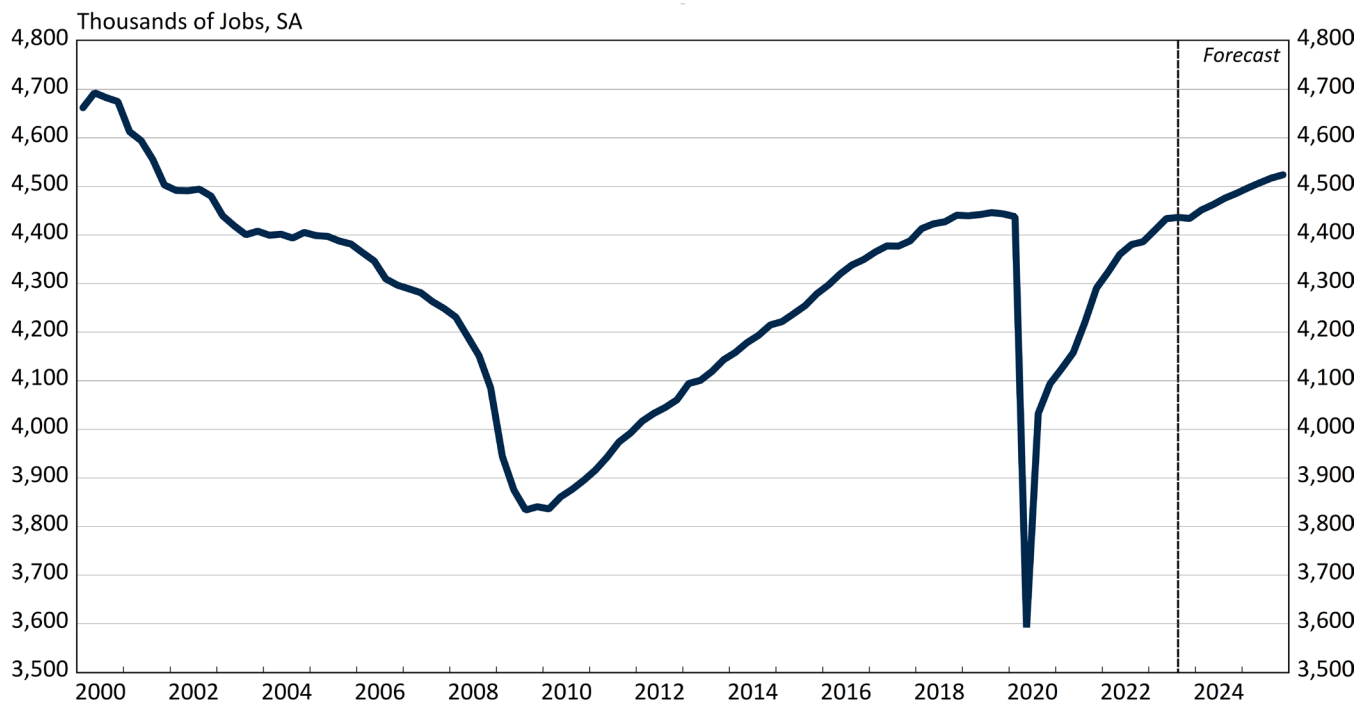
growth gains momentum in the latter part of 2024 and interest rates begin to fall, vehicle sales accelerate, reaching 16.5 million units in 2025. Sales of light trucks account for nearly all of the sales growth over the forecast horizon. Car sales, however, have hit the brakes and remain stagnant over the next two years.

The Detroit Three's share of U.S. light vehicle sales is on pace to fall from 38.6 percent in 2022 to 36.8 percent in 2023. We see the Detroit Three's share of the light vehicle market slipping a bit further in each of the next two years, to 36.0 percent in 2024 and 35.3 percent in 2025. When combined with our projection of increasing total light vehicle sales, that forecast implies that Detroit Three vehicle sales will register 5.8 million units in each of 2024 and 2025. Those totals are roughly on par with the 2011 sales pace of 5.9 million units, when the Detroit Three captured roughly 46 percent of the light vehicle market. We believe the Detroit Three's market share will remain at low levels as the Detroit Three manufacturers continue to prioritize pricing discipline and profitability over market share.

Payroll Employment

Figure 5 shows our forecast of Michigan's quarterly payroll job count. We project statewide employment to decrease by only 2,200 jobs in the fourth quarter, as the UAW strike ended before it could affect the November jobs report. Still, employment climbs by 65,900 jobs on a calendar year basis in 2023 due to the strong gains so far this year. Job gains slow to 40,400 in 2024 as the national economy hits a soft patch. Gains nudge up to 42,400 jobs in 2025 as the national economy reaccelerates but Michigan's labor market runs up against labor supply constraints.

Figure 5
Quarterly Michigan Payroll Employment

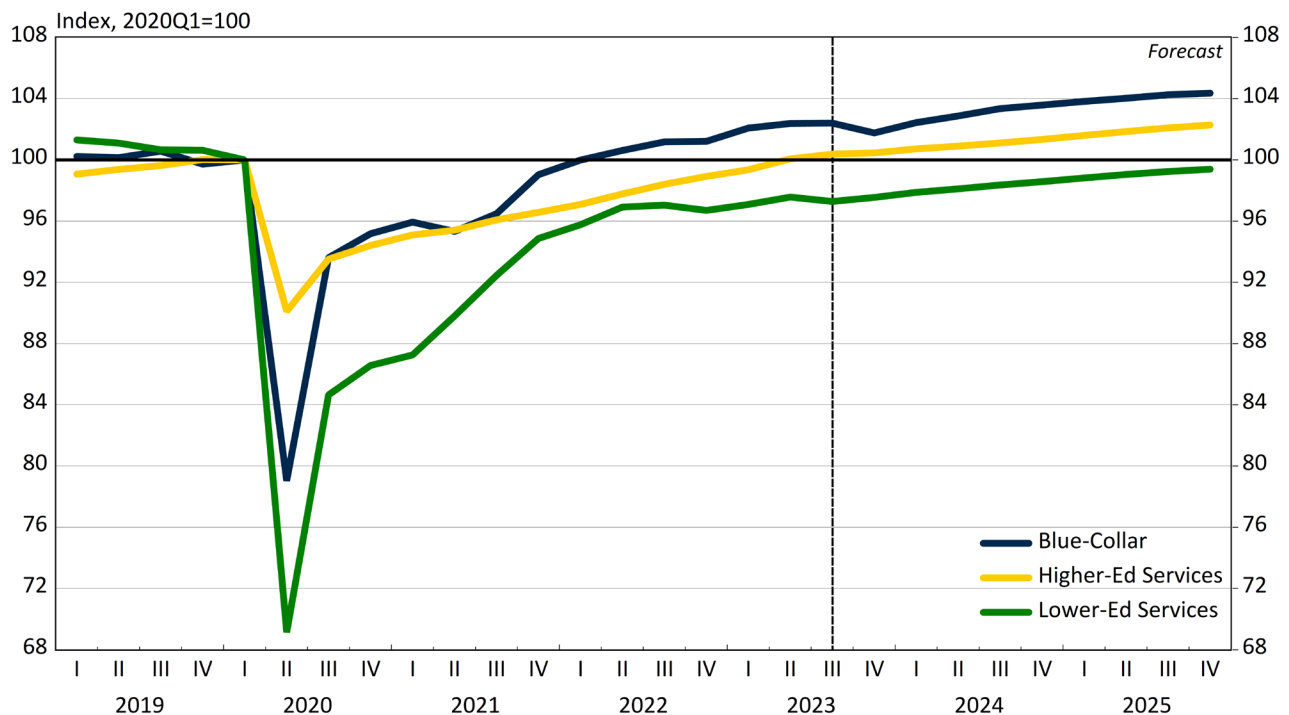


We expect Michigan's payroll employment count to surpass its pre-pandemic level in the first quarter of 2024. By the end of 2025, statewide employment climbs to 86,200 jobs (1.9 percent) above the pre-pandemic level, although it remains 169,100 jobs (3.6 percent) below its all-time peak from the second quarter of 2000.

Table 3 below displays our forecast for annual job growth for Michigan's individual industries, while Figure 6 splits the state's industries into three groups: "Blue-Collar Industries," "Lower-Education

Services Industries,” and “Higher-Education Services Industries.”⁷ The figure plots the recent history and our quarterly forecast for each of these industry groups as index values, with the first quarter of 2020 normalized to a value of 100.

Figure 6
Job Growth in Michigan
Blue-Collar, Higher-Education Services, and Lower-Education Services Industries



Michigan’s **blue-collar industries** have led the recovery from the pandemic recession, and we estimate that they were the most heavily impacted by the recent strike in the auto industry. We expect these industries to lose 7,300 jobs on a quarterly basis in the fourth quarter but to add 7,700 jobs back in the first quarter of next year as the industry rebounds from the strike. Taking a longer perspective, the state’s blue-collar industries’ job growth has slowed significantly this year, and we expect slower growth for these industries to be the norm over the next two years as well.

⁷ The blue-collar industries comprise mining; construction; manufacturing; wholesale trade; and transportation, warehousing, and utilities. The higher-education services industries (which generally require employees to hold a bachelor’s degree or higher educational level) comprise information; finance; professional, scientific, and technical services; management of companies and enterprises; private education and health services; and government. The lower-education services industries (which typically do not require a college education) comprise retail trade; leisure and hospitality; administrative support services and waste management; and other services.

We are projecting Michigan's transportation equipment manufacturing industry to add only 600 jobs this year after adding 5,800 last year. Growth then bumps up to 4,300 jobs in 2024 and 2,300 in 2025. Michigan's non-transportation equipment manufacturing sector also slows significantly from last year's pace of 13,400 job additions with 1,800 job gains this this year. Job gains slow a bit further to 1,200 next year before accelerating to 4,800 in 2025 along with the broader economy. Michigan's wholesale trade industry follows the course of its manufacturing industry over the next two years, with growth slowing from 7,900 job gains this year to an average of 2,000 per year in 2024–25.

Table 3
Forecast of Payroll Jobs in Michigan by Major Industry Division
(Thousands of Jobs)

| | 2022 | Forecast Employment Change | | | |
|---|---------------|----------------------------|-------------|-------------|--------------|
| | | '22-'23 | '23-'24 | '24-'25 | '22-'25 |
| Total Jobs | 4362.9 | 65.9 | 40.4 | 42.4 | 148.7 |
| Total Government | 589.5 | 21.0 | 7.9 | 3.6 | 32.5 |
| Total Private | 3773.4 | 45.0 | 32.4 | 38.8 | 116.2 |
| Natural resources and mining | 7.2 | 0.3 | 0.2 | -0.1 | 0.4 |
| Construction | 183.8 | 7.3 | 0.9 | 1.2 | 9.4 |
| Manufacturing | 603.0 | 2.5 | 5.6 | 7.0 | 15.1 |
| Transportation equipment manufacturing | 184.6 | 0.6 | 4.3 | 2.3 | 7.3 |
| Other manufacturing | 418.4 | 1.8 | 1.2 | 4.8 | 7.8 |
| Trade, transportation, and utilities | 805.3 | 6.8 | 2.5 | 1.2 | 10.5 |
| Retail trade | 454.9 | 0.9 | -1.2 | -2.7 | -2.9 |
| Transportation, Warehousing, and Utilities | 178.1 | -2.0 | 1.8 | 1.7 | 1.5 |
| Wholesale trade | 172.3 | 7.9 | 1.9 | 2.1 | 11.9 |
| Information | 56.4 | 0.4 | -0.5 | -0.1 | -0.2 |
| Financial activities | 232.0 | -3.3 | -0.3 | 1.3 | -2.4 |
| Professional and business services | 658.1 | 4.3 | 4.3 | 6.9 | 15.4 |
| Professional, scientific & technical services | 314.7 | 4.7 | 1.3 | 3.3 | 9.2 |
| Management of companies & enterprises | 70.9 | -0.4 | 0.2 | 1.1 | 1.0 |
| Admin & support & waste mgmt. | 272.5 | 0.0 | 2.8 | 2.5 | 5.3 |
| Private education and health services | 661.5 | 17.3 | 10.1 | 9.2 | 36.6 |
| Leisure and hospitality | 403.1 | 11.5 | 8.6 | 11.4 | 31.5 |
| Other services | 162.9 | -2.1 | 1.2 | 0.8 | -0.1 |
| Addendum: Percent Change in Total Jobs | 3.9 | 1.5 | 0.9 | 0.9 | 3.4 |

RSQE: November 2023

Michigan's construction industry has held up surprisingly well in the face of sharply higher interest rates. We now expect it to match its 2022 pace of 7,300 job gains this year. Growth slows sharply over

the next two years, though, as builders work through their backlog of previously started projects. Michigan's construction industry adds just 900 jobs next year and 1,200 in 2025.

In contrast to most of the state's other blue-collar industries, Michigan's transportation, warehousing, and utilities industry has already begun to slow down. We expect it to lose 2,000 jobs this year based on the data so far. Modest growth of 1,700–1,800 jobs per year returns in 2024 and 2025, a pace that is nonetheless slower than the average growth rate of 4,500 jobs per year from 2010–2019, much less the trend in the years following the pandemic.

Michigan's **higher-education services industries** have been on a steady growth path since late 2020. We expect growth to continue at a slightly slower pace over the next two years: the pace of growth slows from 39,600 job additions this year to an average of 18,500 in each of the next two years. The higher-education services industries finish our forecast with an employment level 2.3 percent, or 44,700 jobs, higher than prior to the pandemic.

We project the state's finance industry to lose 3,300 jobs this year and another 300 next year amid sharply higher mortgage rates. Although the sector recovers 1,300 jobs in 2025, its employment level that year remains below its average from 2021.

Michigan's government sector has posted strong job gains recently, but we expect growth to continue at a slower rate in our forecast. We are projecting 21,000 job gains this year, followed by 7,900 next year and 3,600 in 2025. The recovery in government employment is likely supported by funding that is still working its way through state and local governments from the American Rescue Plan Act of 2021, which will fade over time as a source of support. Despite the growth we are forecasting, government employment accounts for just 13.8 percent of the statewide total in 2025. For comparison, government's share of statewide employment has averaged 15.5 percent since 1956 and 14.8 percent since 2000.

Michigan's private education and health services sector is on track to add 17,300 jobs this year after a disappointing pace of less than 10,000 last year. Growth moderates to 9,700 jobs per year in 2024–25. Even with that robust recovery, the state's health sector does not recover to its pre-pandemic employment level until the third quarter of next year.

Michigan's professional, scientific, and technical services sector recovered all of the jobs it lost during the pandemic by the end of 2021. This sector was exposed to some fallout from the UAW strike, and we project it to lose 600 jobs in the fourth quarter of this year. Still, this sector adds 4,700 jobs on a calendar year basis in 2023. Growth slows over the next few years as the sector sets new employment records. Job gains step down to an average of 2,300 per year in 2024–25.

Michigan's **lower-education services industries** currently remain over 36,000 jobs short of their pre-pandemic employment level. After adding over 10,000 jobs in the first half of this year, they gave back 3,800 in the third quarter. We believe they will be able to recover most of those losses by year-end despite some spillover from the strike in the auto industry. Growth comes to 10,300 jobs in 2023, followed by an average of 11,700 per year in 2024–25. Even so, these industries are just shy of making a full employment recovery from the pandemic during our forecast horizon.

The leisure and hospitality industry added nearly 46,000 jobs last year, but the pace of growth has slowed down recently as the economy has normalized. We are forecasting that the sector will add 11,500 jobs this year before settling to an average of 10,000 gains per year over the next two years. We are projecting leisure and hospitality to recover to its pre-pandemic employment level by mid-2025.

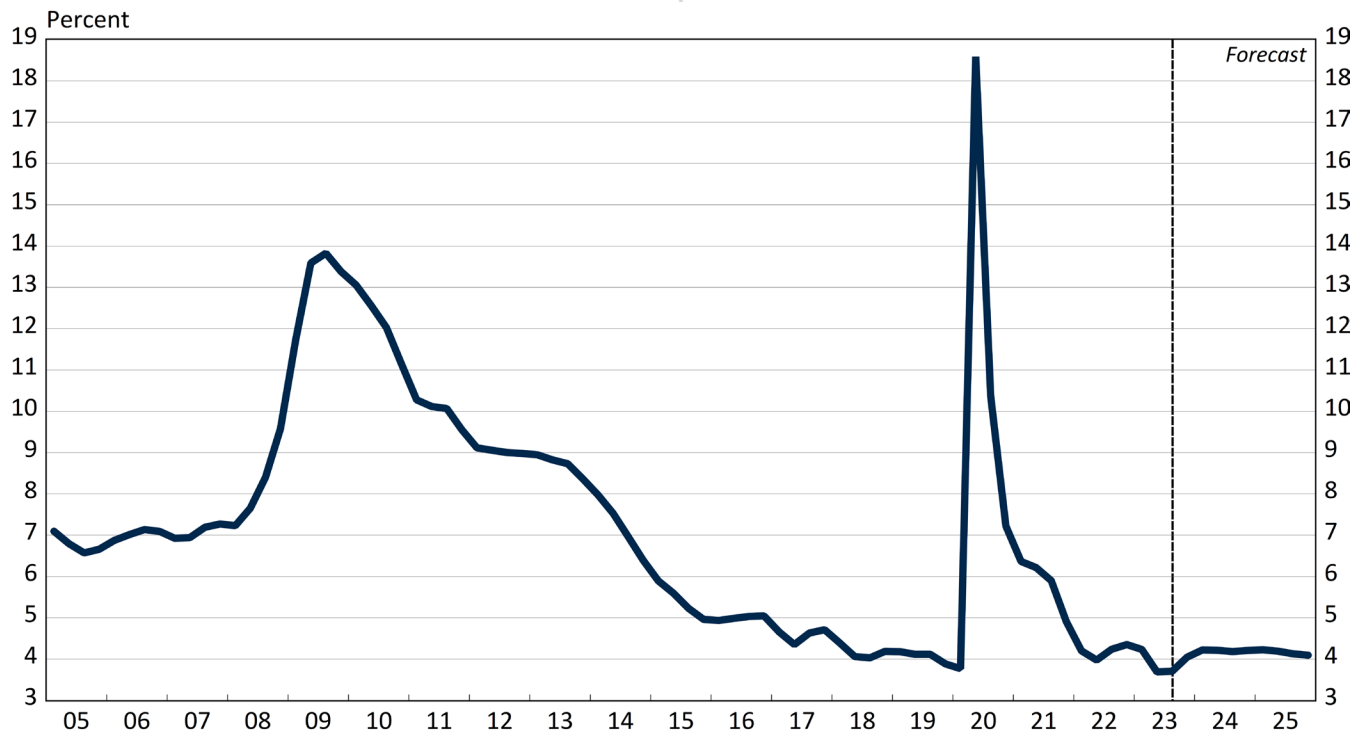
Employment in the retail trade sector has been moving mostly sideways for over a year now. We are penciling in 900 job gains for calendar year 2023. The sector loses 1,200 jobs next year and 2,700 in 2025 as the shift away from traditional brick-and-mortar retail continues.

The other two sectors we categorize in Michigan's lower-education services industries are administrative support services and waste management and other services. Administrative support and waste management services unexpectedly lost 3,000 jobs in the third quarter of this year. We expect it to take some time to recover those losses given that this sector was also exposed to spillovers from the strike in the auto industry. We are therefore projecting employment in administrative support to hold flat in 2023 after adding 13,300 jobs last year. Modest growth averaging 2,600 jobs per year returns over the next two years. We expect Michigan's other services sector to lose 2,100 jobs this year based on the data so far. The sector ekes out modest gains of 1,200 jobs next year and 800 in 2025, but it does not recover to its pre-pandemic employment level in our forecast period.

Unemployment and Labor Force Participation Rates

Figure 7 displays the historical data and our forecast for Michigan's quarterly unemployment rate. Our calculations suggest that the fallout from the UAW strike will increase the state's unemployment rate from 3.9 percent in September to 4.1 percent in the fourth quarter of 2023.⁸ We anticipate that the unemployment rate will tick up further to 4.2 percent in early 2024 amid a period of below-trend growth for the national economy. We project that Michigan's unemployment rate will hover at 4.2 percent during 2024 and the first half of 2025. The state unemployment rate inches down to 4.1 percent in the latter half of the year following the return of stronger national growth. Although that would be above the current rate, it would put Michigan's jobless rate roughly on par with its level from 2018 and 2019, which we view to be a generally healthy period for the state's labor market.

Figure 7
Quarterly Michigan Unemployment Rate



The state's labor force participation rate has been rising since the beginning of the year, defying the downward pressure from Michigan's aging populace.⁹ As of September 2023, Michigan's labor force

⁸ The striking workers themselves should not be counted as unemployed, but non-striking workers who were temporarily laid off because of the strike should be counted as unemployed.

⁹ We do not believe the state's labor force participation rate should be materially affected by the UAW strike.

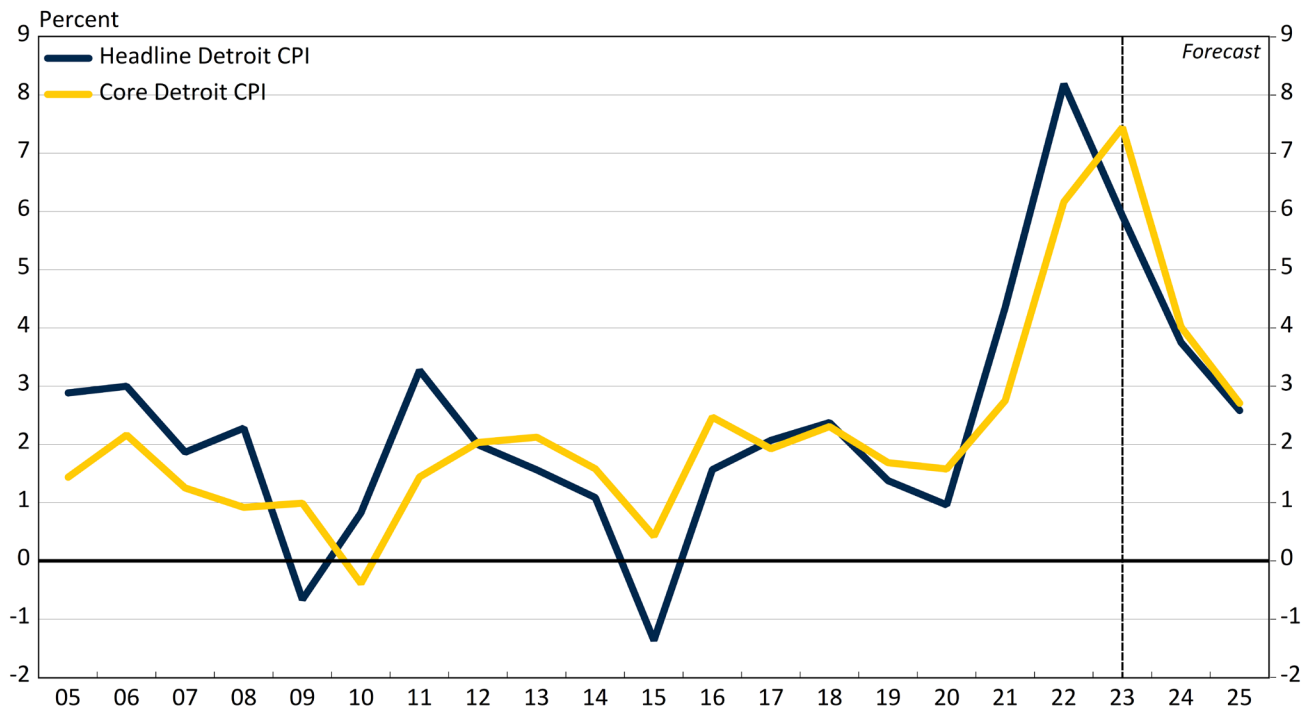
participation rate sat at 61.6 percent, or 1.8 percentage points higher than at the beginning of the year. Despite the recent surge in labor force participation, the overall demographic trends paint a less promising picture. Michigan's population is steadily aging, a trend that is poised to impede the state's labor force growth. Our forecast calls for the participation rate to increase slightly to 61.8 percent by the first quarter of 2024 before it flatlines for the remainder of the forecast.

Local Inflation

Figure 8 shows the history and our forecast of headline (all-item) and core (excluding food and energy) Detroit CPI inflation. The local headline inflation rate nearly doubled last year, from 4.4 percent in 2021 to 8.2 percent in 2022. We anticipate that headline inflation will slow to 5.9 percent this year, representing welcome progress but falling short of our initial hopes for disinflation at the beginning of the year. The decline in energy prices and a significant moderation in food price inflation over the past year help explain this improvement. Looking ahead, we project local headline inflation to slow to 3.8 percent in 2024 and 2.6 percent in 2025. Despite that progress, the rate of local inflation we are forecasting in 2025 is roughly one percentage point higher than the average local inflation rate during the decade following the Great Recession (2010–19).

We now project local core inflation, on the other hand, to accelerate from 6.2 percent in 2022 to 7.4 percent in 2023. Shelter cost inflation played an important role in the ramp up of local core inflation, but it has started to recede, which should help cool off core inflation. We project that the current 1.5-percentage-point gap between the headline and core measures will shrink to just one-tenth of a percentage point in 2025 as inflation moderates broadly. Local core inflation remains slightly above headline inflation for the duration of our forecast, primarily due to food and energy inflation lagging the core. Despite our forecast for both headline and core inflation running ahead of the Fed's 2 percent target during our outlook, we are encouraged by the progress that has been made thus far, even though it is not as swift as we had initially hoped.

Figure 8
Local Inflation, Headline and Core Detroit CPI



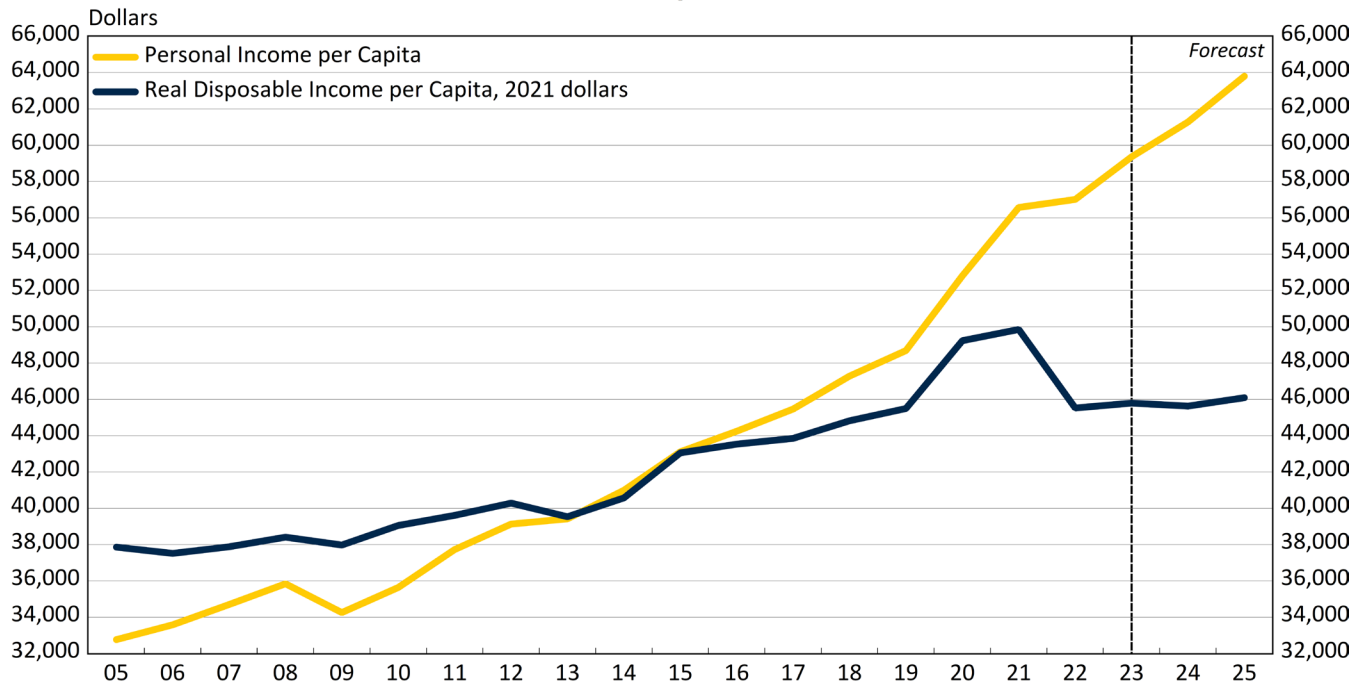
Personal Incomes

Figure 9 shows our forecast for Michigan personal income per capita, measured in nominal dollars, and real disposable income per capita, measured in 2021 dollars. Personal income per capita in Michigan held steady at \$57,000 in 2022, as the large swings in nominal income associated with the pandemic era became a thing of the past. We expect Michigan's personal income per capita to increase by 4.1 percent this year and 3.2 percent next year, as the national economy hits a speed bump. As broad economic momentum picks back up, Michigan personal income per capita increases by 4.1 percent in 2025. That growth would bring Michigan's personal income per capita to \$63,800 in 2025, roughly 30 percent higher than in 2019.

Our forecast for real disposable income per capita in Michigan combines our forecast of nominal personal income with our forecasts for taxes and local inflation. Michigan's real disposable income per capita surged by 8.2 percent in 2020, thanks to low inflation and federal support, and it edged up a further 1.3 percent in 2021. In 2022, however, high inflation drove a decline of nearly 9 percent, sending living standards back to 2019 levels. We expect Michigan's real disposable income largely to tread water until

the national economy begins to pick up speed in the second half of 2024. Our forecast calls for a gradual return to modest growth in living standards in 2025, with real disposable income per capita expected to exceed the 2019 average by just 1.3 percent.

Figure 9
Personal Income per Capita and Real Disposable Income per Capita in Michigan



The State Revenue Outlook

The fiscal year for the State of Michigan officially ended on September 30. While final account settlements will take some time, the monthly data suggest a major realignment in state tax revenue for fiscal 2023. The preliminary numbers show a plunge of \$1.8 billion in combined General Fund General Purpose (GFGP) and School Aid Fund (SAF) revenues, matching our forecast from May and representing a reversal of fortune from the past few years.

State tax revenue soared by \$8.4 billion, or 34 percent, between 2019 and 2022 due to several features of the pandemic and post-pandemic economy. Initially, tax revenue was sustained by emergency federal stimulus, expanded unemployment benefits, and extra assistance to businesses, which helped support personal incomes and consumer expenditures in the state. As federal assistance waned, combined GFGP and SAF revenue continued to make gains on the strength of personal and corporate

income tax revenue as well as the state's sales tax. Those gains, which are not adjusted for inflation, were themselves supported by the fast growth of nominal income in the state.

We have viewed much of the pandemic-era revenue surge as a temporary windfall for the state. As the national economy has softened and consumer spending patterns have slowly shifted back to services, we have expected to see a moderation in state tax revenue growth. Two indications of such a moderation in fiscal 2023 were a dip in sales tax revenue and a large decline in quarterly income tax payments, which are often influenced by capital gains. Even so, the dramatic fall of state tax revenue in fiscal 2023 was due mostly to a combination of factors related to the state's tax laws, which will continue to exert influence throughout our forecast period.

First, sweeping changes to Michigan's tax laws associated with [Public Act 4 of 2023](#), adopted in March, are expected to reduce fiscal 2023 revenues by roughly \$620 million and a further \$3.1 billion over the course of fiscal 2024 and fiscal 2025. Public Act 4 expanded exemptions for certain retirement income as well as the state's earned income tax credit and adopted new earmarks to Michigan's corporate income tax. These changes are described in more detail below.

Second, Michigan's individual income tax rate was lowered from 4.25 percent to 4.05 percent for calendar year 2023. The change arose from a provision of the state's 2015 road funding law, which set a cap for the growth of general fund revenues relative to inflation in any year. The cap was exceeded in fiscal 2022, thus triggering an automatic reduction in the personal income tax rate for calendar 2023. While the courts are currently hearing a challenge that would make the tax rate cut permanent, we will continue to assume that the change is temporary until the law is formally clarified. The income tax rate change for calendar 2023 is expected to reduce fiscal 2023 revenue by nearly \$430 million and fiscal 2024 revenue by roughly \$220 million.

Third, the state enacted a "flow-through entity tax" in December 2021 that was retroactive to January 1, 2021. The tax is optional and allows certain flow-through entities, such as partnerships and S corporations, to pay taxes at the "entity level," serving as a workaround to the SALT cap on federal tax returns. Due to the timing of the new tax, fiscal 2022 experienced a one-time outsized level of flow-through returns. In fiscal 2023, flow-through returns fell to a more sustainable level, but that involved a

drop of \$900 million relative to fiscal 2022. That drop alone accounted for half of the total revenue decline in fiscal 2023.

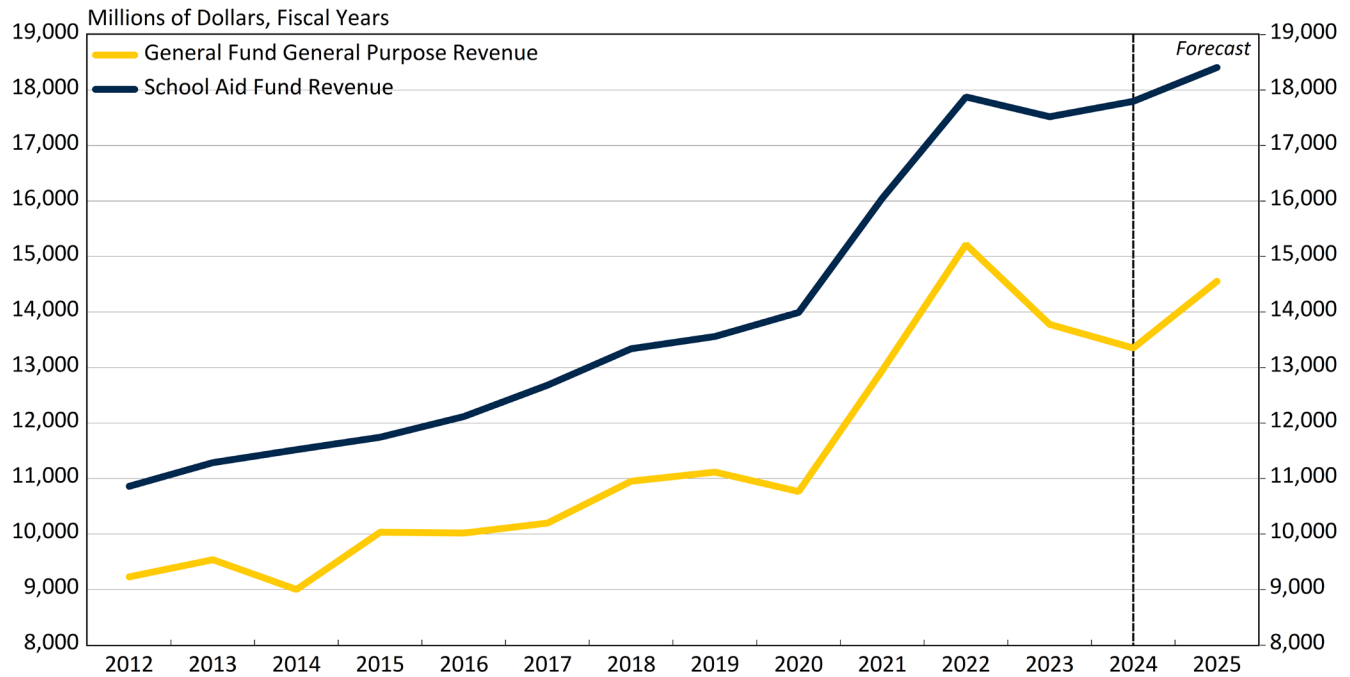
It is also worth commenting on the tax implications of the UAW's strike on the Detroit Three automakers. As discussed in the special section earlier in this report, the strikes began on September 15 and lasted for 46 days, until Monday, October 30. Even though the strike involved all three automakers, the "Stand Up" strategy meant that, at its peak, just over one-third of all UAW workers at the Detroit Three were on strike, and most were on strike for much less than the full 46 days. In Michigan, roughly 11,300 UAW workers were on strike from the third week of the strike until the sixth week, when another 6,200 workers joined from the Stellantis assembly in Sterling Heights for the final week. Due to the limited nature of the strike, we estimate its total impact on state revenue to be a drop in the bucket compared to the usual churn. We estimate a total loss of \$7.2 million for Michigan non-business tax revenue due to the strike.

Figure 10 shows our forecast of total GFGP and SAF revenues over the forecast period. Overall, the moderating national economy and new revenue changes combine to lower our forecast of combined GFGP and SAF revenue by \$150 million, or 0.5 percent, in fiscal 2024. The General Fund bears all of that loss and more. Allocations of revenue to the SAF tend to come from gross revenue before refunds and earmarks. Furthermore, Public Act 4 of 2023 raised the percentage of gross collections from the personal income tax that are deposited into the SAF, beginning in fiscal 2024, in order to maintain SAF levels under the new retirement tax exemptions. We expect conditions to improve in fiscal 2025 with both the SAF and General Fund recording solid growth. We forecast combined revenue growth of \$1.8 billion, or 5.8 percent, in fiscal 2025.

Even with the declines in 2023 and 2024, our forecast trajectory leaves combined revenues nearly \$8.3 billion, or 34 percent, higher in fiscal 2025 than the level from fiscal 2019. While that number sounds impressive, it does not account for the elevated inflation of the past two years. After adjusting for local inflation, the growth of combined GFGP and SAF revenue is only 3.9 percent from 2019 to 2025. It is, perhaps, important to remember that state tax revenue is used to pay for public goods and services

across Michigan via the state's budget. When prices rise across the economy, purchasers pay more for the goods and services they need. The state government is no exception.

Figure 10
Michigan Tax Revenues, General and School Aid Funds



As discussed above, the changes to Michigan's tax structure with the largest impacts on state revenue come primarily from Public Act 4 of 2023 and include the following in addition to the temporary reduction in the individual income tax rate:¹⁰

- Exemptions for certain **retirement income** were expanded by Public Act 4 of 2023. Because the act was not passed with immediate effect, the new exemptions will not take effect until 90 days after the adjournment of the 2023 legislative session, which formally occurred on Tuesday, November 14. That means the exemptions will take effect in mid-February 2024. The exemptions adjustment is expected to reduce fiscal year 2024 revenue by \$280 million and fiscal 2025 revenue by \$350 million.
- Beginning retroactively with tax year 2022, the state's **Earned Income Tax Credit (EITC)** was expanded from 6 percent of the federal credit to 30 percent. This change was also included as part of Public Act 4 of 2023. Even though the change affects payments related to tax year 2022, it will only come into play once the act itself takes effect, as discussed in the previous bullet. As a result, two years' worth of expanded EITC payments are expected to be paid around tax time in

¹⁰ The dollar value impacts of Michigan's tax changes can be found in the [joint presentation document](#) for the May 2023 CREC prepared by economists at the Michigan Department of Treasury, the Michigan House Fiscal Agency, and the Michigan Senate Fiscal Agency.

March and April 2024, reducing state tax revenue by roughly \$770 million in fiscal 2024. Fiscal 2025 sees a reduction of \$380 million in state tax revenue from the expanded EITC.

- Various earmarks to Michigan's **Corporate Income Tax** were also adopted in Public Act 4. The earmarks include distributions to the Michigan Housing and Community Development Fund, the Revitalization and Placemaking Fund, and the state's Strategic Outreach and Attraction Fund (SOAR). In total, the earmarks are expected to reduce state tax revenue by \$600 million each year beginning in fiscal 2023.
- Public Acts 20, 21, and 29 of 2023 provide new **sales and use tax** exemptions for most delivery and installation charges in Michigan. The new exemptions are expected to decrease sales and use tax revenue by nearly \$20 million in fiscal 2023 and just over \$60 million in each of fiscal 2024 and 2025.

We now describe our forecast of state revenues in more detail. Table 4 breaks down fiscal 2022 revenues, our preliminary estimates for fiscal 2023, and our forecast for fiscal years 2024–25. The upper portion details GFGP revenues, and the lower portion summarizes SAF revenues.

Net Personal Income Tax Revenue

- Based on the preliminary monthly data, net personal income tax revenue declined by 10.7 percent in fiscal 2023, following two years of extraordinary growth during the pandemic.
- The fiscal 2023 contraction is due to substantial reductions in annual, quarterly, and flow-through entity tax revenue. Personal income tax withholding, on the other hand, saw an increase of 1.8 percent, bolstered by the ongoing jobs recovery and wage growth in the state, even with the tax rate adjustment to 4.05 percent. Currently, it remains unknown how many individuals in the state have adjusted their withholding to account for the temporary decrease in the tax rate. Elevated refunds are likely next year for taxpayers who did not adjust their withholding.
- We forecast net personal income tax revenue to drop an additional 2.5 percent in fiscal 2024. Although we expect withholding growth to pick up, overall net personal income tax collections are projected to fall due to the expansion of the EITC, the revised exemptions on retirement income, and an increase in refunds owing to this year's tax rate adjustment.
- Net personal income tax revenue bounces back in fiscal 2025 with growth of 12.6 percent, as all components of personal income tax revenue show solid growth.
- Accounting for the allocation to the School Aid Fund, personal income tax revenue flowing to the GFGP falls by 13.3 percent in fiscal 2023 and 3.7 percent in fiscal 2024 before rebounding with 16.5 percent growth in fiscal 2025.
- The allocation of personal income tax revenue to the SAF falls by 6.5 percent in fiscal 2023 due to the large decline in gross income tax revenue. It manages to hold mostly flat in fiscal 2024 before growing by 6.9 percent in fiscal 2025. The better outcome for the SAF is due to its allocation being calculated from gross revenue (before refunds), as well as an adjustment contained in Public Act 4 of 2023. The adjustment gradually increases the percentage of gross income tax revenue deposited into the SAF over fiscal years 2024–27, compensating the fund for the modifications to retirement income tax revenue.

Consumption Tax Revenue

- GFGP consumption tax revenue in Michigan is driven by distributions from the sales and use taxes, with smaller contributions from excise taxes on cigarettes and alcohol.
- In fiscal 2021 and fiscal 2022, gross sales and use tax revenue showed remarkable growth due to the combination of resilient consumer demand during the pandemic, a shift in spending away from services to taxable goods, and inflationary pressures in goods markets.
- Gross sales and use tax revenue flattened in fiscal 2023 as economic growth softened, consumers felt the pinch of inflation, and spending began to shift back to services.
- We expect moderate growth around 2 percent for gross sales and use tax in both fiscal 2024 and fiscal 2025 as the state economy continues to expand, albeit at a slower pace than in the past two years.
- Even with the weak growth we have projected, gross sales and use tax revenue in fiscal 2025 is projected to total \$3.9 billion higher, or 38.5 percent, than in fiscal 2019. We expect gross sales and use tax revenue to remain above its pre-pandemic trend for the foreseeable future.
- When adjusted for local inflation, real gross sales and use tax revenue declined by over 5 percent in fiscal 2023, and smaller declines are projected in fiscal 2024 and fiscal 2025. Still, by the end of our forecast, inflation-adjusted gross sales and use tax revenue is expected to remain nearly 8 percent above its level from 2019.
- Combining the General Fund's share of gross sales and use tax revenue with the excise taxes on cigarettes and alcohol, we forecast GFGP consumption tax revenue to fall by 1.0 percent in fiscal 2024 before growing by 2.7 percent in fiscal 2025.

Business Tax Revenue

- Business tax revenue comes primarily from the state's corporate income tax (CIT), insurance company premiums, and oil and gas severance tax payments. Certain businesses continue to pay taxes and claim credits under the previously used Michigan Business Tax (MBT) instead of the CIT. Variability in the timing of when MBT refunds are claimed can lead to swings in the state's overall business tax revenue. All business tax revenue accrues to the General Fund.
- Business tax revenue saw impressive growth during the pandemic, most of which came from sharp rises in CIT payments in fiscal 2021 and fiscal 2022.
- Gross CIT collections continued strong in fiscal 2023, but the new earmarks discussed above also began to bite, leading GFGP business tax revenue to drop 18.8 percent for the fiscal year.
- We expect GFGP business tax revenue to give back an additional 3.1 percent in fiscal 2024 and another 0.6 percent in fiscal 2025.

Total General Fund Revenue

- In fiscal 2022, exceptionally strong collections from the personal income tax, the sales tax, and the corporate income tax combined for a total GFGP revenue gain of nearly \$2.3 billion, or 17.5 percent.

- Most of the GFGP's revenue sources declined in fiscal 2023, resulting in an overall loss of \$1.4 billion, or 9.5 percent, as shown in Figure 10. Total GFGP revenue drops another 3.1 percent in fiscal 2024 before rebounding with hearty growth of 9.0 percent in fiscal 2025.
- While the above-trend revenue growth of fiscal 2021 and fiscal 2022 and the overall softening economy have led to us expect some degree of moderation in state revenue growth, the tax law changes that take effect during fiscal 2023–24 are largely responsible for the declines during that time.
- Even with the declines in fiscal 2023–24, our forecast puts total GFGP revenue over \$3.4 billion higher, or 30.9 percent, in fiscal 2025 than in fiscal 2019. After adjusting for inflation, however, the growth of General Fund revenues from fiscal 2019–25 is only 1.9 percent.

Total School Aid Fund Revenue

- About half of total SAF revenue comes from sales and use tax collections, while one-fifth derives from the personal income tax, and about one-seventh comes from the state education property tax. Other taxes, such as the real estate transfer tax, liquor tax, casino tax, and tobacco tax, as well as lottery transfers, all contribute smaller amounts.
- As shown in Figure 10, total SAF revenue fell by \$360 million, or 2.0 percent, in fiscal 2023, with nearly three quarters of that decline coming from the contribution from the personal income tax.
- Revenues related to the housing market also limited growth in fiscal 2023. State education property tax revenue (SEP) stayed mostly flat, and real estate transfer tax revenue fell by 27.5 percent as the housing market cooled and mortgage rates soared.
- We forecast total SAF revenue to nudge up by 1.6 percent in fiscal 2024 as sales tax and SEP revenues advance. We forecast stronger growth of 3.4 percent for total SAF in fiscal 2025, as all major revenues except lottery transfers experience growth.
- Total SAF revenue is forecast to finish fiscal 2025 over \$4.8 billion, or 35.7 percent, higher than in fiscal 2019. After adjusting for inflation, that growth is reduced to 5.6 percent.

Table 4
State Revenues by Fiscal Year
(Millions of dollars, except as noted)

| | Actual | | RSQE Forecast | |
|-------------------------------------|---------|-------------------|---------------|--------|
| | 2022 | 2023 ^P | 2024 | 2025 |
| <u>General Fund General Purpose</u> | | | | |
| Personal income tax | 9,212 | 7,990 | 7,691 | 8,961 |
| (% change) | (19.3) | (-13.3) | (-3.7) | (16.5) |
| Consumption taxes | 3,176 | 3,207 | 3,174 | 3,259 |
| (% change) | (4.2) | (1.0) | (-1.0) | (2.7) |
| Sales | 1,705 | 1,684 | 1,740 | 1,774 |
| Use | 1,192 | 1,259 | 1,169 | 1,217 |
| Other consumption | 279 | 264 | 264 | 268 |
| Business taxes | 1,993 | 1,619 | 1,569 | 1,559 |
| (% change) | (25.7) | (-18.8) | (-3.1) | (-0.6) |
| MBT/SBT/Corporate income | 1,531 | 1,120 | 1,090 | 1,070 |
| Other business | 462 | 499 | 479 | 490 |
| Other GFGP taxes | 182 | 170 | 180 | 188 |
| GFGP tax revenue | 14,563 | 12,986 | 12,614 | 13,968 |
| (% change) | (16.3) | (-10.8) | (-2.9) | (10.7) |
| Nontax revenue | 656 | 793 | 740 | 588 |
| GFGP revenue | 15,219 | 13,779 | 13,354 | 14,556 |
| (% change) | (17.5) | (-9.5) | (-3.1) | (9.0) |
| <u>School Aid Fund</u> | | | | |
| SAF taxes | 16,628 | 16,233 | 16,586 | 17,206 |
| (% change) | (13.6) | (-2.4) | (2.2) | (3.7) |
| Lottery transfer | 1,248 | 1,286 | 1,213 | 1,202 |
| (% change) | (-12.1) | (3.0) | (-5.7) | (-0.9) |
| Earmarked state SAF revenue | 17,876 | 17,519 | 17,798 | 18,408 |
| (% change) | (11.4) | (-2.0) | (1.6) | (3.4) |
| <u>Addendum</u> | | | | |
| Combined GFGP and SAF revenue | 33,096 | 31,298 | 31,152 | 32,964 |
| (% change) | (14.1) | (-5.4) | (-0.5) | (5.8) |
| Gross sales and use taxes | 13,358 | 13,391 | 13,658 | 13,916 |
| (% change) | (11.0) | (0.2) | (2.0) | (1.9) |

^P Preliminary

RSQE: November 2023

Risks and Concluding Thoughts

We see three main risks to our forecast for the Michigan economy over the next two years. They are a national recession, a resurgence of inflation, and rising geopolitical tensions. We summarize these risks below.

Not out of the woods yet. Many forecasting groups, RSQE included, predicted that the national economy would enter recession or a period of below trend growth during 2023. Instead, real GDP is on pace to grow by 2.4 percent, and the unemployment rate is expected to average 3.7 percent for the year. The national economy is still not out of the woods yet, though. The Federal Reserve's policy tightening to rein in inflation has led to sharp increases in consumer-facing interest rates. Furthermore, student loan repayments have recently resumed after a long hiatus, and we face the renewed specter of a federal government shutdown this month. Even though our baseline forecast for Michigan is relatively optimistic, it is important to recognize that the state's economic trajectory can be significantly influenced by the broader national economic outlook.

It's not the 70s anymore. Stubbornly high inflation remains one of the largest risks to our outlook. Although we do not expect to see a wage-price spiral similar to what developed during the 1970s, we have been surprised by the extent to which inflation has risen and persisted. We expect local inflation to cool from 5.9 percent this year to 2.6 percent by 2025. If the economy suffers major additional supply chain disruptions or if consumers maintain their robust spending patterns, then a more aggressive monetary policy response will be needed. That would be especially bad news for Michigan's cyclically sensitive economy.

War and Peace. We have often been asked recently what the rising geopolitical tensions around the globe, and in particular the active wars between Ukraine and Russia and Israel and Hamas mean for the economic outlook. Some of our questioners have been surprised that we do not consider the wars to have large effects on our current baseline outlook. On the other hand, the wars certainly pose large tail risks if the conflicts were to expand. One direct pathway comes through oil prices, which jumped last year following Russia's invasion of Ukraine, and which we would expect to jump again if the war between

Israel and Hamas were to escalate into a broader regional conflict. At present, we do not expect major escalations in either war, but the possibilities pose a clear risk to our forecast.

We think the risks to our forecast are skewed slightly to the downside, but there are upside risks too, particularly if inflation falls more rapidly than we anticipate.

While Michigan's economy must navigate a bumpy road ahead, our baseline forecast is that the state will experience at least two more years of healthy economic growth. Payroll job growth normalizes from 3.9 percent in 2022 to 1.5 percent in 2023 before slowing to an average of 0.9 percent per year in 2024 and 2025. Our forecast puts Michigan's job count 1.9 percent higher at the end of 2025 than it stood prior to the pandemic, and about 3.6 percent below its peak level achieved in the second quarter of 2000. We hope that Michigan's newfound economic resilience signals that the state has turned the corner from the boom-and-bust economy of the past. We are excited to see what the next chapter holds for the state.

Appendix Table A.1: Review of RSQE Forecasts of Employment and Income in the State of Michigan

| Year | Percent Change in Michigan Wage and Salary Employment | | Percent Change in Michigan Personal Income | |
|------|---|------------------|--|------------------|
| | RSQE Forecast ¹ | Observed | RSQE Forecast ¹ | Observed |
| 1973 | 4.6 | 5.4 | 9.6 | 11.6 |
| 1974 | 1.5 | -0.2 | 7.4 | 7.0 |
| 1975 | -1.3 | -4.3 | 5.8 | 7.0 |
| 1976 | 3.4 | 4.7 | 12.7 | 11.7 |
| 1977 | 2.1 | 4.8 | 11.4 | 12.5 |
| 1978 | 2.8 | 4.8 | 11.2 | 11.5 |
| 1979 | -0.6 | 0.8 | 8.3 | 9.6 |
| 1980 | -2.5 | -5.3 | 6.1 | 7.0 |
| 1981 | 2.2 | -2.3 | 10.8 | 7.0 |
| 1982 | -0.9 | -5.1 | 7.1 | 3.2 |
| 1983 | 1.0 | 0.9 | 7.0 | 6.3 |
| 1984 | 5.5 | 4.9 | 11.3 | 10.6 |
| 1985 | 2.6 | 5.3 | 8.0 | 8.5 |
| 1986 | 1.3 | 2.7 | 4.8 | 6.5 |
| 1987 | 1.8 | 2.1 | 3.8 | 4.0 |
| 1988 | 0.3 | 2.2 | 3.7 | 6.7 |
| 1989 | 1.8 | 2.7 | 6.4 | 7.7 |
| 1990 | 1.3 | 0.6 | 6.0 | 4.6 |
| 1991 | -0.4 | -1.5 | 5.0 | 2.1 |
| 1992 | 0.7 | 0.8 | 5.1 | 6.1 |
| 1993 | 0.3 | 2.1 | 4.9 | 5.3 |
| 1994 | 1.1 | 3.6 | 4.7 | 7.5 |
| 1995 | 2.1 | 3.1 | 6.4 | 5.8 |
| 1996 | 1.6 | 2.0 | 4.6 | 5.3 |
| 1997 | 1.6 | 1.9 | 5.1 | 5.3 |
| 1998 | 1.2 | 1.6 | 4.8 | 6.1 |
| 1999 | 1.4 | 1.6 | 3.5 | 5.2 |
| 2000 | 1.4 | 2.1 | 5.2 | 6.7 |
| 2001 | 0.5 | -2.4 | 4.6 | 1.7 |
| 2002 | -0.6 | -1.7 | 2.3 | 0.1 |
| 2003 | -0.3 | -1.6 | 3.5 | 2.1 |
| 2004 | 0.8 | -0.4 | 4.9 | 2.9 |
| 2005 | 0.8 | -0.2 | 4.7 | 2.0 |
| 2006 | -0.2 | -1.4 | 4.9 | 2.4 |
| 2007 | -0.7 | -1.4 | 3.3 | 2.8 |
| 2008 | -1.7 | -2.5 | 1.6 | 2.2 |
| 2009 | -3.0 | -7.0 | 0.7 | -5.1 |
| 2010 | -2.2 | -0.2 | 1.0 | 3.4 |
| 2011 | 0.2 | 2.3 | 2.0 | 6.2 |
| 2012 | 0.8 | 2.1 | 3.0 | 3.6 |
| 2013 | 0.9 | 1.9 | 2.6 | 1.4 |
| 2014 | 1.7 | 1.7 | 4.5 | 4.3 |
| 2015 | 1.5 | 1.5 | 4.6 | 5.5 |
| 2016 | 1.4 | 2.0 | 4.4 | 2.8 |
| 2017 | 0.9 | 1.2 | 3.7 | 3.5 |
| 2018 | 1.0 | 1.1 | 4.4 | 4.1 |
| 2019 | 0.8 | 0.4 | 3.7 | 3.1 |
| 2020 | 0.7 | -9.1 | 3.7 | 8.5 |
| 2021 | 3.4 | 3.9 | -1.5 | 5.6 |
| 2022 | 3.1 | 3.9 | -0.4 | 0.7 |
| 2023 | 1.2 | 1.5 ² | 4.7 | 4.3 ² |

¹ Forecast presented at the Economic Outlook Conference of the preceding year.² Estimated by RSQE as of November 2023.