INVESTING in Ohio's FUTURE

BUDGET OF THE STATE OF OHIO | FISCAL YEARS 2022-2023

Budget Recommendations

The State of Ohio Executive Budget
FISCAL YEARS **2022-2023**

MIKE DEWINE
GOVERNOR OF OHIO

Office of Budget and Management

Director Kimberly Murnieks

The Blue Book: Book One of Three

Governor Mike DeWine
State of Ohio, Executive Budget Recommendations
for Fiscal Years 2022-2023

Developed by the Ohio Office of Budget and Management
Kimberly Murnieks, Director

Presented to the Ohio General Assembly on February 1, 2021

February 1, 2021

Fellow Ohioans and Members of the General Assembly:

The past year has been a challenging time in Ohio and across the nation and the world. The coronavirus pandemic has made clear that the strength of our economy depends on the health and well-being of our citizens.

With our Executive Budget for Fiscal Years 2022 and 2023, we have an opportunity to make needed investments to help our great state recover. Our budget is built upon the knowledge that a thriving economy -- and ultimately the future of our state -- depends on healthy citizens and revitalized communities. By investing in our future, our proposed budget will help all Ohioans move forward together as we emerge stronger than ever.

This is our "Year of Recovery!" Our Executive Budget includes a $1 Billion ***Investing in Ohio Initiative***, an aggressive plan to accelerate economic growth and ensure economic vitality. By making targeted investments for businesses that have been hardest hit during the pandemic and for our communities most in need, we can address disparities, build prosperity, and set Ohio on the road to a brighter future. This budget also represents the core values and mission of my Administration by investing in Ohio families, in the education and well-being of our children, in Ohio's workforce, in our communities, and in our precious natural resources.

Ohio is in a position to make these vital investments because we took immediate action to ensure that our budget remained balanced at the onset of the pandemic. We made the hard choices early on that put us on stable footing as we enter this phase of economic recovery. As Governor, I will do all that I can to protect Ohioans' health and put Ohio's economy on a path to even greater success.

In my first State of the State Address, I quoted Robert Louis Stevenson, who said, "Don't judge each day by the harvest you reap, but [rather] by the seeds that you plant." These words are even more significant today. The budget for the next two years continues to plant the seeds of hope and possibility -- and of courage and recovery -- that will grow into a more vibrant, prosperous, and flourishing Ohio for generations to come.

Very respectfully yours,

Mike DeWine
Governor

INVESTING in Ohio's FUTURE

BUDGET OF THE STATE OF OHIO | FISCAL YEARS 2022-2023

SECTION B

Economic Forecast

Economic Overview and Forecast

The Pre-Pandemic U.S. Economy

When the U.S. economy reached its pre-pandemic peak in February 2020, it set a new mark for the longest economic expansion in U.S. history. The 128-month expansion that began in 2009 eclipsed the prior record of 120 months for the period from March 1991 to March 2001.

The expansion that ended in February 2020 proved extraordinarily durable. Job growth had plateaued during the months between February and July 2019, with only one month of employment gains over 200,000. But when the expansion seemed threatened, interest rate cuts by the Federal Reserve, in July and September of 2019, led to a re-acceleration in both output and employment growth. After interest rate reductions, job growth re-accelerated in the August 2019 through February 2020 span, with five of the seven months exceeding 200,000 job gains, while the monthly average gain was 216,000.

The U.S. unemployment rate dropped to 3.5 percent in January 2020 and stayed there in February, getting back to the 50-year low it first touched in September 2019. Unemployment rates had not been that low since the last months of 1968 and the first months of 1969 when they reached 3.4 percent.

Real GDP also was reinvigorated in the second half of calendar year 2019. After growth fell to 1.5 percent in the second quarter, it rebounded to 2.6 percent and 2.4 percent in the third and fourth quarters, respectively. These growth rates were slightly above the 2.3 percent average for the 42 quarters of the post-Great Recession recovery and expansion.

Besides increases in the most aggregated measures of the economy, there also were noticeable improvements at the household level. These improvements were visible over a longer time horizon than simply the last half of 2019. The Federal Reserve's Survey of Consumer Finances, conducted every three years, saw gains to lower-income and lower-wealth households over the 2016-2019 period, in sharp contrast to the earlier part of the expansion, the 2010-2016 period: [1]

> "Between 2016 and 2019, families that were high wealth, had a college education, or identified as White non-Hispanic experienced proportionally smaller income growth than other groups of families..."
>
> "In grouping families by wealth, families at the top of the distribution experienced a sharp decline in average income (following particularly outsized gains over the 2010–16 period), whereas families in the lower and middle portions of the wealth distribution all saw modest gains."
>
> "Families near the bottom of the income and wealth distributions generally continued to experience substantial gains in median and mean net worth between 2016 and 2019."

Wage gains in the industries including retail and leisure and hospitality were exceeding economy wide wage gains. In a November 25, 2019 speech titled “Building on the Gains from the Long Expansion,” Federal Reserve Chairman Jerome Powell remarked: [2]

> “Recent years' data paint a hopeful picture of more people in their prime years in the workforce and wages rising for low- and middle-income workers.”

Figure B-1, from the Atlanta Federal Reserve Bank supports Chairman Powell’s statement. Wage growth for the lowest quartile of workers begins exceeding wage growth for all workers in 2016, and this new trend continued through 2019.

Figure B-1: Median Wage Growth

Source: Current Population Survey, author calculations. Data for 2019 are through November.

Despite continued concerns about the health of the manufacturing economy given the reciprocal tariffs being imposed by the U.S. and China, and the Treasury yield curve sending sporadic warnings of recession, prior to the pandemic, the expansion had begun to pick up steam again. Helped by interest rate cuts, the late part of the expansion brought benefits to lower skilled workers in terms of rising income and wealth. In addition to the Federal Reserve Information cited above, there were also data that showed that bigger increases in consumer confidence were being recorded for lower income and less educated households.

All these hopeful developments, both for the economy in the aggregate and for lower-income and lower-wealth households, would be reversed by COVID-19.

The U.S. Economy in the Pandemic

In the early days of the COVID-19 crisis, economists theorized that the primary impact of the pandemic in Europe and the United States would be the disruption of supply chains that relied on products from Asian countries, primarily China. As COVID-19 transformed from an emergent virus to a global pandemic and the virus arrived in Europe and the United States with deadly force, it became clear it would cause an extraordinary demand shock, in addition to a supply disruption.

In response to COVID-19, the Secretary of Health and Human Services declared a public health emergency in the United States on January 31, 2020. President Trump issued a proclamation on March 13 declaring a national emergency, effective March 1. At that point, known cases had not yet been identified in every state: the proclamation cites 1,645 known cases in 47 states. Later evidence would show that by that point COVD-19 was in fact in communities all over the United States.

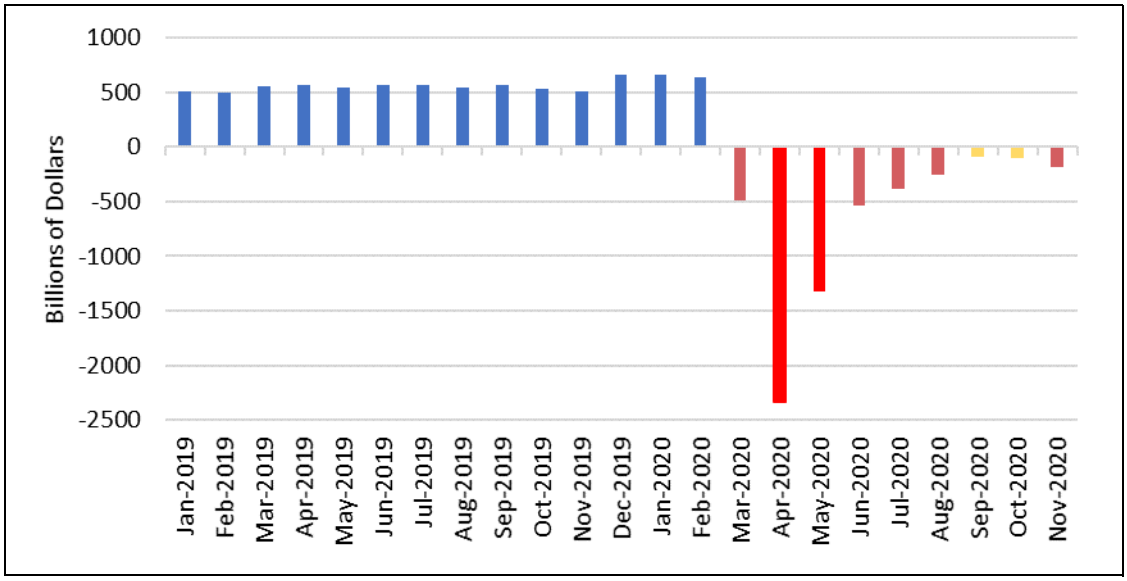
On the economic front, the rapid spread of COVID-19 led to two developments of the greatest significance to the U.S. economy. The first was the issuance of stay-at-home orders of varying degree by many of the nation's governors. The Centers for Disease Control (CDC) issued a report in September 2020 that found that 42 states and U.S. territories issued stay-at-home orders between March 1 and May 31, with the first territorial order in Puerto Rico on March 15 and the first state order in California on March 19. Governor DeWine issued Ohio's first stay-at-home order on March 23. The CDC research shows that the stay-at-home orders covered 2,355 (73%) of 3,233 U.S. counties.[3]

These stay-at-home orders resulted in a quick reduction in U.S. consumption spending. However, even in the absence of state containment measures, there would have been reductions in consumer spending because of consumers' fears of exposure to COVID-19 in retail stores, restaurants, hotels, and other business locations. Some of the early research on whether consumer preferences or stay-at-home orders mattered more for spending behavior found that consumer preferences mattered more. Later research by IHS Markit, a leading economic forecasting firm, finds that, at least as the pandemic went on, containment measures mattered more. [4]

Economic Overview and Forecast

U.S. consumption spending began falling in March, both relative to the month before, and relative to the same month a year prior. Figure B-2 shows the year-over-year change in U. S. consumption spending through November 2020. The worst months were April and May, when consumption spending fell by $2.33 trillion (-16.1%) and $1.33 trillion (-9.2%) from the prior year, at annual rates. [5]

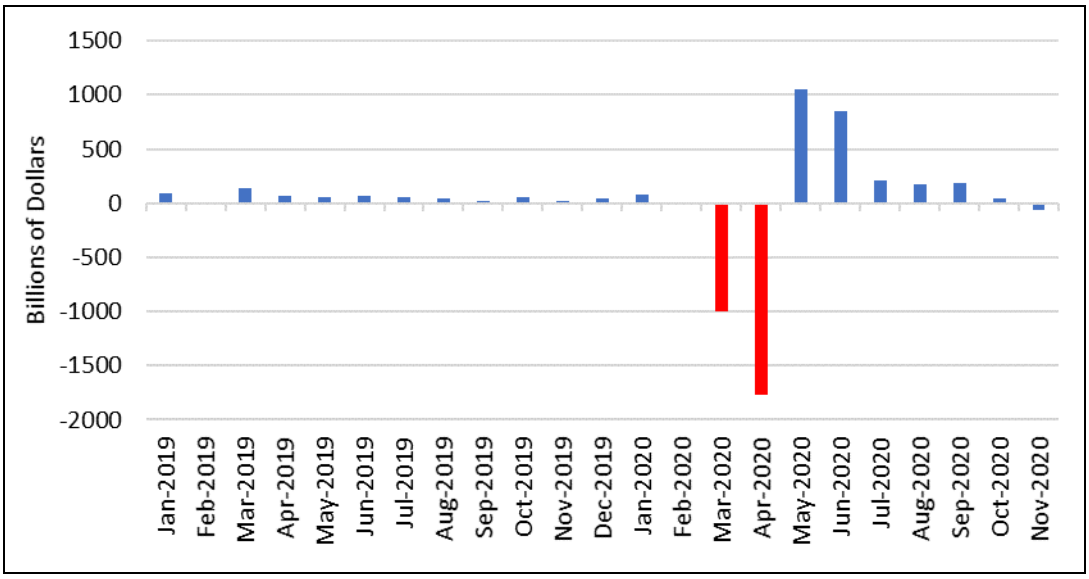
Figure B-2: Year-Over-Year Change in Personal Consumption Spending
(dollars in billions)



Source: Bureau of Economic Analysis via FRED

Beginning in May, with the gradual and careful "reopening" of many states, consumption began to rebound. This can be seen in Figure B-3, which compares consumption spending on a month-to-month basis (annualized).

Figure B-3: Month-Over-Month Change in Personal Consumption
(dollars in billions)

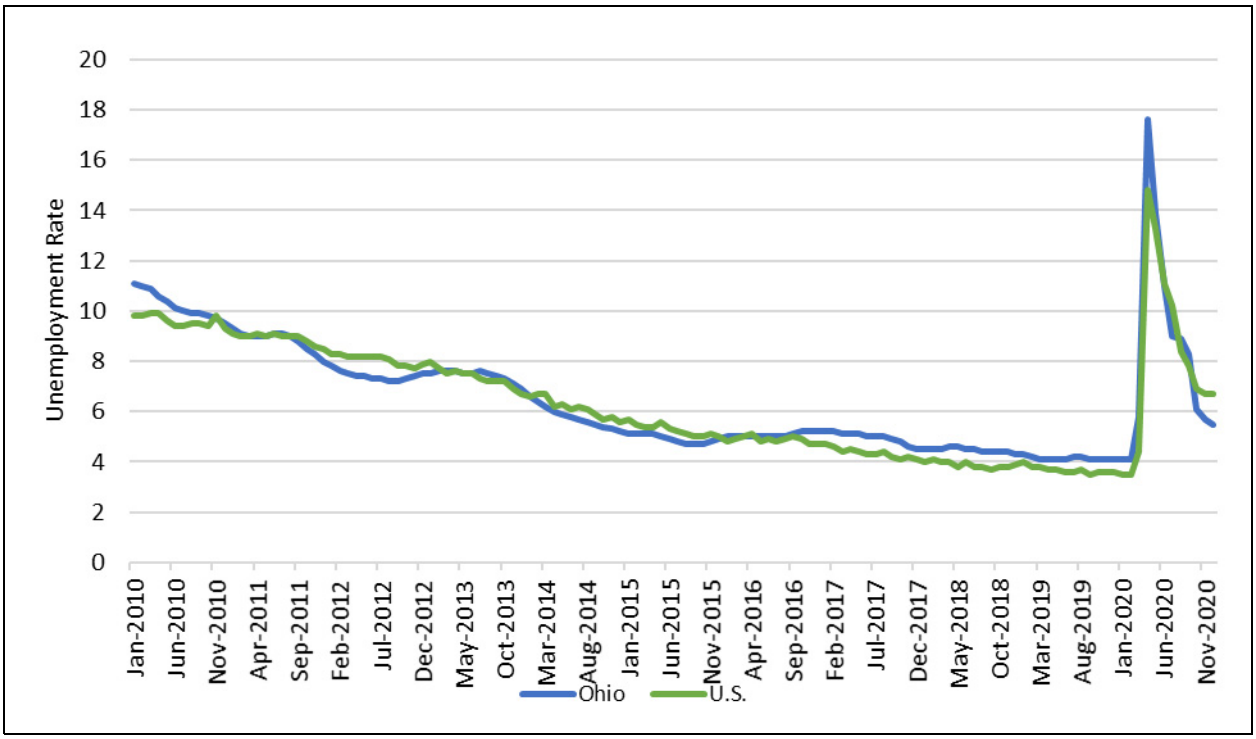


Source: Bureau of Economic Analysis via FRED

But the resurgence in consumption spending cannot be explained solely by reopening. This leads us to the second major development for the U.S. economy: federal income support.

On the employment side, the states were flooded with unemployment claims. Nationally, the unemployment rate shot up from 3.5 percent in February to a peak of 14.8 percent in April. In Ohio, the April unemployment rate hit 17.6%. The week ending April 18 saw total Ohio unemployment claims peak at almost 870,000. All these employment statistics were much worse than at the trough of the Great Recession. Figure B-4 shows the sharp spike in employment rates and the steady decline since April. Ohio's unemployment rate for December was 5.5 percent, while the U.S. rate was substantially higher, at 6.7 percent.

Figure B-4: U.S. and Ohio Unemployment Rates, 2010 – 2020



Source: Bureau of Economic Analysis via FRED

Unprecedented is an overused word, but in this case it is warranted: the CARES Act, signed into law March 27, 2020, and the Paycheck Protection Program and Health Care Enhancement Act, enacted April 24, 2020, provided $2.2 trillion in overall economic relief through a number of provisions that benefited both households and businesses.[6] As shown in Table B-1, this economic support - according to Congressional Budget Office (CBO) scoring – totaled over ten percent of pre-pandemic GDP (in nominal dollars).[7] In comparison, the American Recovery and Reinvestment Act of 2009 (ARRA), passed in response to the Great Recession, was a spending and tax cut package with an estimated value of $840 billion, or about 5.7 percent of pre-Great Recession nominal GDP. [8]

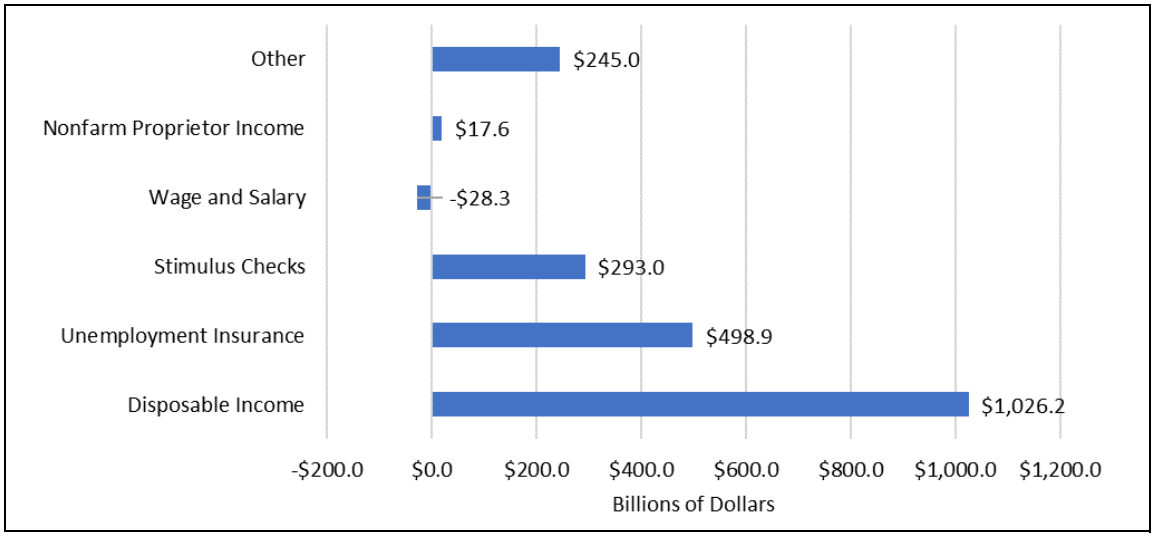
Table B-1: Impact of Federal COVID-19 Relief Bills
(dollars in billions)

	Coronavirus Aid, Relief, and Economic Security (CARES) Act P.L. 116-136 March 27, 2020	Paycheck Protection Program and Health Care Enhancement Act P.L. 116-139 April 24, 2020
Increase in Discretionary Outlays	$326	$162
Increase in Mandatory Spending	$988	$321
Decrease in Revenues	$408	$0
Total Impact	**$1,721**	**$483**
Major Provisions		
Paycheck Protection Program and Other SBA Grants and Loans	$377	$383
Recovery Rebates (checks to households)	$293	
Unemployment Insurance	$268	
Increased Limits on Losses for Corporations and Individual Taxpayers	$161	
Payments to State, Local, and Tribal Governments	$150	
All Other	$472	

Of this $2.2 trillion, about $1.3 trillion (or over 6% of pre-pandemic GDP) was direct relief to households or businesses through unemployment benefits, payments to households, or the Paycheck Protection Program (PPP) or other SBA loans or grants.

Bureau of Economic Analysis data on disposable income in the March through November period clearly demonstrate the massive economic stimulus (see Figure B-5). Despite a huge increase in unemployment, disposable income rose by $1.03 trillion (about 80% of the CBO scoring of CARES Act provisions directly benefiting households and businesses). This 8.4 percent increase in disposable income was led by a $499 billion increase in unemployment benefits paid. The stimulus checks, or Economic Impact Payments ($1,200 per adult plus $500 per child under 17 in a household) added another $293 billion. For businesses, nonfarm proprietors' income rose by $18 billion (1.5%), instead of falling sharply as it would have likely done without the PPP loans. Finally, to the surprise of many, wage and salary income fell by only $28 billion (0.4%), as laid-off workers were mostly on the low end of the income distribution.

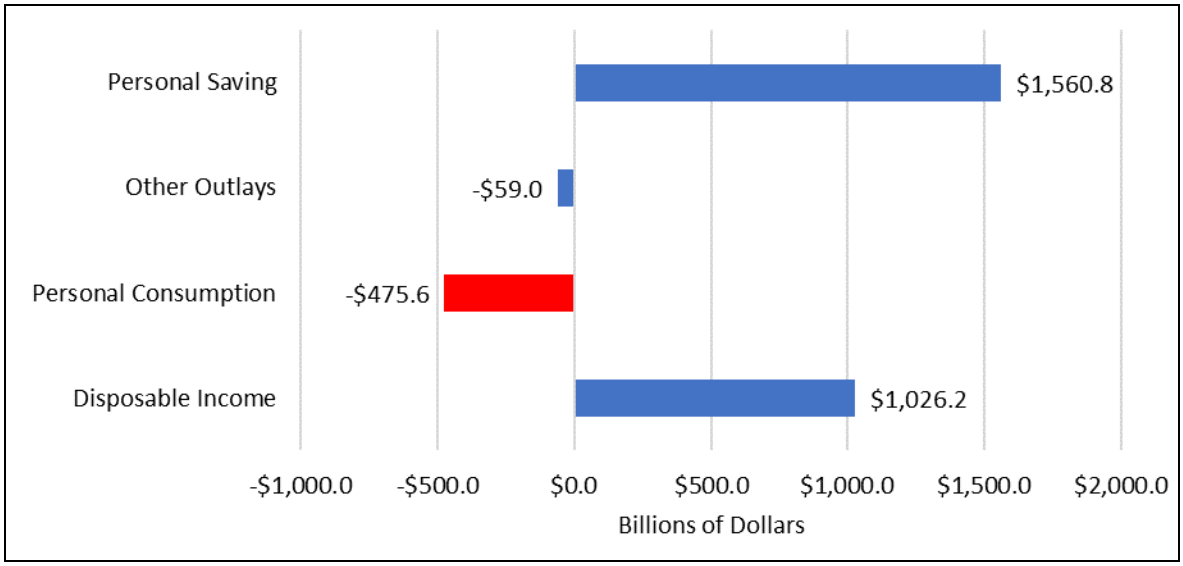
**Figure B-5: Change in Disposable Income and its Components:
March Through November 2020 Compared to the Same Period in 2019**
(dollars in billions)



Source: Bureau of Economic Analysis via FRED

This enormous injection of income kept consumption spending from falling more than it did, and, as Figure B-6 shows, the increase in income also led to an enormous increase in household saving, as households used the additional income as a financial cushion against possible future job loss or other income reduction. Household saving over the March to November period increased by $1.6 trillion, or 173 percent, over the same period in 2019. It seems quite likely that this increase in saving, at least among higher wealth households, contributed to the increase in asset prices, including houses and stocks.

**Figure B-6: Change in Disposable Income, Consumption Spending, and Personal Saving,
March Through November 2020 Compared to the Same Period in 2019**
(dollars in billions)

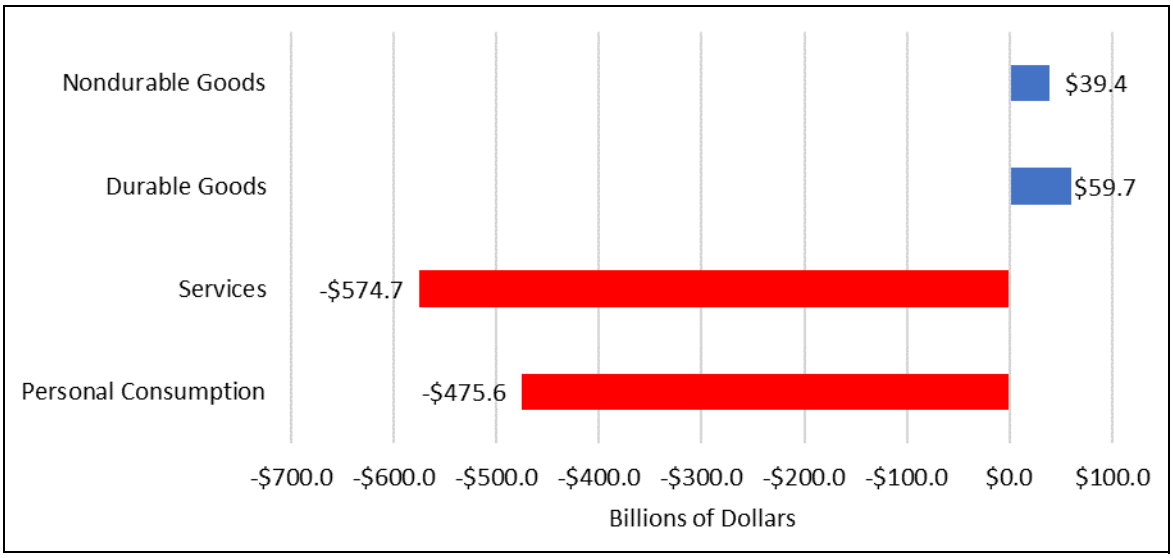


Source: Bureau of Economic Analysis via FRED

Finally, although consumption spending fell by $476 billion (4.3%) from the same 9-month period in 2019, not all categories of spending were affected equally. In fact, spending on both durable and non-durable goods increased, while spending on services plummeted. This shift in spending from services (largely untaxable under state sales taxes) to goods has helped sales tax revenue

in Ohio and other states post surprisingly strong results so far in fiscal year 2021. Other factors that have supported state sales tax growth, such as the U.S. Supreme Court case, Wayfair v. South Dakota, that imposed a sales tax collection burden on remote sellers, and law changes in Ohio and other states that have subjected online marketplace facilitators to state and local sales tax, are discussed in the revenue summary of the Blue Book. As shown in Figure B-7, over the March-November period, non-durable goods spending increased by $39 billion (1.8%) compared to the same period in 2019, durable goods spending increased by $60 billion (5.2%), but services spending fell by $575 billion (7.6%). Services spending has dropped from 69.2 percent of consumption spending before the pandemic to 66.5 percent in November 2020. The last time the ratio had been that low was in late 2008, during the Great Recession.

Figure B-7: Change in Consumption Spending, March Through November 2020 Compared to the Same Period in 2019
(dollars in billions)



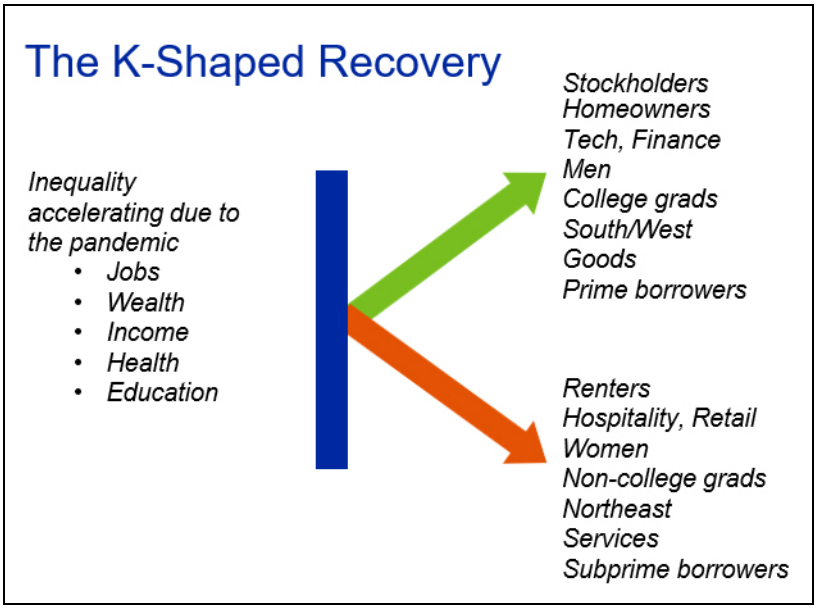
Source: Bureau of Economic Analysis via FRED

Economic Overview and Forecast

The K-shaped recovery

Ohio's economy was strong before the onset of the worldwide COVID-19 pandemic and Ohio remains above the national average and on the path to recovery. The virus left disparate scars on some sectors of the economy and brought inequalities to the forefront. The disparity between the impact of the pandemic on workers by education attainment, wage level, and skill level has led to many analysts describing the recovery from the pandemic's depths in March through May as a "K-shaped" recovery, wherein more educated and skilled workers are on the upper arm of the K, and less educated and skilled workers are on the lower arm of the K. Moody's Analytics extends the analysis of the K-shaped recovery to include differences in impacts between U.S. regions, between homeowners and renters, and between genders, as in the Figure B-8, below.

Figure B-8: The K-Shape Recovery



Source: Moody's Analytics

While the disparity in employment outcomes has been the most widely noted aspect of the recovery's K shape, the boom in asset prices for wealthier households has also had important economic impacts. The housing boom helped to fuel the demand for durable goods such as furniture and appliances. The increases in stock prices has a more ambiguous effect, as some of the increase may be the result of savings increasing at the expense of consumption, as noted in the prior section.

On the employment front, data from the Bureau of Labor Statistics (BLS) clearly illustrates that the emerging recovery has been much stronger for the best educated, most skilled, and highest wage workers (many of whom also have jobs that are more easily performed in a work from home setting). In contrast, the least educated, least skilled, and lowest wage occupations and industries still show employment that is 10 percent to 20 percent below its pre-pandemic levels, depending on the measure used.

Furthermore, the BLS data show that after initial gains, the recovery of lost jobs may be stalling out. Specifically, employment during the pandemic demonstrates two phases, with perhaps a third phase under way. In the initial phase more educated and higher skilled (and higher compensated) workers experienced far lower job loss and faster recovery of the jobs that were lost. During the middle phase less educated and less skilled workers regained ground and the disparity shrank. Finally, there is a possibility of a third phase (in its very early stages) where the disparity has plateaued and perhaps begun to widen again for the least educated and least skilled workers. These disparate impacts by education, skill level, and wage level are explored further in Appendix A of this section.

There are several implications of these results for state revenues and spending. First, income tax revenues did not fall to the extent originally feared. The fact that most jobs lost were in the lower wage range meant that although Ohio employment has fallen by a monthly average of 7.3% in the July-November period compared to the prior year, income tax withholding for July-December has grown by 4.1% (adjusted for the tax rate cut that took effect in January 2021).

Second, federal income support has been crucial in supporting consumption, as workers in the lower wage range generally have little in precautionary savings to smooth consumption in times of such steep employment declines. The CARES Act and its close successor, the Paycheck Protection Program and Health Care Enhancement Act, have managed to stabilize aggregate consumption, particularly of goods, and thus support state sales tax revenues. With the support of additional federal stimulus, middle- and higher-income earners will likely continue to spend, generating additional sales tax revenues. However, despite the fact that the economy in the aggregate has bounced back strongly from the very negative March-May period, households at the lower end of the income scale remain in a precarious position.

While the economic aggregates and tax revenues have held up well so far in fiscal year 2021, demand for government services could rise sharply given the poor employment situation, and the struggle to cover basic living expenses such as food and housing, of lower income Ohioans.

The Baseline Economic Outlook

The huge negative demand shock from the COVID-19 pandemic caught economists by surprise, and forecasts of GDP and other important economic variables, particularly consumer spending, fluctuated wildly in the early days of the pandemic. First the forecasts understated the decline in the second quarter of 2020. Then they understated the rebound in the following quarter. Now that forecasters have a couple of quarters of actual data during the pandemic, the range of forecasts has narrowed, moving back towards more familiar ranges of outcomes.

Looking at the broadest measure of production, real GDP, forecasts for calendar years 2021 – 2023 from OBM's economic forecasting contractors, Moody's Analytics (MA) and IHSMarkit (IHSM) are reasonably close to each other, although the MA forecast is noticeably stronger in 2022. The forecasts from both firms, along with the latest consensus from the Wall Street Journal Survey of Forecasters and the Philadelphia Federal Reserve Bank Survey of Professional Forecasters, are displayed in Table B-2 below.

Table B-2: U.S. Real GDP Growth: History and Forecasts

	2018	2019	2020	2021	2022	2023
IHSM Baseline (December 2020)	3.0	2.2	-3.4	4.3	3.6	2.6
MA Baseline (December 2020)	3.0	2.2	-3.5	4.1	4.7	3.2
WSJ Survey (January 2021)	3.0	2.2	-2.5	4.3	3.0	2.4
Philadelphia Fed SPF (November 2020)	3.0	2.2	-3.5	4.0	3.0	2.1

The forecasts for calendar year 2021 real GDP are remarkably similar. For calendar year 2022, the Moody's forecast is a notable positive outlier. The Moody's forecast is also highest of the group in calendar year 2023, although the difference is not as stark as in calendar year 2022.

All the GDP forecasts predict that growth will be four percent or greater in calendar year 2021, as vaccine rollout improves consumer confidence and services consumption improves as a result. The forecasts also assume that in the short run additional federal aid to households under the latest COVID-19 relief bill[9] will support continued economic growth.

While both the IHSM and Moody's forecasts have features to recommend them, OBM has decided to rely on the IHSM December baseline to underpin the administration's tax revenue forecasts because of differences in projections of the labor market and of consumption spending.

Labor market forecasts by IHSM and Moody's follow a somewhat different pattern. Although the Moody's forecast is much more optimistic about output, with the highest GDP forecasts in calendar year 2022 and calendar year 2023, it is more pessimistic about the labor market. In fact, the Moody's forecast of the labor market through the pandemic has tended to be somewhat too pessimistic about job growth, although admittedly the sample of actual data points is still small. Both its jobs forecast, and its unemployment rate forecast are not as optimistic as the IHSM baseline. Moody's forecast implicitly assumes that more of the benefits of increased production will go to capital, rather than labor (see Table B-3).

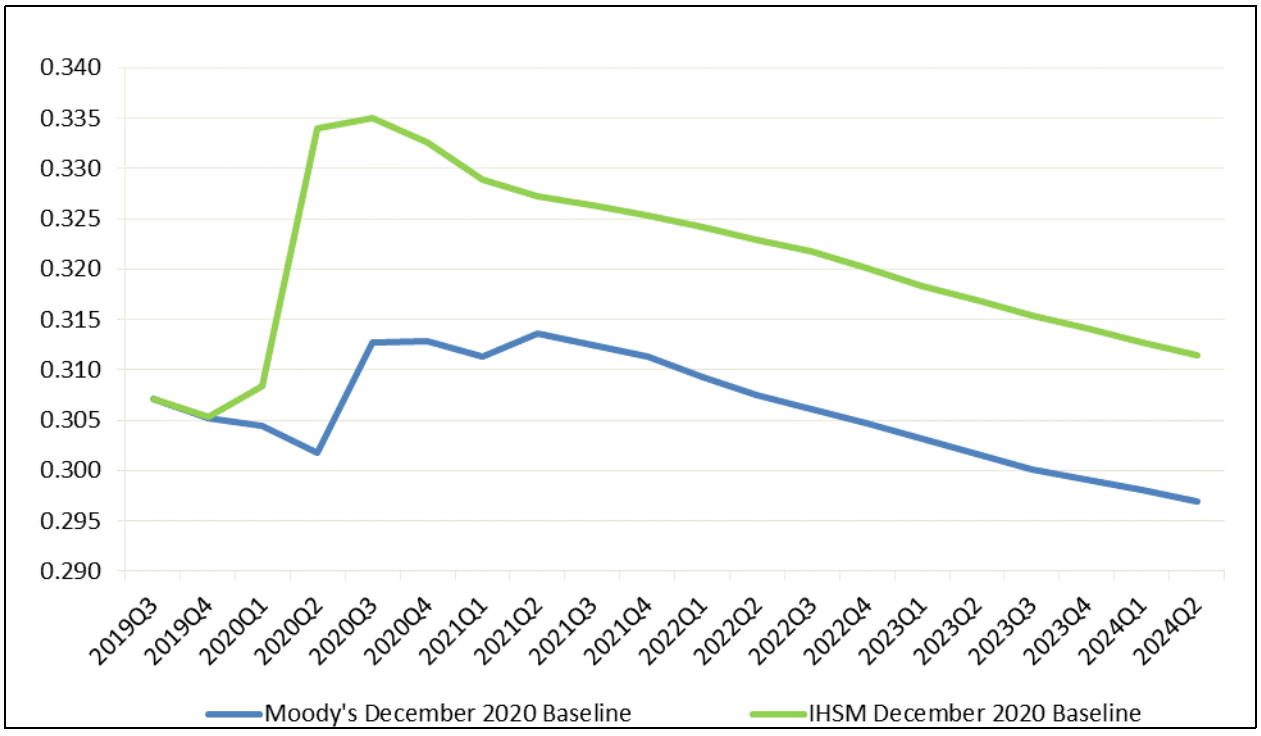
Table B-3: U.S. Payroll Employment and Unemployment Rate: History and Forecasts

		2018	2019	2020	2021	2022	2023
IHSM Baseline (December 2020)	payroll employment (millions)	148.9	150.9	142.3	146.3	151.3	153.2
IHSM Baseline (December 2020)	unemployment rate	3.9	3.7	8.1	5.9	4.6	4.4
MA Baseline (December 2020)	payroll employment (millions)	148.9	150.9	142.3	143.9	147.4	151
MA Baseline (December 2020)	unemployment rate	3.9	3.7	8.1	6.9	6	4.6
WSJ Survey (January 2021)	unemployment rate	3.9	3.7	8.1	6.2	5.8	5.5
Philadelphia Fed SPF (November 2020)	unemployment rate	3.9	3.7	8.1	6.3	5.2	4.6

Another point that leads OBM to favor the IHSM forecast is the consumption spending detail. The ratio of personal consumption expenditure (PCE) on goods to total PCE has risen sharply as spending on goods has increased but spending on services has fallen sharply, as detailed in the prior section. Monthly U.S. PCE data shows that goods consumption as a percent of the total reached a high of 33.9 percent in June and July of 2020 and was still 33.5 percent in November. In December of 2019, prior to the pandemic, that percentage was 30.8 percent.

The IHSM December baseline forecast of the Ohio PCE goods to total PCE ratio clearly captures that high point of almost 34 percent, before slowly declining in the forecast. In contrast, the Moody's Ohio forecast does not fully capture the surge in goods spending, as shown in Figure B-9.

Figure B-9: Ohio Goods PCE to Total PCE Ratio



Tracking the ratio of goods spending to total spending is of crucial importance during these pandemic times to the state sales tax, which relies more heavily on goods (including digital goods) than on services.

Risks to the Baseline Forecast

Unsurprisingly, since it was a global pandemic that halted the longest expansion in U.S. history, the greatest risks, both to the upside and the downside, are tied to the course of the pandemic and the deployment of the vaccines meant to provide immunity against it.

The upside risks are from vaccine deployment being faster and more effective than assumed in the baseline. In the December IHSM optimistic scenario, to which the firm assigns a 20 percent probability, vaccine deployment is widespread in the Spring of 2021. The optimistic scenario also assumes that the recent surge in COVID-19 cases results in better compliance with social distancing and mask wearing behavior, so that cases and hospitalizations fall more quickly than in the baseline scenario. Crucial to IHSM's thinking, this also causes faster relaxation in state containment measures. Both the decline in cases and the relaxation of containment measures lead to faster growth in consumption spending. In the optimistic scenario, consumption spending in calendar year 2021 grows 6.2 percent in calendar year 2021, as compared to 5.2 percent growth in the baseline scenario.

The optimistic scenario also leads to much faster improvements in the labor market, compared to the baseline. The U.S. unemployment rate falls to 4.6 percent in calendar year 2022, and payroll employment growth hits 5.0 percent late in calendar year 2021.

The downside risks to the forecast are more numerous. More things can go wrong with the recovery than can go better than expected. Just as in the optimistic scenario, the main downside risks are centered on vaccine deployment, the number of COVID-19 cases, and state containment measures. A slow and uncertain deployment of vaccines may lead to a failure to reach herd immunity in the near term. A continued surge in cases and hospitalizations, accompanied by stricter containment measures, lead to slower consumer spending and slower business investment than in the baseline.

To be specific, the IHSM December pessimistic scenario, which carries a 30 percent probability, has consumer spending increasing only by 3.9 percent in calendar year 2021, compared to 5.2 percent in the baseline and 6.2 percent in the optimistic scenario. This leads to GDP growth being only 3.0 percent in calendar year 2021, as compared to 4.3 percent in the baseline. The unemployment rate averages 6.4 percent in calendar year 2021 and 5.5 percent in calendar year 2022, compared to 5.9 percent and 4.6 percent in the baseline, respectively. Payroll employment growth is less than 2 percent in calendar year 2021.

There are other risks that are less immediate but still significant.

(i) Problems with vaccine rollout and achieving herd immunity for the United States' key trading partners, Canada, Mexico, the Eurozone, and Asia, could lead to weak exports and slower U.S. growth, particularly in manufacturing, which is of importance to Ohio.

(ii) High asset prices, particularly stock prices but also home prices, which have been fueled in part by the surge in saving, could turn out to be an asset bubble which deflates quickly, hurting consumer confidence and leading to a pullback in spending.

(iii) In the longer run, Federal Reserve policy that has kept interest rates very low and injected large amounts of liquidity into the economy could lead to fast increases in inflation, leading to a sharp reversal of course by the Federal Reserve that could lead to slower long-run growth.

(iv) Another long run risk is that workers who have left the labor force due to COVID-19 eventually re-enter with skills that are mismatched to the post-pandemic economy, leading to lower overall productivity and slower income growth.

OBM's adoption of the baseline IHSM forecast does not ignore these risks. The revenue prediction models that rely on the IHSM baseline forecast for inputs generate quite conservative tax revenue forecasts in FY 2021, and by extension also produce conservative forecasts in FY 2022 and FY 2023.

[1] Federal Reserve Bulletin, "Changes in U.S. Family Finances from 2016 to 2019: Evidence from the Survey of Consumer Finances," vol. 106, no.5, September 2020.

[2] Chairman Powell's quote and the chart of median wage growth are from the Atlanta Federal Reserve Bank blog, "Faster Wage Growth for the Lowest Paid Workers," December 16, 2019. https://www.frbatlanta.org/blogs/macroblog/2019/12/16/faster-wage-growth-for-the-lowest-paid-workers

[3] Moreland A, Herlihy C, Tynan MA, et al. Timing of State and Territorial COVID-19 Stay-at-Home Orders and Changes in Population Movement — United States, March 1–May 31, 2020. MMWR Morb Mortal Wkly Rep 2020;69:1198–1203. DOI: http://dx.doi.org/10.15585/mmwr.mm6935a2

[4] IHSM Macro Focus, "The effects of COVID-19 and efforts to contain it on consumer spending: Insights from weekly panel data," November 2020.

[5] The income and consumption graphs in this section are based on monthly data from the Bureau of Economic Analysis (BEA) for the March through November period.

[6] This analysis omits the two COVID-19 federal bills passed prior to the CARES Act in March since they were much smaller in terms of relief provided to households and businesses.

[7] "The Budgetary Effects of Laws Enacted in Response to the 2020 Coronavirus Pandemic, March and April 2020," Congressional Budget Office, June 2020

[8] "Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output in 2014," Congressional Budget Office, February 2015.

[9] The Coronavirus Response and Relief Supplemental Appropriations Act, 2021 (CRRSAA)) was passed December 27, 2020. This federal package provides $908 billion in various COVID-19 relief programs, of which about $611 billion is for the three economic pillars of the earlier CARES Act: another round of PPP loans to small business ($325 billion), direct payments to households ($166 billion), and expanded unemployment benefits ($120 billion).

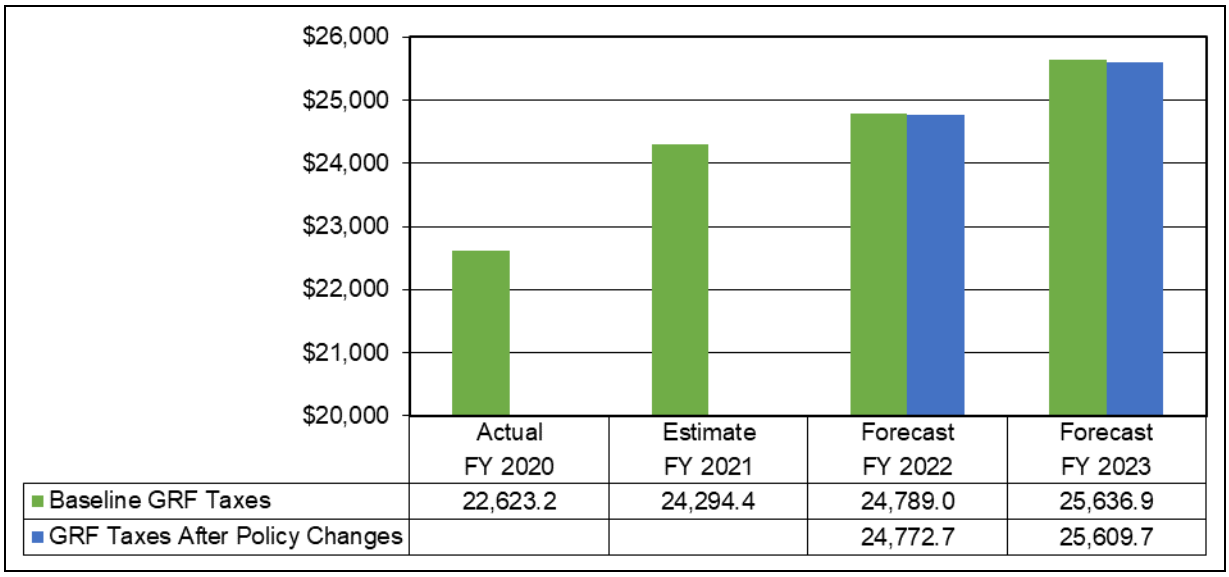
Revenue Estimates and Methodology

Overview

Ohio finds itself responding to and recovering from the economic shockwaves of the pandemic. Ohio's economy is resilient and will continue along the path to a bright future. Although an economic low point occurred during the early spring during the onset of the pandemic and the implementation of necessary containment strategies, the story of the pandemic and the economy's recovery is still unfolding. As heartbreaking and as difficult as this health crisis has been, the underpinnings of the economy have remained fundamentally sound.

Although Gross Domestic Product (GDP) is likely to slow during the first quarter of calendar year 2021, the federal fiscal support enacted in December 2020 makes the possibility of an outright contraction much less likely. Assuming the nation attains greater capacity to manage the virus over the coming months, most economists agree that the U.S. economy will experience strong growth throughout the remainder of 2021, concentrated in the second half of the calendar year. National economic forecasts show continued, if moderating, growth throughout the time horizon associated with the fiscal years 2022-2023 biennium.

Figure B-10: GRF Tax Revenues, Baseline and After Proposed Law Changes
(dollars in millions)



	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
Baseline GRF Taxes	22,623.2	24,294.4	24,789.0	25,636.9
GRF Taxes After Policy Changes			24,772.7	25,609.7

Accordingly, the tax bases that underlie the preponderance of Ohio GRF tax revenues should support growth through the biennium. Figure B-10 shows the total GRF tax revenue estimates contained in the Executive Budget. The budget anticipates $24.79 billion in tax revenue during fiscal year 2022. This reflects $494.6 million in estimated year-over-year tax revenue growth for fiscal year 2022; as shown in Table B-5, this translates into a 2.0 percent growth rate. Estimated baseline tax revenue in fiscal year 2023 amounts to $25.64 billion. Estimated baseline year-over-year growth in fiscal year 2023 amounts to $847.9 million, or 3.4 percent.

Several statistical methods were employed in estimating GRF receipts. For the major tax sources, such as the sales and use tax, the personal income tax, and the commercial activity tax, regression forecasting equations were employed, although "outside the model" adjustments are also made in order to derive the final forecast. With the use of regression equations, the underlying assumption is that recent historical relationships between tax revenues and the independent variables that affect them, such as income, demographic variables, gross business revenues, etc., will remain in effect for future periods. For other revenue sources, trend analysis was the primary forecasting method used, along with analysis of expected developments in the industries or markets related to those taxes. However, the disruptions caused by the pandemic appear to have impacted certain revenue

sources in the current biennium, so the estimates for the upcoming biennium attempt to recognize and adjust for the recent disruptions of trend.

In developing the baseline estimates for fiscal years 2021 through 2023, the Office of Budget and Management (OBM), in collaboration with the Department of Taxation, relied primarily on the baseline (highest probability) national and state economic forecasts produced by IHSMarkit (IHSM) and Moody's Analytics, two prominent national economic forecasting firms. OBM focused on key Ohio variables such as employment and income. Unlike the forecasts for the FY 2020-2021 biennium, OBM and the Department of Taxation did not specifically construct an income forecast more conservative than the firms' baseline forecasts. This is because conditions have changed: the Ohio wage and salary forecasts from these firms did not appear to require a downward adjustment. That said, the baseline economic forecasts themselves are inherently likely contain a more conservative outlook than is expected to unfold over the coming months and next several years. Since late spring 2020, each consecutively updated monthly baseline forecast has reflected more optimistic outcomes than the one preceding it. Relative to the initial unfolding of the crisis, both firms better understand and presumably can better assess the likelihood of various economic scenarios and their associated economic outputs. It is reasonable to expect both firms to issue updated forecasts over the coming months that are even more optimistic than those issued in December, which were used to derive the revenue forecasts contained in the Executive Budget.

Table B-4 lists the proposed tax law change in the Executive Budget that directly impacts GRF tax revenues during the FY 2022-2023 biennium and the estimated revenue impact of this change. To reiterate, this change is not included in the GRF tax revenue baseline. The Commercial Activity Tax section contained in this document provides a brief explanation of the proposed tax law change.

Table B-4: Estimated GRF Tax Revenue Impacts of Proposed Law Changes in the FY 2022-2023 Executive Budget
(dollars in millions)

Proposal	Estimate	
	FY 2022	FY 2023
Commercial Activity Tax		
Expand job creation tax credit to include small businesses	$0.0	($10.0)
Total GRF Impact of Changes Affecting Tax Collections	**$0.0**	**($10.0)**

As Table B-5 shows, the proposed tax policy change is not large enough in size to cause a change in growth rates relative to the baseline. It also shows modest forecasted GRF baseline tax revenue growth rates for FY 2022-2023. However, further context is merited regarding some of the growth rates in the table. Approximately $719 million in personal income tax revenue was shifted from FY 2020 to FY 2021 as a result of the postponement of certain income tax payments and filing dates to July 15, 2020. This one-time shift in revenue had a notable impact on the annual growth rates shown for FY 2020 through FY 2022. If the postponement had not occurred, then the annual growth rates for total GRF tax revenue would have been as follows: -0.6 percent in FY 2020; 1.0 percent in FY 2021; and 5.1 percent in FY 2022.

Table B-5: GRF Tax Revenue Growth FY 2018-2023, Baseline and After Law Changes
(Annual percentage change)

Proposal	Actual			Estimate	Forecast	
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Measure of GRF Tax Revenue						
GRF Tax Revenue Baseline	2.5%	4.8%	-3.7%	7.4%	2.0%	3.4%
GRF Tax Revenue After Tax Policy Changes					2.0%	3.4%

Revenue Estimates and Methodology

Tax Sources

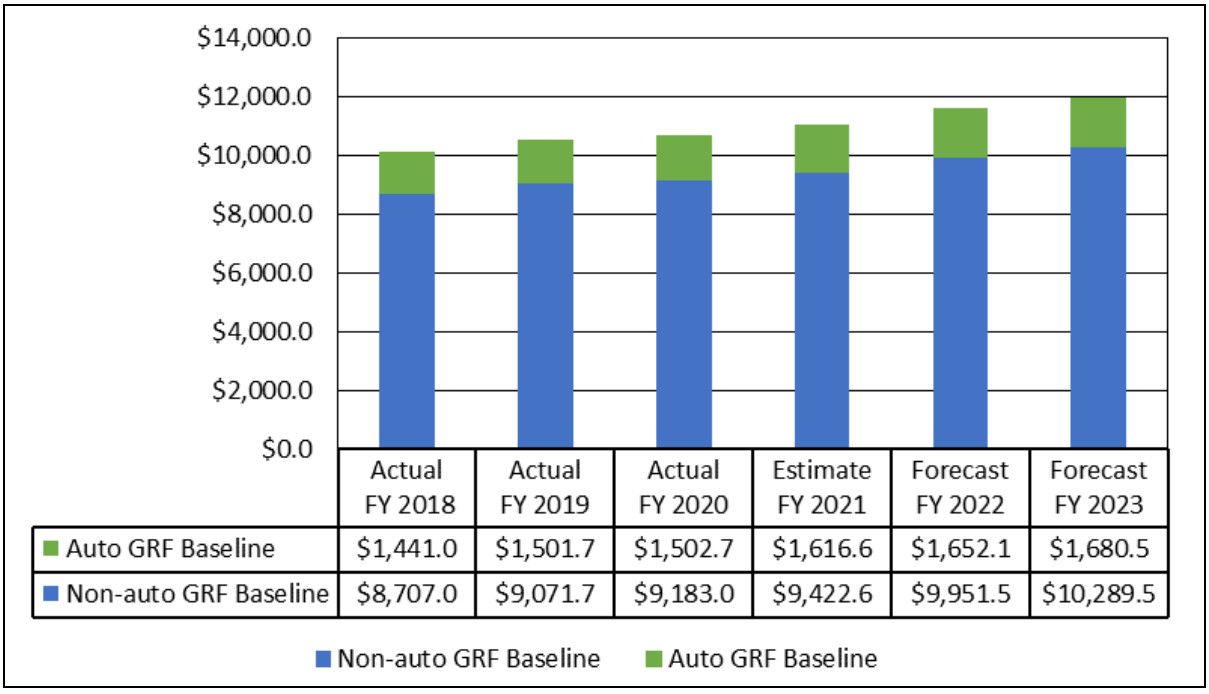
Sales and Use Tax

For revenue projection purposes, the sales and use tax is separated into two components: auto and non-auto sales tax revenue. The auto component consists of the tax collected from the sale of automobiles and trucks. The non-auto component includes all other sales and use tax collections, including the sales and use tax on motor vehicle leases.

The forecast for FY 2021 and for FY 2022-2023 calls for continued growth in revenue, with growth expected to strengthen in FY 2022 as the economic recovery picks up momentum. Wage growth is expected to continue as the labor market adds additional jobs, a dynamic that is a primary driver of both the auto and non-auto sales tax estimates.

The forecasting methodology for each series is discussed in more detail in subsequent sections. Figure B-11 illustrates both the baseline estimates for fiscal years 2021 through 2023. Sales tax revenues for fiscal year 2021 are expected to increase by 3.3 percent over fiscal year 2020. Growth in combined auto and non-auto sales tax revenue is expected to be 5.1 percent in fiscal year 2022 and 3.2 percent in fiscal year 2023 (as shown in Table B-6).

Figure B-11: Baseline Sales and Use Tax GRF Revenues
(dollars in millions)



	Actual FY 2018	Actual FY 2019	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
Auto GRF Baseline	$1,441.0	$1,501.7	$1,502.7	$1,616.6	$1,652.1	$1,680.5
Non-auto GRF Baseline	$8,707.0	$9,071.7	$9,183.0	$9,422.6	$9,951.5	$10,289.5

Under current law, the state sales and use tax on retail sales and selected services is levied at a rate of 5.75 percent. From 1981 through 2003 the sales and use tax was levied at a rate of 5.0 percent. In fiscal years 2004 and 2005, the sales and use tax rate was temporarily increased from 5.0 percent to 6.0, before it was lowered to a rate of 5.5 percent beginning in fiscal year 2006. The state rate was last changed in September 2013, when it was set at the current 5.75 percent.

Revenue Estimates and Methodology

Beginning in January 2008, deposits into the Local Government Fund and the Public Library Fund (PLF) were based on a designated percentage of total GRF tax receipts. The accounting mechanism for crediting funds to the PLF is to take half of the total calculated PLF deposits as a subtraction from non-auto sales tax collections, while the other half is subtracted from kilowatt hour tax collections. Thus, GRF non-auto sales tax revenues are slightly less than total collections, since part of non-auto collections are credited to the PLF.

Table B-6: GRF Baseline Auto and Non-Auto Sales Tax Revenues
(dollars in millions)

	Actual			Estimate	Forecast	
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Auto-GRF	$1,440.5	$1,501.7	$1,502.7	$1,616.6	$1,652.1	$1,680.5
Non-Auto GRF	$8,707.6	$9,071.7	$9,183.0	$9,422.6	$9,951.5	$10,289.5
Total GRF Sales Tax	**$10,148.2**	**$10,573.4**	**$10,685.8**	**$11,039.2**	**$11,603.6**	**$11,970.0**
Annual Growth Rate (total)	**-4.4%**	**4.2%**	**1.1%**	**3.3%**	**5.1%**	**3.2%**

Revenue Estimates and Methodology

Non-Auto Sales and Use Tax

The non-auto sales and use tax forecast is the result of the output of an econometric model of the sales tax base, with several "post-model" adjustments made to derive the final forecast.

Each biennium, OBM and the Department of Taxation create a series of non-auto sales tax models. IHSM and Moody's Analytics are the two primary providers of the data for the economic variables used in preparing forecasts. The models employ several different statistical techniques with selected combinations of independent variables in the equations and rely on separate sets of forecasted values for those independent variables (emanating from IHSM and Moody's Analytics). The model results are then evaluated, and the model specification judged to be the most robust and predictive of the dynamic economic forces at play is chosen to produce the revenue forecast. As has been the case for the last few biennia, the IHSM baseline forecast was chosen as the primary source of independent variables used in the non-auto sales tax forecast model.

Occasionally, an average of several models has been used to produce the revenue forecast but for the FY 2022-2023 biennium, one regression equation was chosen. This equation was selected both for generating estimated values that fit more closely with actual historical data, and for relying heavily on wage and salary income, historically a key variable in forecasting non-auto sales tax revenues. Another key variable in the equation chosen is the Ohio employment to population ratio, which is meant to capture Ohio employment dynamics outside of wage income alone. Finally, a variable that considers the relative share of goods purchases to total personal consumption expenditures was used. Several post-model adjustments are layered onto the model output.

One of the important adjustments made to the non-auto sales tax outside the regression model is to subtract an estimate of motor vehicle leasing revenue from the dependent variable, run the regression model, and then add that estimated revenue into the regression output. In this way, the regression model estimates true non-auto revenue, based on variables thought to impact non-auto purchasing decisions, and is not affected by auto dealer incentives that drive lease or purchase decisions in different directions in different years.

Other adjustments entail fiscally significant enacted tax policy changes. During the current biennium revenues were realized from the imposition of a sales tax collection requirement on remote sellers as allowed by the U.S. Supreme Court's Wayfair v South Dakota decision rendered in 2018. The decision permitted states to require sellers with substantial in-state economic presence (or "nexus") to collect sales tax on sales to customers located within the state. Accordingly, the current biennial budget contained provisions requiring out-of-state sellers to collect Ohio sales tax on taxable sales made to Ohio customers, and specifically requiring "marketplace facilitators" (third-party online marketplaces) to collect sales tax on transactions made on their platforms. Collections from marketplace facilitators (MPFs) commenced in October 2019. In fiscal year 2020, $248 million in non-auto sales tax revenue was collected from MPFs (representing 9 months of revenue); OBM estimates such collections will reach $375 million in fiscal year 2021. The FY 2022-2023 non-auto forecasts also build in projections of revenue from these sellers.

Another major change in non-auto sales tax revenue took effect in fiscal year 2021, although this change constituted a revenue reduction. A federal law change compelled the termination of sales tax on internet access services. Ohio was among seven states whose authority to collect such taxes had been extended over the years after the enactment of the federal Internet Tax Freedom Act of 1998 (ITFA); with this Act, all states - except the seven that had imposed a tax on these activities prior to ITFA - were not permitted to impose a tax on internet access services. Subsequent federal legislation finally repealed the "grandfather clause" provided to these states, eliminating their ability to impose sales tax on these services beginning in July 2020. This change was estimated to reduce Ohio sales tax revenue by $172 million in fiscal year 2021. The FY 2022-2023 revenue estimates were adjusted to account for this law change.

Figure B-12 displays All Funds and GRF non-auto sales tax revenues over the FY 2018-2023 period, with the difference between the two sets of figures attributable to non-auto sales tax revenues credited to the Public Library Fund. Table B-7 shows revenue amounts with annual growth rates.

Figure B-12: GRF Non-Auto GRF and All Funds Sales Tax Revenues
(dollars in millions)

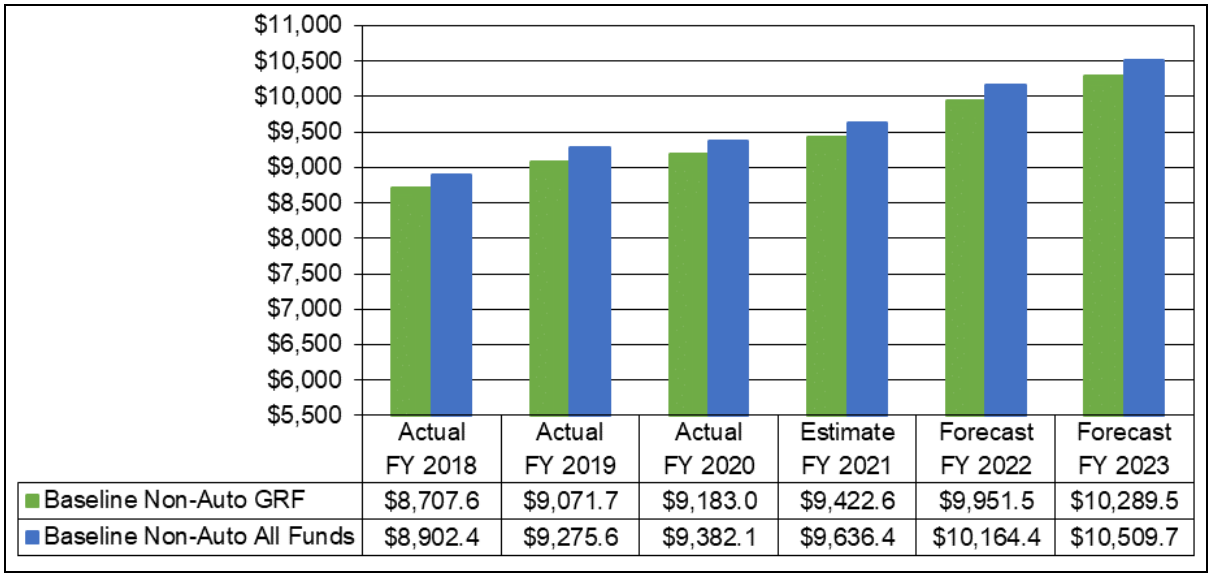


Table B-7: Non-Auto Sales Tax GRF Revenues
(dollars in millions)

	Actual			Estimate	Forecast	
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Actual/Estimated Baseline Revenue	$8,707.6	$9,071.7	$9,183.0	$9,422.6	$9,951.5	$10,289.5
Baseline Annual Growth Rate	-5.6%	4.2%	1.2%	2.6%	5.6%	3.4%

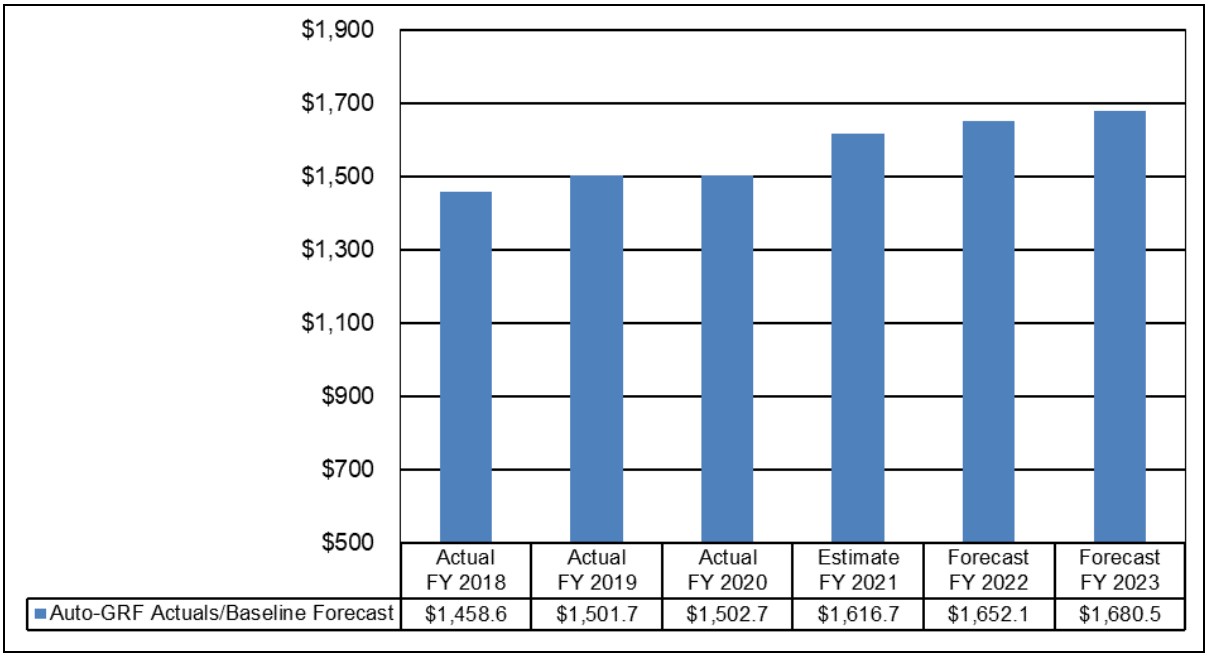
Revenue Estimates and Methodology

Auto Sales Tax

The auto sales tax forecast is based on an econometric model which performs a conditional least squares regression of the auto sales tax base against two variables: Ohio wage data used as a measurement of disposable income, and a variable pertaining to leased cars to remove such transactions data (these transactions are included in non-auto sales tax). For the three prior biennia, the Department of Taxation and OBM have used a regression equation with these two variables for estimating the auto sales tax.

Although recovering, the number of new motor vehicle units sold remain down from last year at the time of this publication. Even though auto sales tax declined by historic amounts in April and May, revenues have bounced back ever since, a function of strong growth in used vehicle sales (caused by increases in units sold and price growth) and increasing average prices for new vehicles. Even with conservative expectations on the number of new vehicle units sold, the FY 2022-2023 revenue estimates show continuing growth largely caused by forecasted growth in aggregate wages (see Figure B-13).

Figure B-13: Non-Auto Sales Tax GRF Revenues
(dollars in millions)



	Actual FY 2018	Actual FY 2019	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
Auto-GRF Actuals/Baseline Forecast	$1,458.6	$1,501.7	$1,502.7	$1,616.7	$1,652.1	$1,680.5

Personal Income Tax

The Ohio income tax on individuals and estates took effect in 1972, with an income tax on trusts enacted in 2002. There are currently five income brackets with progressive marginal tax rates ranging from 2.850 percent to 4.797 percent. Ohio taxable income is federal adjusted gross income (federal taxable income for estates and trusts), with certain adjustments as well as an exemption for filers and their dependents. Graduated tax rates are applied to this income base to arrive at tax liability before credits. Ohio law provides a variety of nonrefundable tax credits and several refundable tax credits; the taxpayer subtracts appropriate tax credits to derive final tax liability. Individual taxpayers whose taxable income is less than or equal to $22,150 (this is the amount for 2020; it increases annually through an inflation adjustment) are exempt from the tax.

Effective in taxable year 2013, a deduction against business income became available to taxpayers. In taxable years 2013 and 2014, the deduction equaled 50 percent of taxable business income, not to exceed $125,000. In taxable year 2015, the deduction was increased to 75 percent of taxable income, not to exceed $250,000. Finally, in taxable year 2016 the deduction became the lesser of taxable business income or $250,000.

Following the implementation of the new deduction for business income, beginning in taxable year 2015, Ohio's individual income tax comprises two different sets of tax rates, with one set of tax rates applied to taxable non-business income and another tax rate structure applied to taxable business income. The multi-bracket Ohio tax rate structure referred to above applies to non-business income. Since taxable year 2016, taxable business income is taxed at a flat rate of 3.0 percent.

Table B-8 provides the total personal income tax liability on business and nonbusiness income, followed by total tax credits and tax liability after such credits. These figures emanate from tax return data for taxable year 2018 compiled and reported by the Department of Taxation.

Table B-8: Reported Business and Nonbusiness Personal Income Tax Liability, Tax Credits, and Liability After Tax Credits
Taxable Year 2018
(dollars in millions)

	Tax on Nonbusiness Income	Tax on Business Income	Total
Tax Before Credits	$12,784	$1,824	$14,608
Resident/Nonresident Tax Credits (a)	-	-	-$5,720
All Other Nonrefundable Tax Credits	-	-	-$720
Total Nonrefundable Tax Credits (b)	-	-	-$6,440
Tax After Nonrefundable Tax Credits	-	-	$8,404
Refundable Tax Credits (c)	-	-	-$235
Tax After All Tax Credits	-	-	$8,169

Table does not include trust or estate income tax returns and does not include tax remitted by qualifying pass-through entities.

(a) States may only tax such portion of income that is earned or received in the state. Because the starting point for the computation of Ohio taxable income is federal adjusted gross income (i.e., income earned everywhere before special deductions and exemptions, as defined by the U.S. Internal Revenue Code), Ohio uses resident and nonresident tax credits (as appropriate) as the means of ensuring that income not earned or received in this state is not taxed by this state. Accordingly, the "Tax Before Credits" figures provided in this table are essentially theoretical and could not be realized since they would not be constitutionally compliant.

(b) Credit amounts are as claimed on each individual tax return before application to liability. For some taxpayers, the amount of earned credits exceeds their pre-credit tax liability. Therefore, the total shown here exceeds the amount necessary to reduce each taxpayer's tax liability exactly to zero.

(c) Includes historic preservation, job creation, motion picture production, financial institutions and venture capital refundable tax credits. Although they may be fully or partially refunded once annual tax liability is computed, the various forms of tax payment made prior to the filing of the annual tax return - i.e., withholding, estimated payments and prior-year overpayment carryforwards - are not considered "refundable tax credits" for purposes of this table.

The baseline personal income tax revenue estimates were derived by dividing this tax source into two different components: employer withholding and taxes derived from non-wage income. The collections for employer withholding in fiscal years 2021 through 2023 were estimated by employing regression analysis, using Ohio wage and salary income as the main independent

variable. The employer withholding regression equation also uses a proxy variable for pension income against which there is personal income tax withheld.

The estimates for the non-wage components reflect historical IRS data for Ohio residents for various non-wage income amounts (capital gains, dividends, rents and royalties, interest, etc.) projected forward using forecasts of those income amounts or proxies for those income amounts from IHSM and other sources.

Table B-9: Personal Income Tax GRF Revenues
(dollars in millions)

	Actual			Estimate	Forecast	
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Actual/Estimated Baseline Revenue	$8,411.0	$8,910.2	$7,881.3	$9,389.7	$9,175.5	$9,571.4
Baseline Annual Growth Rate	10.6%	5.9%	-11.5%	19.1%	-2.3%	4.3%

Figure B-14: Personal Income Tax All Funds and GRF Revenues
(dollars in millions)

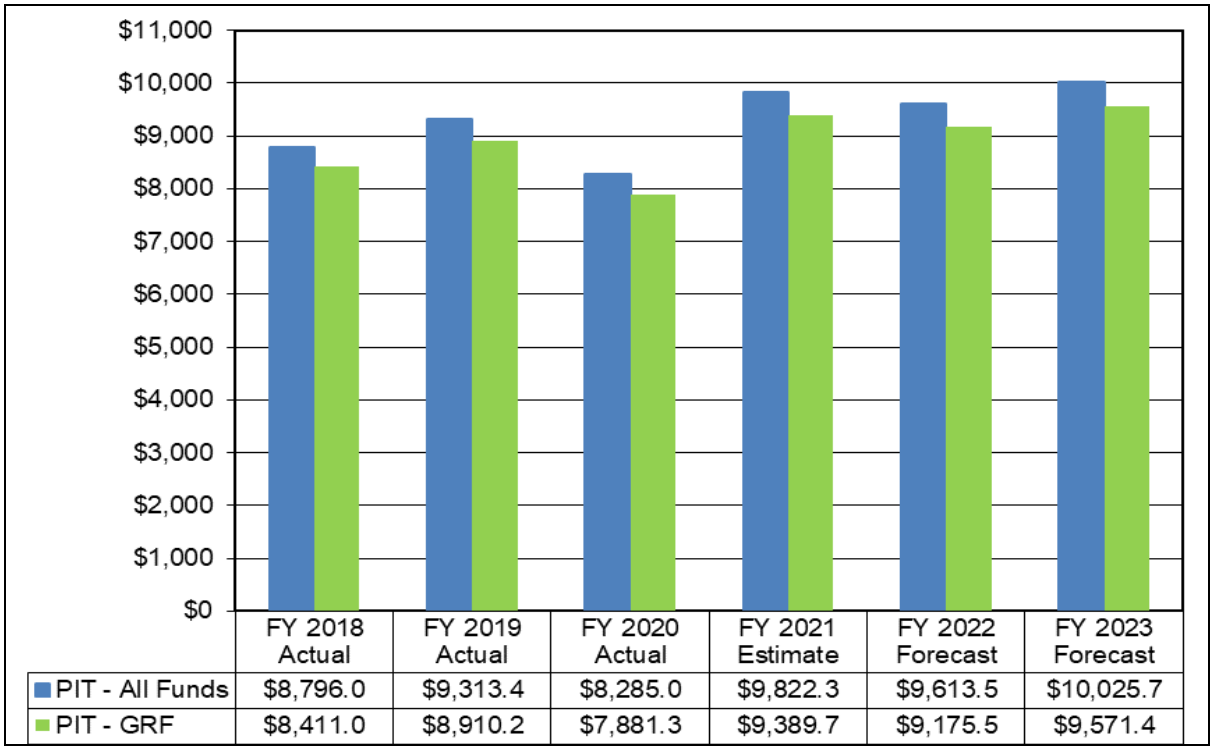


Table B-9 and Figure B-14 show the history and forecasts of GRF income tax collections. GRF income tax revenues displayed vibrant growth in FY 2018 and 2019, a function of growth in both wages and non-wage income during those years. A distinct downturn in revenue occurred in FY 2020, but the decline would have been much smaller if not for approximately $719 million in personal income tax annual return and first quarter estimated payments being postponed to July. If the payments had not been postponed, FY 2020 revenue would have decreased by 3.5 percent instead of the 11.5 percent declined actually experienced. In contrast, the very large 19.1 percent growth rate in FY 2021 reflects both the suppressed FY 2020 revenue caused by the payment postponement and the one-time increase in FY 2021 attributable to the postponement. If not for the postponement, estimated FY 2021 revenue growth would have been just 0.8 percent. OBM forecasts a 2.3 percent decline in baseline GRF revenue in FY 2022, and 4.3 percent growth in FY 2023. Once again, the payment postponement has an impact on year-over-year comparisons: if the postponement had not occurred, OBM estimates that FY 2022 revenue would increase by 5.8 percent over FY 2021.

Commercial Activity Tax (CAT)

The commercial activity tax (CAT), a tax imposed on doing business in Ohio, is levied upon taxable gross receipts sourced to Ohio from most business activities. The tax was enacted in House Bill 66 of the 126th General Assembly and was phased in over five years beginning in July 2005. The CAT applies to businesses with at least $150,000 in annual taxable gross receipts. Those companies subject to the CAT are taxed at $150 on their first $1.0 million in annual taxable gross receipts plus the CAT rate multiplied by their remaining taxable gross receipts above $1.0 million. Since fiscal year 2010, when the commercial activity tax was fully implemented, a tax rate of 0.26 percent has applied to all businesses subject to the tax on annual receipts in excess of $1.0 million.

Beginning in FY 2014, a change was made to the $150 minimum tax. The $1 million exclusion provides a significant tax benefit to companies with gross receipts in excess of $1 million: if all of the first $1 million in gross receipts were taxed at 0.26 percent, the tax owed would be $2,600, or $2,450 more than $150. Recognizing this, beginning in FY 2014 the General Assembly changed the minimum tax to phase out the benefit of the exclusion as taxable gross receipts increased. For taxpayers with gross receipts above $1 million, the minimum tax was increased as follows:

- $800 for filers with more than $1 million but less than or equal to $2 million taxable gross receipts in the previous calendar year;
- $2,100 for filers with more than $2 million but less than or equal to $4 million taxable gross receipts in the previous calendar year; and,
- $2,600 for filers with more than $4 million taxable gross receipts in the previous calendar year.

As the CAT was phased in, the law enacted in H.B. 66 phased out the tangible personal property tax. The tax on general business and railroad property was phased-out over four tax years (2006-2009), and the tax on telephone and telecommunications property was phased out over five tax years (2007-2011). To provide transitional relief for the local tax losses caused by the phase-out of the tangible personal property tax, from fiscal years 2007 through 2011, the GRF received no CAT revenue and the revenue was instead deposited into two separate tangible personal property tax replacement funds to provide guaranteed payments to school districts and local governments.

The disposition of CAT revenues has been changed three times since FY 2011, as shown in Table B-10. Under current law, of total CAT revenue (after an earmarked 0.85 percent that goes to the Department of Taxation for administrative expenses), the GRF receives 85.0 percent, the school district replacement fund receives 13.0 percent of CAT revenues, and the local government replacement fund receives 2.0 percent of CAT revenues.

The replacement payment obligations to schools and local governments have declined over time as school districts and local governments have received gradually decreasing payments based on formulae that reduce their payments in annual increments based on their budgetary reliance on those payments. This decline in payments to schools and local governments is the reason that the law has been changed to reduce the percentage shares provided to the replacement funds, while increasing the share going to the GRF.

Table B-10: Allocation of CAT Revenues After Department of Taxation Administrative Expenses, FY 2012 – Present

	HB 153		HB 59		HB 64		HB 49
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018 and thereafter
GRF	25%	50%	50%	50%	75%	75%	85%
School district replacement fund	52.5%	35%	35%	35%	20%	20%	13%
Local govt replacement fund	22.5%	15%	15%	15%	5%	5%	2%

Revenue Estimates and Methodology

The baseline CAT forecast is a multi-stage process that begins with forecasting taxable gross receipts (TGR). TGR is forecasted based on the historical correlation between TGR and gross output by industry, with forecasts of gross output (the main independent variable in the regression equation) supplied by IHSM. Rather than just using the total U.S. gross output, OBM uses gross output only from certain industries, because the CAT tax base excludes many industry groups such as finance and utilities, since those industry groups are subject to alternative taxes. In addition, the Department of Taxation has calculated an adjusted TGR (the dependent variable) by taking out historical amounts for taxpayers who were made subject to the petroleum activity tax instead of the CAT in FY 2015.

Once TGR has been estimated, there are several additional steps required to derive a CAT forecast. These are as follows:

(i) Estimate the exclusion amount to derive taxable gross receipts after exclusion;

(ii) Multiply by the 0.26 percent tax rate to derive tax before credits, other than the minimum tax;

(iii) Estimate the minimum tax using trend analysis;

(iv) Add the estimates of steps (ii) and (iii) to derive a total estimated tax before credits;

(v) Estimate the tax credits and subtract them from the results of step (iv) to derive total CAT revenues;

(vi) Multiply the result of (v) by 0.85 percent to estimate Taxation's share of revenue for administrative expenses;

(vii) Subtract the results of step (vi) from step (v) to estimate the amounts to be distributed to the GRF and the two property tax replacement funds.

(viii) Multiply the result of (vii) by the appropriate percentages to obtain estimated GRF revenue and the revenue to the school district property tax replacement fund and the local government property tax replacement fund.

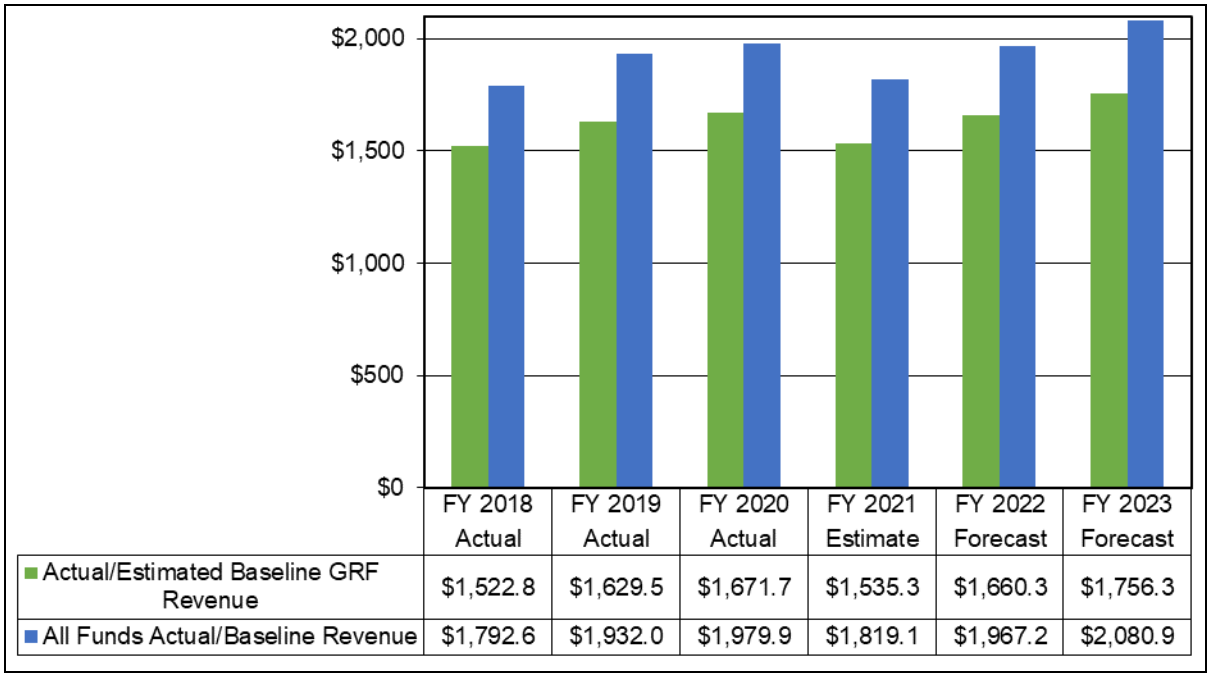
As shown in Table B-11 and Figure B-15, GRF CAT revenue amounted to $1.52 billion in FY 2018 and is estimated to reach an estimated $1.54 billion in FY 2021, representing a 0.8 percent increase over these years. FY 2021 explains that modest three-year growth result: OBM estimates FY 2021 revenue will be 8.2 percent below FY 2020. The decline in FY 2021 reflects both the historic decline in economic activity that occurred in the second quarter of calendar year 2020 (impacting first-quarter FY 2021 revenue) and anticipated levels of taxable gross receipts during the remainder of the fiscal year as the economy continues its recovery. However, revenue growth is expected in both years of the upcoming biennium: baseline year-over-year growth is projected to be 8.1 percent for FY 2022 and 5.8 percent for FY 2023.

The Executive Budget proposes an expansion of the job creation tax credit (JCTC), allowing smaller businesses not currently able to qualify for the existing tax credit program to undertake an agreement with the Tax Credit Authority. Currently, only those projects involving at least ten new employees qualify for the JCTC. Under the proposal, projects with less than ten new employees could qualify for the JCTC. Up to $25.0 million in tax credits could be claimed per year under the expanded criteria targeted to smaller businesses. FY 2023 is expected to be the first year with a potential revenue impact from this proposal.

Table B-11: CAT GRF Revenues, Baseline and After Policy Change
(dollars in millions)

	Actual			Estimate	Forecast	
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
GRF Actual/Estimated Baseline Revenue	**$1,522.8**	**$1,629.5**	**$1,671.7**	**$1,535.3**	**$1,660.3**	**$1,756.3**
Baseline Annual Growth Rate	17.0%	7.0%	2.6%	-8.2%	8.1%	5.8%
Policy Proposal						
Small business job creation tax credit					$0.0	-$10.0
GRF Forecast Revenue after Policy Change					$1,660.3	$1,746.3
Annual Growth Rate after Policy Change					8.1%	5.2%

Figure B-15: CAT All Funds and GRF Revenues
(dollars in millions)



Revenue Estimates and Methodology

Cigarette and Other Tobacco Products Tax

A tax is levied upon the sale, use, consumption, or storage for consumption of cigarettes in Ohio and on the receipt or import of other tobacco products for resale in Ohio. The excise tax on cigarettes has been levied since 1931. The excise tax on other tobacco products (OTP) was enacted effective February 1993 and applies to cigars, chewing tobacco, snuff, smoking tobacco, and other defined tobacco products. OTP is currently taxed at 17 percent of wholesale price. There are two exceptions: "little cigars" are taxed at 37 percent of wholesale price (with a per-cigar cap that is annually indexed); and vapor products, which became newly taxable in October 2019, are taxed at one cent per one-tenth milliliter in liquid form or one cent per one-tenth gram in non-liquid form.

Forecasting this revenue source has traditionally relied on observed trends in both cigarette and OTP consumption, based on tax collection data. That trend has been steadily downward, although the emergence of OTP products has tended to marginally soften that decline. The pandemic has upended the traditional approach: during the March-December 2020 period, this revenue source grew by nearly five percent, a result inconsistent with the decades-long national trend away from the consumption of nicotine products.

The recent growth in revenue is probably not sustainable as the pandemic-induced changes in conditions – e.g., higher joblessness, more time spent at home – that are likely driving the recent revenue uptake are anticipated to begin to unwind during calendar year 2021. However, the slope of the consumption path remains highly uncertain during the forecasting time horizon. With this fluid and very unpredictable nature of consumption behavior in mind, OBM estimates that revenue will grow by nearly $15 million (1.6 percent) in FY 2021. Thereafter, much of the recent upward trend in consumption behavior is expected to reverse but it could take several years to revert to the earlier, longer-term trend. Revenues are forecasted to decline by 1.9 percent in FY 2022 (with many consumers rapidly reverting to pre-pandemic consumption levels), while FY 2023 revenues are forecasted to decline by 1.3 percent. Table B-12 presents the baseline forecast.

Table B-12: Cigarette and OTP Tax GRF Revenues
(dollars in millions)

	Actual			Estimate	Forecast	
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Actual/Estimated Baseline Revenue	$939.8	$918.2	$913.0	$927.8	$910.4	$898.5
Baseline Annual Growth Rate	-4.2%	-2.3%	-0.6%	1.6%	-1.9%	-1.3%

Kilowatt-Hour Tax

The kilowatt-hour tax was enacted in 2001 as part of a broader policy change to deregulate electric utilities. Effective May 2001, this tax replaced the public utility excise tax on electric and rural electric companies. The kilowatt-hour tax is levied on electric distribution companies with end-users in Ohio; collection is based on the end-user's consumption of electricity, as measured in kilowatt-hours (kWh). A three-tiered marginal tax rate structure is used based on kWh consumption. For certain large consumers of electricity (called "self-assessors"), prior to January 1, 2011, the tax was based partially on consumption (volume) and partially on sales (dollar amount). Beginning in 2011, self-assessors pay 0.257 cents per kWh on the first 500 million kWh of annual consumption and 0.1832 cents per kWh on all consumption above 500 million kWh.

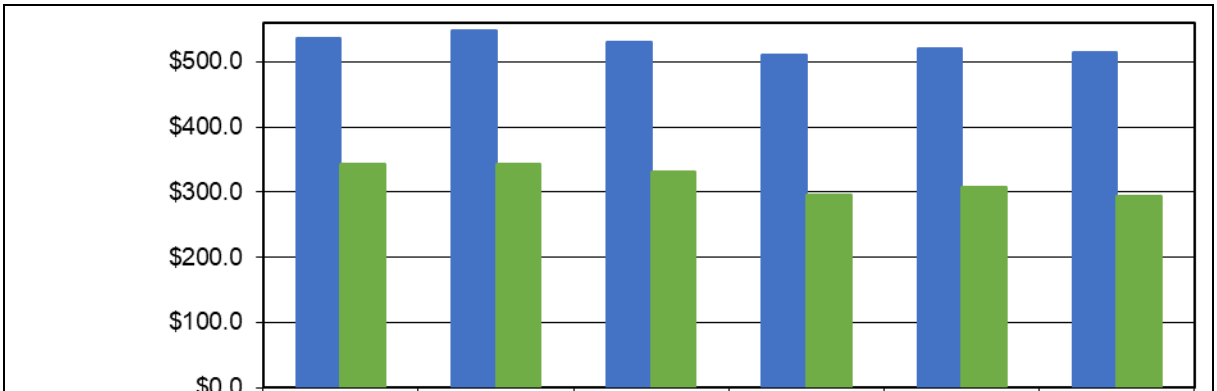
Between January 2008 and June 2011, the GRF was credited with 63 percent of tax receipts for this source, whereas the school district and local government property tax replacement funds received a combined 37 percent to compensate for local tax revenue losses due to the reduced tangible personal property tax assessment rates for electric companies. In 2012, House Bill 153 of the 129th General Assembly changed the distribution of kilowatt-hour tax receipts, reducing to 12 percent the combined amount reserved for school districts (9 percent) and local governments (3 percent), with the remainder being deposited into the GRF. Finally, House Bill 64 of the 131st General Assembly changed the allocation again so that beginning in FY 2016 all kilowatt hour receipts go to the GRF and the Public Library Fund (PLF) and the property tax replacement payments to school districts and local governments are made only from commercial activity tax collections.

Table B-13 and Figure B-16 show the all-funds and GRF history and forecast for fiscal years 2018 through 2023 for kilowatt-hour tax revenue. Beginning with FY 2016, the only difference between all funds and GRF kilowatt-hour tax revenues is that one-half of the distribution owed to the PLF is subtracted from kilowatt-hour tax receipts.

Table B-13: Kilowatt-Hour Tax All Funds and GRF-Only Revenues
(dollars in millions)

	Actual			Estimate	Forecast	
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
All Funds Actual/Estimated Revenue	**$537.2**	**$547.5**	**$530.8**	**$510.0**	**$520.0**	**$515.0**
Public Library Fund Distribution	($194.8)	($203.9)	($199.0)	($213.8)	($212.9)	($220.2)
GRF Actual/Estimated Revenue	**$342.3**	**$343.6**	**$331.8**	**$296.2**	**$307.1**	**$294.8**
Annual GRF Growth Rate	-1.5%	0.4%	-3.4%	-10.7%	3.7%	-4.0%

Figure B-16: Kilowatt-Hour Tax All Funds and GRF Revenues
(dollars in millions)



	Actual FY 2018	Actual FY 2019	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
KWH Tax-All Funds	$537.2	$547.5	$530.8	$510.0	$520.0	$515.0
KWH Tax - GRF	$342.4	$343.6	$331.8	$296.2	$307.1	$294.8

All Funds revenue in FY 2021 through December has declined by 1.8 percent from the prior year, with GRF revenue declining by a more dramatic 7.8 percent. With the winter heating season approaching and the pandemic expected to impact demand in a negative manner in the first quarter of calendar year 2021, OBM expects that the remainder of the year could display a larger year-over-year decline than observed during the first six months of FY 2021. Accordingly, total kilowatt-hour tax revenue is estimated to decline by nearly $20 million (3.9 percent) in FY 2021; however, because of growth in PLF deposits, GRF revenue is estimated by decline by a more significant 10.7 percent. Somewhat improved performance is anticipated in FY 2022, with total revenue growth forecasted to be 2.0 percent and GRF revenue growth estimated to be 3.7 percent. Another mild decline could occur in FY 2023, and the revenue forecast shows estimated total revenue declining by 1.0 percent and GRF revenue declining by 4.0 percent.

Insurance Taxes

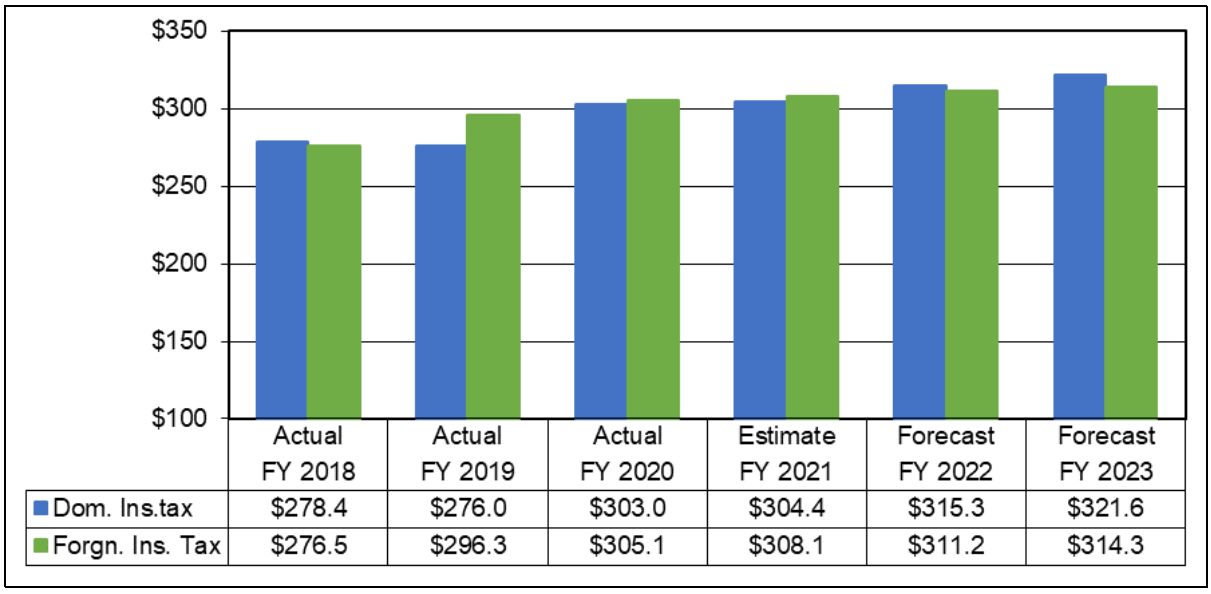
Under Ohio law, insurance companies fall into two categories: domestic and foreign. Domestic insurance companies are organized under Ohio law while foreign insurance companies are not. Ohio has two separate insurance taxes: one levied against domestic insurers and one levied against foreign insurers. Premiums are taxed at a rate of 1.4 percent, except for health insurance premiums, which are taxed at a rate of 1.0 percent. Additionally, foreign insurance companies are subject to a retaliatory tax, which is explained in more detail below. House Bill 1 of the 128th General Assembly also authorized the inclusion of the Medicaid managed care plans in the Health Insuring Corporation (HIC) tax base effective October 1, 2009.

Figure B-17 shows actual and estimated revenues from the foreign and domestic insurance taxes credited to the GRF for fiscal years 2018 through 2023. OBM has not been able to develop a satisfactory model with predictive variables to forecast these revenue sources. Accordingly, this budget again uses a basic forecasting method. That said, the reversal of the relative revenue performance of the two insurance taxes is an outcome of these forecasts and is displayed in the chart.

For the foreign insurance tax, the forecast assumes that FY 2021 revenue will be a modest one percent above the level achieved in FY 2020. OBM forecasts this revenue source to continue to grow at one percent per year in FY 2022 and in FY 2023. This cautious forecast stems from the expectation that the growth rates of the last several years will not continue and assumes the combination of pre-credit tax liability and tax credit usage will yield slight net increases in revenue during the next biennium.

For the domestic insurance tax, the revenue forecast is a similar challenge. To illustrate, revenue declined by 0.9 percent in FY 2019 but grew by 9.8 percent in FY 2020. The forecast assumes that annual growth over the FY 2021 through FY 2023 timeframe will average two percent per year but makes idiosyncratic growth assumptions for each particular year: 0.4 percent growth is assumed in FY 2021, followed by 3.6 percent growth in FY 2022, and 2.0 percent growth in FY 2023.

Figure B-17: Insurance Tax GRF Revenues
(dollars in millions)

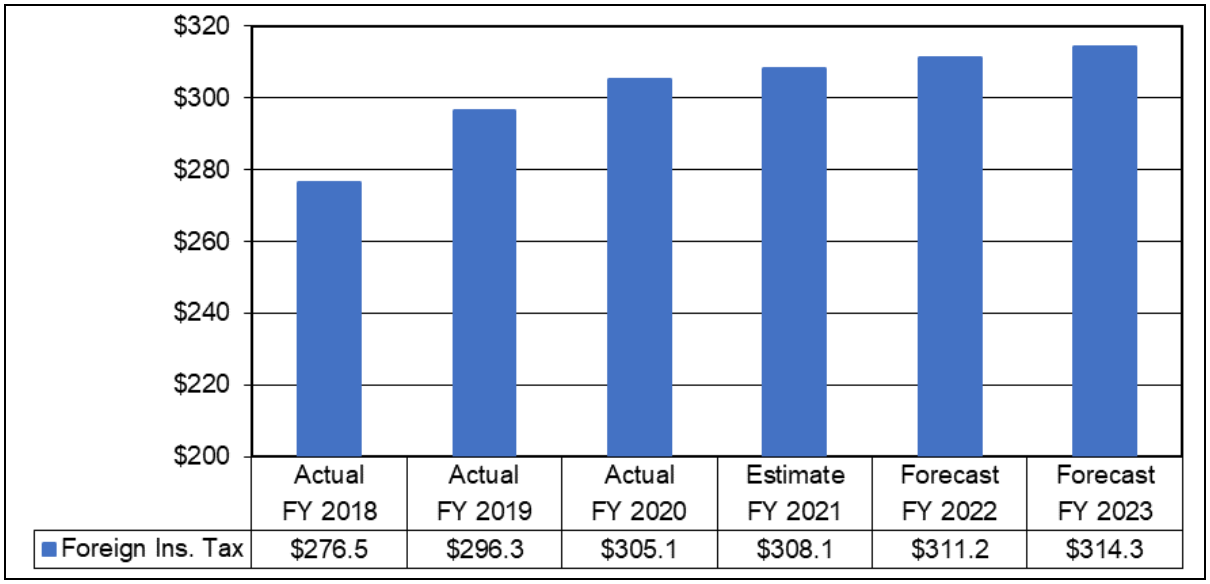


	Actual FY 2018	Actual FY 2019	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
Dom. Ins.tax	$278.4	$276.0	$303.0	$304.4	$315.3	$321.6
Forgn. Ins. Tax	$276.5	$296.3	$305.1	$308.1	$311.2	$314.3

Foreign Insurance Tax

The foreign insurance tax applies to insurance companies that are not organized under Ohio law, but sell insurance policies in Ohio. The tax is based on the gross amount of premiums written for Ohio risks during the preceding calendar year, less specified deductions. Additionally, if the state in which the insurance company is organized imposes a higher tax liability on premiums than Ohio imposes (that is, the other state imposes on Ohio-organized insurance companies a higher tax than Ohio's tax structure would impose on insurance firms organized in that state), the company must also pay an Ohio retaliatory tax equal to the difference between total tax under Ohio law and total tax under law in its state of origin. (Ohio is not unique in levying a retaliatory tax: every state with an insurance premiums tax has such a provision.) An increase in tax credits explains much of the recent decline in revenue. Credit volume is not likely to recede over the next several years, and OBM deems it appropriate to expect little movement in overall foreign insurance tax revenue through the next biennium. The estimates for fiscal years 2021 through 2023, as well as recent history, are presented in Figure B-18.

Figure B-18: Foreign Insurance Tax GRF Revenues
(dollars in millions)



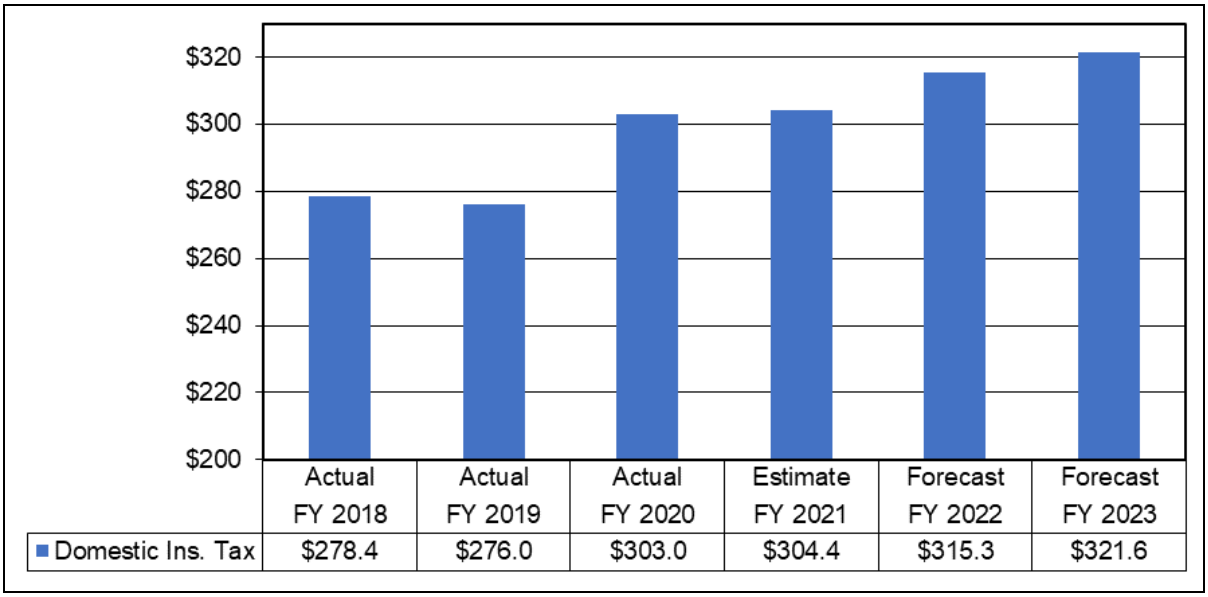
	Actual FY 2018	Actual FY 2019	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
Foreign Ins. Tax	$276.5	$296.3	$305.1	$308.1	$311.2	$314.3

Revenue Estimates and Methodology

Domestic Insurance Tax

The domestic insurance tax applies to insurance companies that are organized under Ohio law. The tax applies to the gross amount of premiums written to cover risks in Ohio, less specific deductions. Figure B-19 presents recent revenue history and estimated revenue for fiscal years 2021-2023.

Figure B-19: Domestic Insurance Tax GRF Revenues
(dollars in millions)



	Actual FY 2018	Actual FY 2019	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
Domestic Ins. Tax	$278.4	$276.0	$303.0	$304.4	$315.3	$321.6

Financial Institutions Tax

Beginning in fiscal year 2014, the financial institutions tax (FIT) replaced previously existing taxes on financial institutions (corporation franchise tax and dealers in intangibles tax) with a new business privilege tax on financial institutions. The GRF receives all revenue collected from this tax.

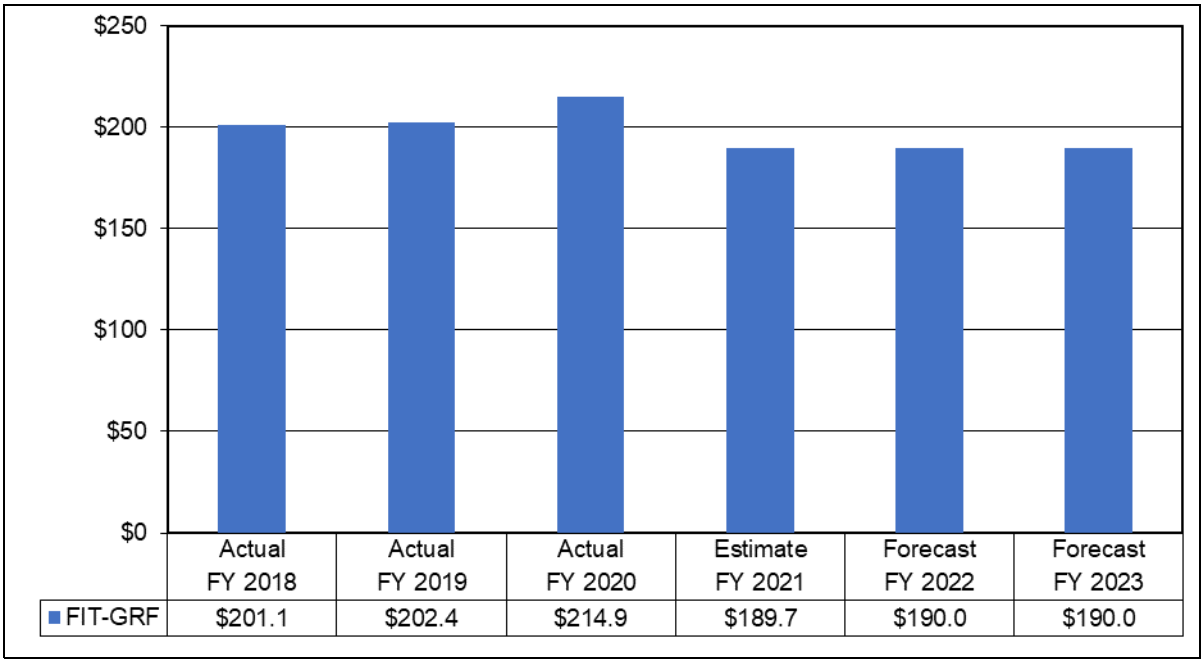
The financial institutions tax is levied on the "total Ohio equity capital" of financial institutions, which is the portion of the financial institution's total equity capital that is apportioned to Ohio. Apportionment reflects the share of the taxpayer's gross receipts that can be assigned to activity emanating from Ohio. Three marginal tax rates are applied: 0.8 percent on the first $200 million of total equity capital, 0.4 percent on the amount of total equity capital greater than $200 million but less than or equal to $1.3 billion, and 0.25 percent on the amount of total Ohio equity capital in excess of $1.3 billion. If the taxpayer's liability does not exceed $1,000, a minimum tax of $1,000 is applied.

Ohio law allows a variety of credits to be claimed against the tax, including the job creation credit, job retention credit, venture capital loan loss credit, historic building rehabilitation credit, new markets credit, motion picture promotion credit, and the research and development credit. These credits reduce the amount of revenues paid into the GRF.

Figure B-20 provides the historical performance of the tax for fiscal years 2018-2020 as well as projections of GRF receipts from the financial institutions tax for fiscal years 2021 through 2023.

Forecasting the FIT poses a challenge due to the abbreviated history for the tax and because the tax credits are consequential share of pre-credit tax liability and can vary considerably from year to year. The FY 2021 estimate assumes a 11.7 percent increase relative to FY 2020. However, given the somewhat volatile pattern of FIT collections and expectations of continued tax credit growth, the forecasts for FY 2022-2023 reflect the somewhat modest assumption that revenues will hold at $190 million per year.

Figure B-20: Financial Institutions Tax GRF Revenues
(dollars in millions)



	Actual FY 2018	Actual FY 2019	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
FIT-GRF	$201.1	$202.4	$214.9	$189.7	$190.0	$190.0

Public Utility Excise Tax

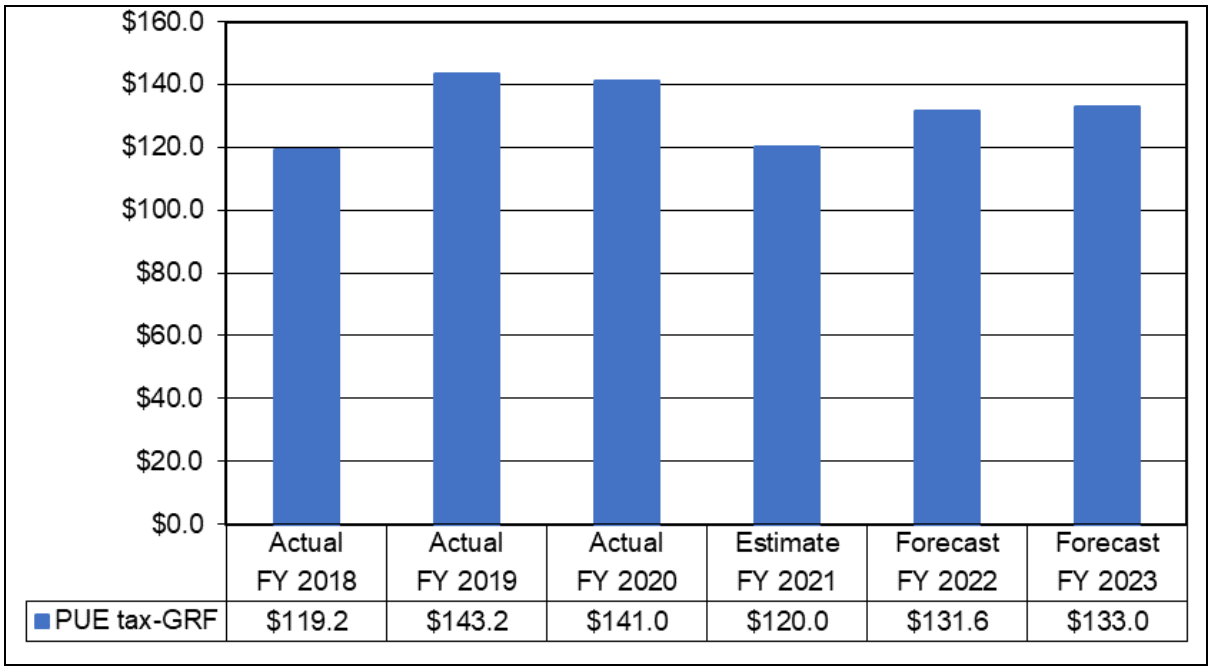
The public utility excise tax has been levied on most public utility companies since 1894. The tax is based on the gross receipts of public utility companies. The several classes of utilities subject to the tax are those that had not been subject to the now-repealed corporation franchise tax. In addition, services provided by public excise taxpayers are excluded from the sales and use tax, and tangible personal property purchased by public utilities and used for qualifying purposes is exempt from sales and use tax. The majority of the public utility excise tax is collected from natural gas utilities (but not from natural gas marketers, whose customers pay the sales tax). Smaller contributors to this tax are pipeline, heating, waterworks, and water transportation companies.

There have been two major changes to this tax since 2001. Amended Substitute Senate Bill 3 of the 123rd General Assembly replaced the excise tax on electric and rural electric companies with the kilowatt-hour tax, which became effective May 1, 2001. Amended Substitute House Bill 95 of the 125th General Assembly removed the telephone companies from the public utility excise tax and instead subjected their receipts to the sales and use tax, beginning in tax year 2005.

In the past, OBM estimated the revenue from this tax source based on regression analysis related to natural gas, with adjustments for such variables as the percentage of customers using budget payment plans. However, beginning with the FY 2014-2015 budget, OBM moved to using trend analysis for the forecast, because natural gas prices continue to be volatile and hard to predict. In addition, collections for the public utility excise tax are still affected by the expansion of the natural gas choice program, where gas consumers can buy natural gas from competitive suppliers who are subject to the sales and use tax. The excise tax receipts from pipeline, heating, waterworks, and water transportation companies are relatively small and have been historically stable, although pipeline company tax receipts grew considerably beginning several years ago.

Since January 2008, all receipts from this tax source are credited to the GRF. Figure B-21 provides history and projections of GRF receipts from the public utility excise tax for fiscal years 2018 through 2023. Over the last several years, excise tax revenues have demonstrated successive growth rather than the usual up and down fluctuations driven by changes in demand and price. Based on results to-date, OBM estimates that FY 2021 revenue will decline by 14.9 percent, reaching $120 million. However, since that decline was in part attributable to one-time refunds, OBM projects that excise tax revenues will grow by nearly 10 percent in FY 2022 (reaching $131.6 million) and by a modest one percent in FY 2023 (totaling $133.0 million).

Figure B-21: Public Utility Excise Tax GRF Revenues
(dollars in millions)



	Actual FY 2018	Actual FY 2019	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
PUE tax-GRF	$119.2	$143.2	$141.0	$120.0	$131.6	$133.0

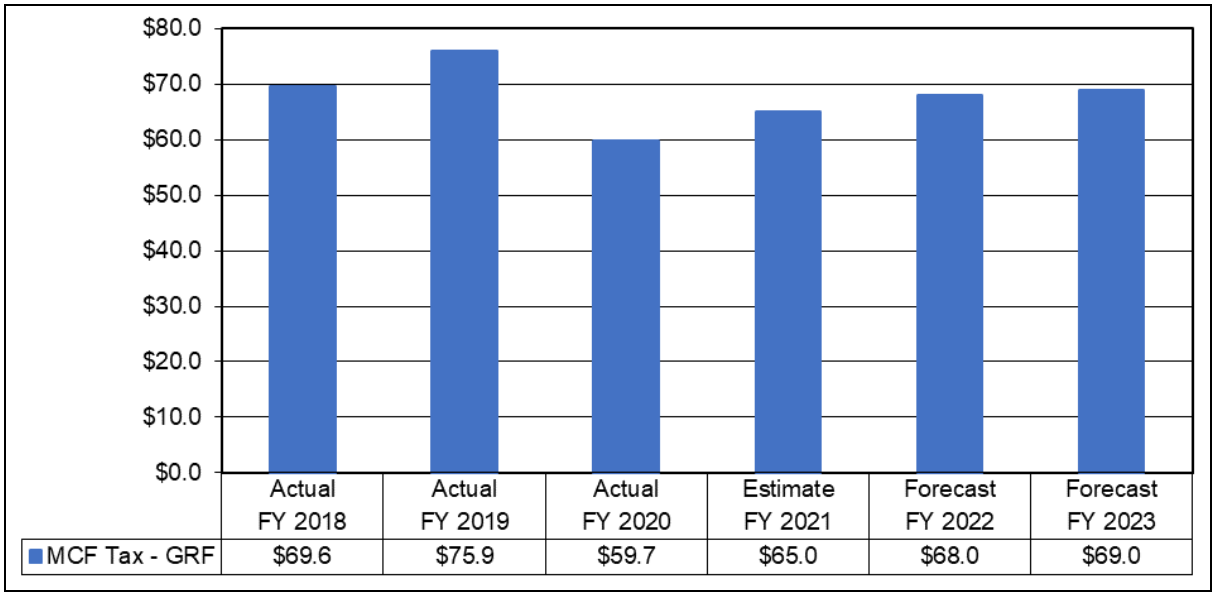
Natural Gas Distribution Tax (MCF Tax)

The natural gas distribution tax is levied on natural gas distribution companies based on volumes of end users' consumption, as measured in million cubic feet (MCF). Three marginal tax rates are applied: $0.1593 per MCF for the first 100 MCF consumed in a month; $0.0877 per MCF for usage between 101 and 2,000 MCF consumed in a month; and, $0.0411 for all consumption over 2,000 MCF in a month. Like the kilowatt-hour tax, the MCF tax is a product of energy sector deregulation, coming into existence in 2001 as part of a set of tax changes involving natural gas. Revenue from the tax was originally earmarked to replace the revenue lost by school districts and local governments when the assessment rate on the personal property of natural gas distribution companies was reduced from 88 percent to 25 percent.

Prior to fiscal year 2012, no MCF tax revenues went to the GRF: instead, 68.7 percent had been credited to the School District Property Tax Replacement Fund, and 31.3 percent had been credited to the Local Government Property Tax Replacement Fund. For fiscal year 2012 and thereafter, all revenue from the natural gas distribution tax is credited to the GRF.

MCF tax revenues can be volatile. A recitation of recent history illustrates its dynamic nature. For FY 2012-2013, revenue averaged $59.0 million per year. Revenues then spiked up to $76.1 million in FY 2014 and $74.7 million in FY 2015, spurred by heavy usage during cold winters. Revenues fell back to $60.7 million in FY 2016 and then steadily increased through FY 2019 before once again experiencing a large decline in FY 2020. Since winter weather and usage are inherently difficult to predict – and it is uncertain the degree by which consumption may be negatively impacted in FY 2021 as the pandemic crisis continues to unfold – OBM has assumed that for FY 2021-2023, revenues will modestly increase to $65.0 million in FY 2021, and then continue to marginally grow in both succeeding years. Figure B-22 provides the history and projections of GRF receipts from the natural gas consumption tax for fiscal years 2018 through 2023.

Figure B-22: Natural Gas Distribution Tax GRF Revenues
(dollars in millions)



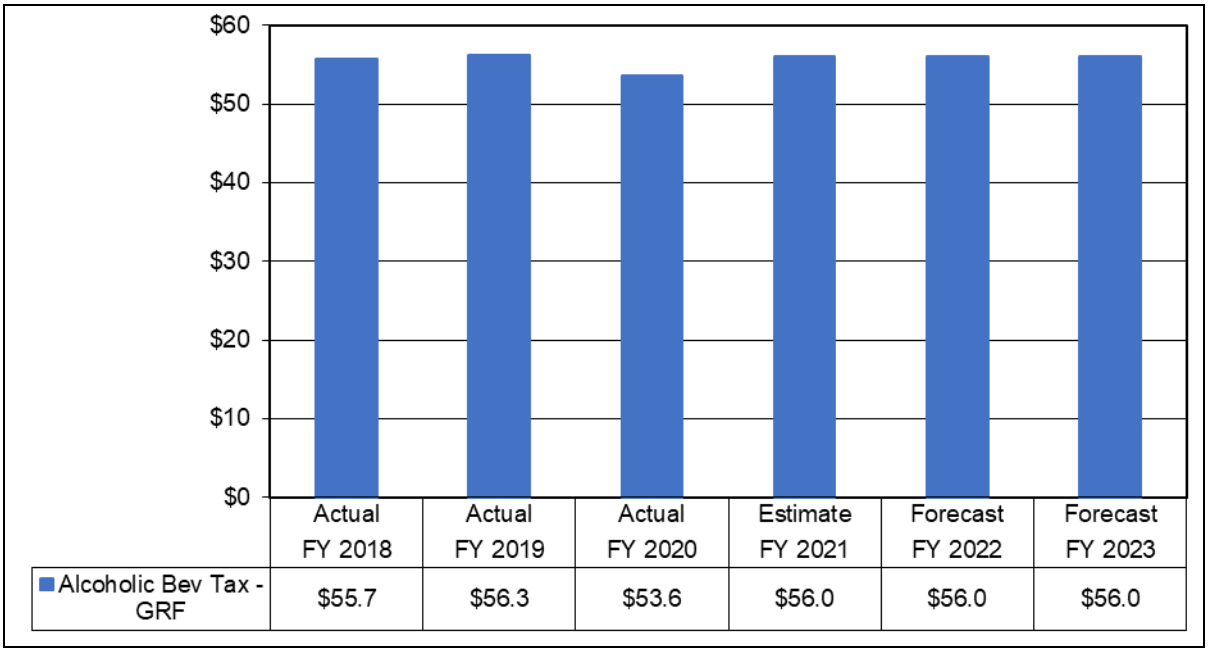
	Actual FY 2018	Actual FY 2019	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
MCF Tax - GRF	$69.6	$75.9	$59.7	$65.0	$68.0	$69.0

Revenue Estimates and Methodology

Alcoholic Beverage Taxes

The alcoholic beverage tax applies to sales of beer and malt beverages, wine, and mixed alcoholic beverages. The tax is based on a per-container rate depending on the type of beverage sold. All receipts are deposited into the GRF with the exception of 5.0 cents per gallon of wine sold, which is deposited in the Ohio Grape Industries Special Revenue Fund, and 1.0 percent of the tax, which is deposited in the Beverage Tax Administration Fund. Figure B-23 illustrates estimated receipts to the GRF from the alcoholic beverage tax for fiscal years 2018-2023. Average annual revenues from the tax for FY 2018 and 2019 were $56.0 million, followed by a moderate decline in FY 2020. Year-to-date FY 2021 revenue is running well over the prior year, so the forecast assumes 4.4 percent growth for the full year and assumes revenue will reach $56.0 million. The OBM baseline forecast for FY 2022-2023 is set at that same dollar amount for both years.

Figure B-23: Alcoholic Beverage Tax GRF Revenues
(dollars in millions)

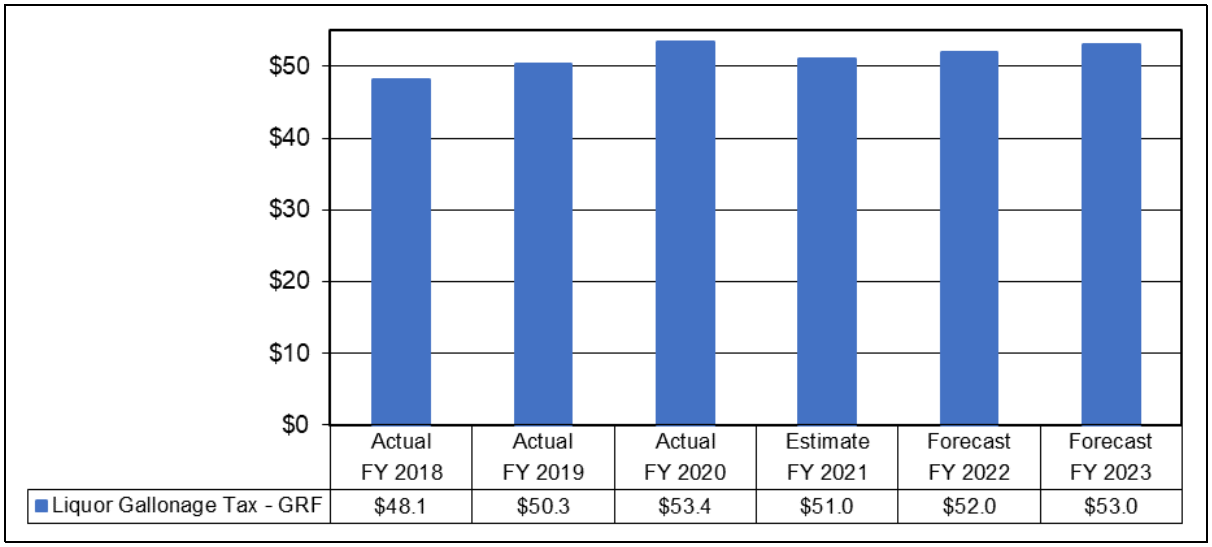


	Actual FY 2018	Actual FY 2019	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
Alcoholic Bev Tax - GRF	$55.7	$56.3	$53.6	$56.0	$56.0	$56.0

Liquor Gallonage Tax

The liquor gallonage tax is currently levied at the rate of $3.38 per gallon of spirituous liquor sold by the private company JobsOhio Beverage System. All tax revenues are deposited into the GRF. Although revenue from the tax has grown during the pandemic, OBM uses a conservative estimate for FY 2021 followed by modest growth through the FY 2022-2023 biennium. As detailed in Figure B-24, the baseline estimate assumes a 4.5 percent ($2.4 million) decline in FY 2021, followed by $1.0 million in annual incremental dollar growth in fiscal years 2022 and 2023.

Figure B-24: Liquor Gallonage Tax GRF Revenues
(dollars in millions)



	Actual FY 2018	Actual FY 2019	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
Liquor Gallonage Tax - GRF	$48.1	$50.3	$53.4	$51.0	$52.0	$53.0

Petroleum Activity Tax

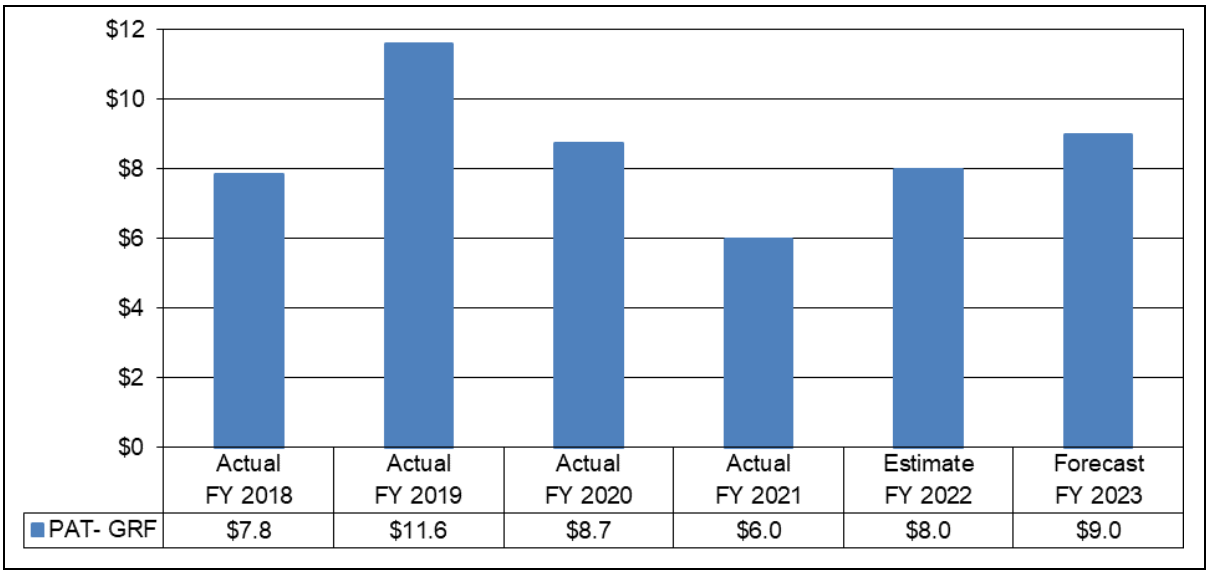
The Petroleum Activity Tax (PAT) is an offshoot of the Commercial Activity Tax (CAT). During the CAT's first two fiscal years, FY 2006-2007, petroleum products were generally exempt from the tax. The CAT began to be applied to motor fuel in FY 2008. In December 2012, the Ohio Supreme Court ruled in the Beaver Excavating decision that allocating CAT revenues to the GRF and to property tax replacement funds violated Article XII, Section 5a of the Ohio Constitution which requires that taxes on motor fuel be dedicated to road and bridge expenditures. The initial response to this decision resulted in the CAT still being applied to motor fuel, but the receipts from motor fuel being segregated and placed in a different fund. Beginning in FY 2015, gross receipts from motor fuel were excluded from the CAT, and suppliers of motor fuel began to pay the motor fuel receipts tax, later named the PAT.

The PAT is levied at a rate of 0.65 percent on "calculated gross receipts" from motor fuel, which are defined as taxable gallons sold multiplied by a statewide wholesale price per gallon. The 0.65 percent rate was deliberately chosen to be 2.5 times the 0.26 percent CAT rate.

Most PAT revenue — specifically the share used for propelling vehicles on public highways or waterways — is deposited into a special fund, to be used for highway-related purposes. A small share of the revenue that comes from motor fuel sold for off-road purposes goes to the GRF.

The PAT has only six years of revenue history, FY 2015-2020, during which time GRF revenues from the PAT grew from $5.5 million to $11.6 million. However, as the pandemic-induced economic crisis took hold, with demand for fuel products have declined and wholesale prices have greatly dropped, PAT revenues declined in FY 2020 and during year-to-date FY 2021. OBM conservatively estimates PAT GRF revenues at $6.0 million in FY 2021, $8.0 million in FY 2022, and $9.0 million in FY 2023 (see Figure B-25).

Figure B-25: Petroleum Activity Tax GRF Revenues
(dollars in millions)



Revenue Estimates and Methodology

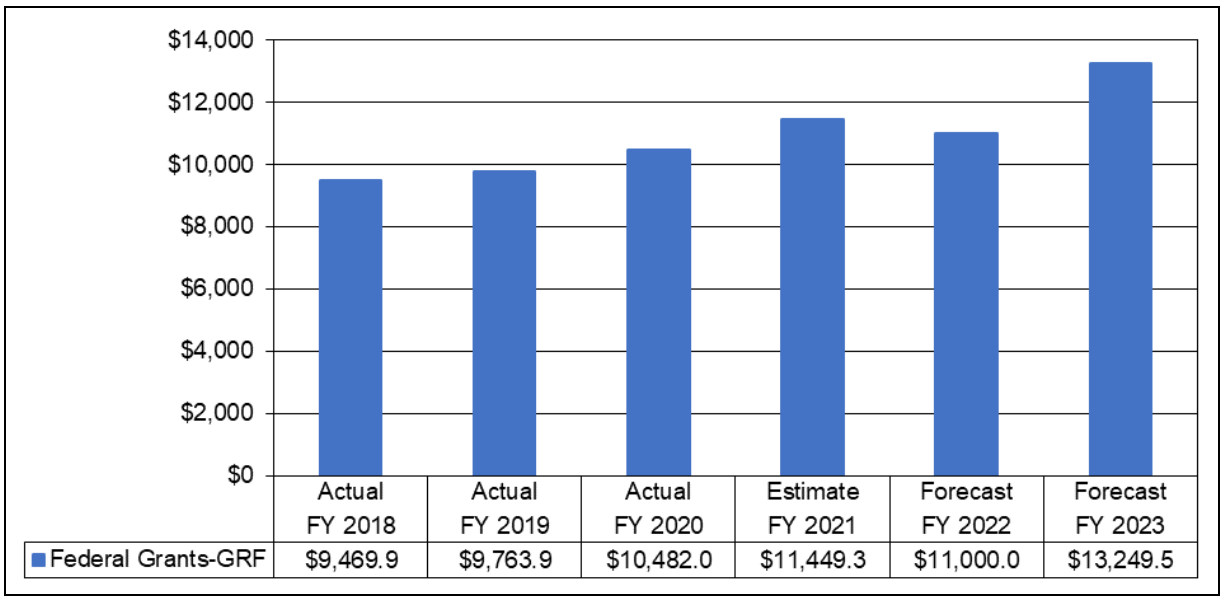
Non-Tax Sources

This section addresses the history and estimates of the numerous categories of non-tax receipts that are deposited into the GRF. Categories of non-tax sources are: federal grants and aid, earnings on investments, licenses and fees, other income, intrastate transfer vouchers (ISTV), and transfers in.

Federal Grants and Aid

Historically, federal receipts deposited into the GRF have been largely limited to federal reimbursements for programs administered by the Departments of Medicaid. These reimbursements are mainly for Medicaid services, but also include reimbursement to the state for Medicaid administration and interest costs on Build America Bonds issued by the state. Figure B-26 lists total federal grants and aid to the GRF for fiscal years 2018 through 2023.

Figure B-26: Federal Grants and Aid GRF Revenues
(dollars in millions)



	Actual FY 2018	Actual FY 2019	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
Federal Grants-GRF	$9,469.9	$9,763.9	$10,482.0	$11,449.3	$11,000.0	$13,249.5

Revenue Estimates and Methodology

Medicaid Reimbursement

The federal reimbursement percentage for Medicaid is determined by the federal government prior to each federal fiscal year and is called the Federal Medical Assistance Percentage (FMAP). FMAP is the federal government's share of a state's Medicaid expenditures. In general, each state's FMAP rate is based on the ratio of the state's per capita income to the U.S. per capita income. The FMAP rate varies by service and ranges from 50.0 percent to 90.0 percent (for Medicaid expansion to persons at or below 138.0 percent of poverty under the Affordable Care Act). Ohio's weighted average FMAP rate is projected to be 63.98 percent in both fiscal years 2022 and 2023. In fiscal years 2022 and 2023, federal revenue estimates assume that 99.5 percent of all potential reimbursements will be received.

To provide some context, it is important to note that not all federal reimbursement for Medicaid is drawn into the GRF. The federal Medicaid reimbursement that is deposited to the GRF is related only to the GRF Medicaid spending from the Ohio Department of Medicaid line items. Other reimbursements include:

- Reimbursements for other state agencies that administer portions of the Medicaid program (such as the Department of Developmental Disabilities) which are drawn through a federal special revenue fund in the state treasury and used to fund additional Medicaid services through discrete agency-specific funds rather than through the GRF.
- Federal reimbursement for Medicaid and Jobs and Family Services spending from non-GRF rotary accounts is reimbursed through a federal special revenue fund rather than through the GRF. As an example, when Medicaid receives rebates from drug manufacturers, those resources are deposited into a dedicated purpose fund and ultimately matched with federal reimbursement that is drawn into a federal special revenue account. Spending estimates for all aspects of the Medicaid program are determined by caseload projections, utilization levels, and rates for services. Any changes in state spending on Medicaid or reimbursable operating expenditures will change receipts from federal grants.

For fiscal years 2021-2023, total federal grants and aid deposited into the GRF are estimated to be $11,449.3 million, $11,000.0 million, and $13,249.5 million in the respective fiscal years.

Revenue Estimates and Methodology

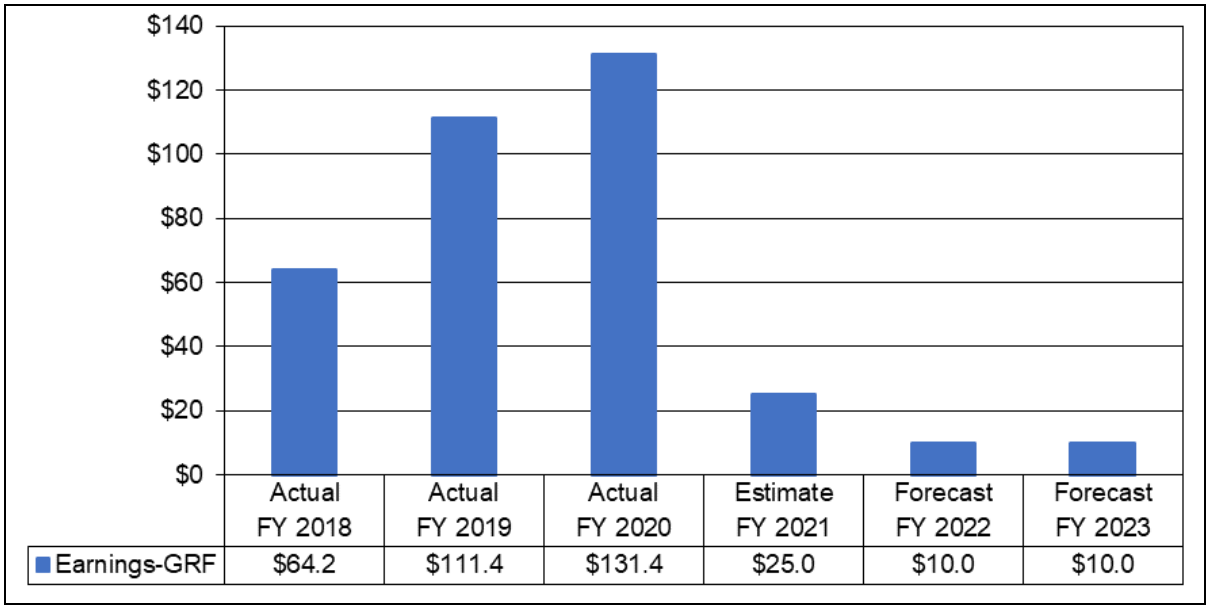
Earnings on Investments

Earnings on investments are determined by the amount of cash in the state's investment portfolio and the level of interest rates at which the funds are invested. The GRF's share of total earnings on investments is determined by the average daily cash balance in the GRF and all the non-interest-earning funds. The Treasurer of State is responsible for managing the state's portfolio and investing state funds. State funds are invested in a diversified portfolio concentrated in short-term to medium-term securities issued by the Federal government and its agencies.

Following several years of steadily increasing interest rates, and correspondingly increasing earnings on investments, the federal funds rate was dropped to near zero in March of 2020 in response to the COVID-19 pandemic. Therefore, OBM forecasts that cash balances will remain relatively consistent over the fiscal year 2022 and 2023 biennium, while interest rates are expected to remain near zero for the foreseeable future.

OBM estimates that earnings on investment deposited into the GRF will drop from $25.0 million in fiscal year 2021 to $10.0 million in both fiscal years 2022 and 2023. In addition to the historically low interest rate environment, the Executive Budget proposes changing the current practice of depositing interest earned from the Budget Stabilization Fund (BSF) balance in the GRF. This estimate assumes earnings associated with the BSF balance will be retained in the BSF. The GRF estimates of receipts from earnings on investments are displayed in Figure B-27.

Figure B-27: Investment Earnings Deposited into the GRF
(dollars in millions)



	Actual FY 2018	Actual FY 2019	Actual FY 2020	Estimate FY 2021	Forecast FY 2022	Forecast FY 2023
Earnings-GRF	$64.2	$111.4	$131.4	$25.0	$10.0	$10.0

Revenue Estimates and Methodology

Licenses and Fees

This source includes receipts deposited into the GRF from licenses and fees collected from businesses, occupations, and motor vehicle owners. The licenses and fees category also includes insurance agent fees, factory building fees, and fees from occupations and businesses not elsewhere classified. License and fee receipts deposited in the GRF are estimated to increase from $58.8 million in fiscal year 2021 to $65.0 million in both fiscal years 2022 and 2023.

Other Income

Other income consists of miscellaneous revenues from refunds, fines and forfeitures, sales of goods and services, receipts from local governments, and other revenue not elsewhere classified. In addition, these revenues include repayments of various loans made from the GRF, canceled warrants, and refunds of prior-year expenditures. The other income category is projected to increase slightly from $94.8 million in fiscal year 2021 to $105.4 million in fiscal year 2022 and $109.2 million in fiscal year 2023.

Intrastate Transfer Vouchers (ISTV)

Intrastate transfer vouchers consist mainly of appropriation reimbursements from other funds for services rendered by state agencies that receive GRF appropriations. It is estimated that $9.0 million in ISTV revenue will be deposited into the GRF in both fiscal years 2022 and 2023.

Transfers In

Transfers-in to the GRF are estimated to increase from $278.2 million in fiscal year 2021 to $373.0 million in fiscal year 2022 and $467.9 million in 2023.

The increases in both fiscal years are due largely to estimated increases in CAT receipt transfers, which are expected to grow from $153.3 million in fiscal year 2021 to $203.0 million in fiscal year 2022 and $232.9 million in fiscal year 2023. Also, transfers into the GRF from non-GRF funds in the state treasury that are not constitutionally protected are expected to grow from $40 million in fiscal year 2019 to $100 million in both fiscal years 2022 and 2023.

Actual and Estimated Revenues

The tables on the following pages show revenue history by budget fund group for fiscal years 2018, 2019, and 2020 and revenue estimates for fiscal years 2021, 2022 and 2023. The first page of the table presents total revenue for all funds and, beginning on the table's second page are revenue amounts for each budget fund group. The revenues are presented by income source and the amounts displayed are in millions of dollars.

State of Ohio Income Sources, Fiscal Years 2018- 2023
All Funds
(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
NON-AUTO SALES AND USE	9,314.0	9,744.0	9,923.7	10,243.0	10,861.0	11,223.5
AUTO SALES AND USE	1,440.5	1,501.7	1,502.7	1,616.7	1,652.1	1,680.5
PERSONAL INCOME TAX	10,711.5	11,346.6	10,349.3	12,237.9	11,759.4	12,282.9
CORPORATE FRANCHISE TAX	3.3	1.9	0.3	6.3	0.3	0.3
FINANCIAL INSTITUTIONS TAX	243.0	248.7	264.6	242.3	245.5	248.2
COMMERCIAL ACTIVITY TAX	1,964.7	2,068.6	2,102.0	1,687.9	1,812.5	1,898.4
PETROLEUM ACTIVITY TAX	74.8	97.0	83.5	6.3	8.3	9.3
PUBLIC UTILITY EXCISE TAX	145.5	169.6	168.2	146.2	158.0	159.5
KILOWATT HOURS EXCISE TAX	537.5	547.8	531.4	296.6	307.5	295.2
NATURAL GAS DISTRIB TAX (MCF)	69.6	75.9	67.4	65.0	68.0	69.0
FOREIGN INSUR COMPANIES TAX	342.6	348.7	359.9	341.1	344.2	347.3
DOMESTIC INSUR FRANCHISE TAX	286.4	302.3	312.2	304.4	315.3	321.6
SEVERENCE TAX	66.1	68.6	66.6	68.4	69.2	69.4
MOTOR FUEL USE TAX	34.8	37.4	44.4	35.0	35.0	35.0
MOTOR VEHICLE FUEL TAX	1,817.7	1,861.9	2,418.9	1,673.4	2,012.4	2,043.1
HORSE RACING WAGER TAX	5.2	5.0	3.8	4.3	4.3	4.3
MOTOR TRANSPORT TAX	0.9	0.7	0.7	0.4	0.5	0.5
INTANGIBLE TAXES	0.0	0.0	0.0	1.9	1.9	1.9
CIGARETTE TAX	942.1	920.8	914.9	929.8	912.4	900.5
ALCOHOLIC BEVERAGES TAX	56.8	57.5	54.8	57.2	57.2	57.2
LIQUOR GALLONAGE TAX	48.1	50.3	53.4	51.0	52.0	53.0
ESTATE TAXES	0.2	0.2	0.1	0.0	21.8	21.8
PERMISSIVE SALES/USE TAX	2,545.4	2,624.0	2,724.3	2,857.8	2,977.1	3,107.8
PERMISSIVE TAXES NEC	512.4	546.0	521.4	530.2	599.7	633.5
MUNICIPAL INCOME TAX	24.7	63.9	55.9	47.4	82.9	88.5
Total Tax Receipts	**31,187.9**	**32,688.9**	**32,524.4**	**33,450.4**	**34,358.5**	**35,552.1**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023

All Funds (Continued)

(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Non-Taxes						
MOTOR VEHICLE OPERATOR LICENSE	80.2	78.8	71.2	118.0	124.6	123.2
MOTOR VEHICLE LICENSES	922.2	948.3	934.5	990.8	1,113.7	1,156.8
BUSINESS LICENSES & FEES	2,243.2	2,313.0	2,561.4	2,910.5	2,777.6	2,767.4
WILDLIFE WATER LIC FEE PERMIT	877.7	914.5	956.1	1,081.2	1,069.5	1,016.6
SALES AND SERVICE	1,637.4	1,664.8	1,671.9	1,670.1	1,720.0	1,755.1
AGRICULTURE	901.8	915.1	759.1	381.6	391.4	396.3
COMMERCE	4.5	5.8	9.1	6.3	6.3	6.3
DEFENSE	40.5	53.9	39.0	43.8	44.8	44.6
HEALTH AND HUMAN SERVICES	18,486.3	18,888.8	19,901.0	25,498.7	23,171.3	25,211.9
HOUSING AND URBAN DEVELOPMENT	61.1	63.2	76.4	245.6	98.2	98.2
INTERIOR	48.3	31.8	38.6	39.4	32.1	30.5
JUSTICE	8.0	20.5	32.9	29.2	33.6	29.6
LABOR	211.4	220.9	251.4	424.1	412.6	399.1
TRANSPORTATION	1,461.8	1,575.1	1,601.4	1,457.0	1,487.7	1,487.8
VETERANS ADMINISTRATION	32.9	32.9	33.7	26.4	22.2	30.8
ENVIRONMENTAL PROTECTION AG	41.0	40.8	37.1	43.2	44.1	40.9
FEDERAL EMERGENCY MANAGEMENT	3.4	29.5	31.2	225.4	209.7	209.8
EDUCATION	1,332.5	1,398.2	1,441.2	2,761.8	3,531.6	3,494.2
HOMELAND SECURITY	18.2	22.3	23.6	14.2	17.2	18.2
OTHER FEDERAL PARTICIPATION	254.6	249.9	266.3	282.2	269.9	271.3
PARTICIPATION--LOCAL GOVT	857.0	862.8	904.9	899.2	932.2	972.1
COVID RELIEF FUNDS	0.0	0.0	4,553.9	30.0	0.0	0.0
STIMULUS BAB SUBSIDY	11.9	9.5	11.7	2.6	2.1	1.6
FINES AND PENALTIES	106.7	111.1	82.9	113.2	103.9	93.6
RENTALS & MISC REIMBURSEMENTS	650.7	468.9	402.0	324.7	315.7	313.4
RECOVERIES-TOBACCO SETTLEMENT	0.1	0.4	2.6	3.0	2.7	2.7
RECOVERIES	274.1	252.7	442.7	177.0	178.9	179.2
INTERGOV'TAL REIMBURSEMENTS	76.5	76.5	68.0	57.0	57.3	56.5
OTHER REIMBURSEMENTS	2,064.6	2,314.9	2,142.3	2,527.0	3,129.3	3,148.4
GIFTS AND CONTRIBUTIONS	12.6	14.9	12.3	11.7	9.5	9.4
INVESTMENT INCOME	27.1	53.8	30.3	191.0	148.1	148.4
UNDISTRIB INVESTMENT INCOME	124.6	212.3	240.8	0.0	0.0	0.0
BOND PROCEEDS	2,202.7	1,042.0	1,393.1	1,344.7	1,643.0	1,430.0
SALES OF ASSETS	2.0	1.6	0.1	0.4	0.4	0.4
LOANS REPAYMENTS	107.9	112.4	78.0	54.5	60.9	60.2
LICENSES AND FEES/ISTV	5.8	6.6	5.6	5.5	5.4	5.4
FEDERAL PASS THRU/ISTV	96.9	105.4	113.3	187.0	177.8	177.9
PRIOR YEAR REV ADJ/ISTV	0.1	-0.4	0.0	0.0	0.0	0.0
RECOVERIES AND REFUNDS/ISTV	22.1	20.7	25.6	17.5	7.5	7.5
EARNINGS-INVESTS/ISTV	124.4	209.0	237.3	34.3	18.5	18.2
INTRAGOVERNMENTAL SERVICE/ISTV	678.8	818.7	746.0	859.6	861.0	878.1
TRANSFERS-STATE FUNDS	15.2	16.4	11.5	2.3	2.8	2.3
STATEWIDE INDIRECT COST ALLOCA	23.8	15.5	18.8	16.8	19.7	19.7

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023
All Funds (Continued)
(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
STATEWIDE INDIRECT COST ALLOCA	23.8	15.5	18.8	16.8	19.7	19.7
OTHER FINAN SOURCES/ISTV	0.6	0.3	0.3	0.3	0.3	0.3
PAYROLL CHECKOFFS/ISTV	92.9	99.8	116.7	18.3	20.1	21.0
PAYROLL EMPLOYEE REIMBURS/ISTV	98.9	95.0	112.3	46.0	42.6	43.6
PAYROLL BENEFITS & DEDUCTIONS	907.8	957.5	1,022.5	1,936.0	2,013.1	2,094.4
INTRAGOVERNMENTAL TRANSFERS	786.1	810.3	845.1	1.4	1.4	1.4
DEBT SERVICE/GRF TO OTHER/ISTV	1,003.7	1,091.8	1,135.6	1,345.2	1,345.2	1,345.2
PR/PAYROLL PROCESSING	17.3	50.8	48.5	21.1	22.2	23.3
Total Non-Tax Receipts	**39,059.9**	**39,299.3**	**45,541.4**	**48,476.7**	**47,699.9**	**49,642.8**
Total Revenue	**70,247.9**	**71,988.2**	**78,065.8**	**81,927.1**	**82,058.4**	**85,194.9**
Transfers						
OPER TRANSFERS IN	28.4	158.0	173.5	59.0	61.0	62.0
TRANSFERS IN - OTHER	5,275.0	4,333.8	4,464.2	3,890.9	3,056.4	3,118.2
TEMPORARY TRF IN	0.0	12.0	0.0	12.0	12.0	12.0
Total Transfers	**5,303.5**	**4,503.8**	**4,637.7**	**3,961.9**	**3,129.4**	**3,192.2**
Total Sources	**75,551.3**	**76,492.0**	**82,703.5**	**85,889.0**	**85,187.8**	**88,387.1**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023
Bond Research and Development (BRD)
(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
N.A.						
Non-Taxes						
BUSINESS LICENSES & FEES	0.0	0.0	0.0	0.0	0.0	0.0
RENTALS & MISC REIMBURSEMENTS	0.0	0.0	0.0	0.3	0.3	0.3
OTHER REIMBURSEMENTS	0.0	0.0	0.2	0.0	0.0	0.0
BOND PROCEEDS	89.6	0.0	133.2	0.0	0.0	0.0
LOANS REPAYMENTS	4.2	17.0	7.0	7.5	8.2	13.6
EARNINGS-INVESTS/ISTV	1.2	1.3	1.7	0.0	0.0	0.0
INTRAGOVERNMENTAL SERVICE/ISTV	0.0	0.0	0.0	1.0	0.9	1.1
Total Non-Tax Receipts	**95.0**	**18.3**	**142.2**	**8.8**	**9.4**	**14.9**
Total Revenue	**95.0**	**18.3**	**142.2**	**8.8**	**9.4**	**14.9**
Transfers						
TRANSFERS IN - OTHER	103.5	0.0	124.7	0.0	100.0	10.0
Total Transfers	**103.5**	**0.0**	**124.7**	**0.0**	**100.0**	**10.0**
Total Sources	**198.5**	**18.3**	**266.9**	**8.8**	**109.4**	**24.9**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023
Budget Stabilization (BSF)
(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
N.A.						
Non-Taxes						
N.A.						
Total Revenue	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Transfers						
TRANSFERS IN - OTHER	0.0	657.5	0.0	0.0	0.0	0.0
Total Transfers	**0.0**	**657.5**	**0.0**	**0.0**	**0.0**	**0.0**
Total Sources	**0.0**	**657.5**	**0.0**	**0.0**	**0.0**	**0.0**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023
Capital Projects (CPF)
(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
N.A.						
Non-Taxes						
FINES AND PENALTIES	0.0	0.0	0.0	0.0	0.0	0.0
RENTALS & MISC REIMBURSEMENTS	0.0	0.1	0.0	0.0	0.0	0.0
RECOVERIES	0.4	2.0	0.4	0.0	0.0	0.0
OTHER REIMBURSEMENTS	12.6	23.4	5.2	0.0	0.6	0.6
GIFTS AND CONTRIBUTIONS	0.1	0.0	0.0	0.0	0.0	0.0
INVESTMENT INCOME	0.9	6.0	0.4	0.1	0.1	0.1
BOND PROCEEDS	2,095.2	1,028.1	1,259.9	1,344.7	1,643.0	1,430.0
SALES OF ASSETS	1.6	1.2	0.0	0.0	0.0	0.0
LOANS REPAYMENTS	44.4	43.4	28.3	0.0	0.0	0.0
RECOVERIES AND REFUNDS/ISTV	0.2	0.0	0.0	0.0	0.0	0.0
EARNINGS-INVESTS/ISTV	18.9	33.8	30.2	2.6	2.6	2.6
INTRAGOVERNMENTAL SERVICE/ISTV	0.0	0.0	0.0	0.0	0.0	0.0
Total Non-Tax Receipts	**2,174.3**	**1,137.9**	**1,324.4**	**1,347.4**	**1,646.3**	**1,433.3**
Total Revenue	**2,174.3**	**1,137.9**	**1,324.4**	**2.7**	**3.3**	**3.3**
Transfers						
TRANSFERS IN - OTHER	1,979.5	956.1	1,518.6	120.0	120.0	170.0
TEMPORARY TRF IN	0.0	12.0	0.0	0.0	0.0	0.0
Total Transfers	**1,979.5**	**968.1**	**1,518.6**	**120.0**	**120.0**	**170.0**
Total Sources	**4,153.8**	**2,106.1**	**2,843.0**	**1,470.0**	**1,769.6**	**1,606.5**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023

Debt Service (DSF)

(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
N.A.						
Non-Taxes						
BUSINESS LICENSES & FEES	0.0	0.0	0.3	0.0	0.0	0.0
RENTALS & MISC REIMBURSEMENTS	0.0	0.0	0.0	0.0	0.0	0.0
BOND PROCEEDS	17.8	14.0	0.0	0.0	0.0	0.0
EARNINGS-INVESTS/ISTV	0.8	1.1	1.2	0.0	0.0	0.0
TRANSFERS-STATE FUNDS	0.0	0.0	0.0	0.0	0.5	0.0
DEBT SERVICE/GRF TO OTHER/ISTV	1,003.7	1,091.8	1,135.6	1,345.2	1,345.2	1,345.2
Total Non-Tax Receipts	**1,022.3**	**1,106.9**	**1,137.1**	**1,345.2**	**1,345.7**	**1,345.2**
Total Revenue	**1,022.3**	**1,106.9**	**1,137.1**	**1,345.2**	**1,345.7**	**1,345.2**
Transfers						
TRANSFERS IN - OTHER	116.0	136.4	151.9	0.0	0.0	0.0
Total Transfers	**116.0**	**136.4**	**151.9**	**0.0**	**0.0**	**0.0**
Total Sources	**1,138.3**	**1,243.3**	**1,289.0**	**1,345.2**	**1,345.7**	**1,345.2**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023
Dedicated Purpose (DPF)
(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
NON-AUTO SALES AND USE	29.7	29.2	29.1	14.9	17.6	17.5
PERSONAL INCOME TAX	18.8	20.2	10.0	0.7	0.6	0.6
COMMERCIAL ACTIVITY TAX	13.9	14.8	13.2	12.1	13.3	14.2
PETROLEUM ACTIVITY TAX	0.7	1.0	0.8	0.0	0.0	0.0
PUBLIC UTILITY EXCISE TAX	0.8	0.8	0.8	0.3	0.3	0.3
FOREIGN INSUR COMPANIES TAX	22.8	29.4	27.4	32.0	32.0	32.0
DOMESTIC INSUR FRANCHISE TAX	5.0	5.3	5.4	0.0	0.0	0.0
SEVERENCE TAX	66.1	68.6	66.6	67.7	68.7	68.7
MOTOR VEHICLE FUEL TAX	24.3	25.2	31.5	31.7	35.7	35.7
HORSE RACING WAGER TAX	4.2	4.0	3.0	3.0	3.0	3.0
MOTOR TRANSPORT TAX	0.4	0.4	0.3	0.4	0.5	0.5
ALCOHOLIC BEVERAGES TAX	1.2	1.3	1.2	1.2	1.2	1.2
ESTATE TAXES	0.0	0.0	0.0	0.0	21.8	21.8
PERMISSIVE SALES/USE TAX	25.5	26.2	27.2	27.2	28.3	30.1
PERMISSIVE TAXES NEC	7.3	7.7	7.4	8.4	8.2	8.6
MUNICIPAL INCOME TAX	0.3	0.5	0.4	0.4	0.4	0.5
Total Tax Receipts	**220.8**	**234.7**	**224.4**	**200.1**	**231.4**	**234.6**
Non-Taxes						
MOTOR VEHICLE OPERATOR LICENSE	13.2	14.0	14.6	55.5	57.6	58.9
MOTOR VEHICLE LICENSES	8.1	8.2	6.8	7.7	7.7	7.7
BUSINESS LICENSES & FEES	2,088.5	2,163.4	2,409.3	2,697.4	2,528.5	2,514.5
WILDLIFE WATER LIC FEE PERMIT	876.6	913.9	955.2	1,075.0	1,062.3	1,008.4
SALES AND SERVICE	61.4	66.0	57.4	53.1	65.5	67.0
AGRICULTURE	0.6	3.0	3.3	3.7	4.0	4.0
HEALTH AND HUMAN SERVICES	84.8	113.7	73.4	89.9	63.5	42.9
INTERIOR	44.7	23.6	23.3	28.0	20.9	19.3
LABOR	0.0	2.3	1.1	0.0	0.0	0.0
VETERANS ADMINISTRATION	0.5	0.5	0.2	0.0	0.0	0.0
FEDERAL EMERGENCY MANAGEMENT	0.2	0.3	0.7	0.2	0.5	0.6
HOMELAND SECURITY	2.4	2.2	4.3	4.2	7.2	8.2
OTHER FEDERAL PARTICIPATION	0.8	1.4	1.0	1.3	1.3	1.3
PARTICIPATION--LOCAL GOVT	701.3	732.1	738.8	784.7	851.6	891.5
COVID RELIEF FUNDS	0.0	0.0	3,754.1	0.0	0.0	0.0
FINES AND PENALTIES	72.2	76.9	55.6	61.2	62.2	64.7
RENTALS & MISC REIMBURSEMENTS	233.5	293.0	223.0	182.1	183.7	184.3
RECOVERIES-TOBACCO SETTLEMENT	0.1	0.2	2.5	3.0	2.7	2.7
RECOVERIES	98.0	93.8	83.7	75.6	80.9	80.8
INTERGOV'TAL REIMBURSEMENTS	21.9	21.2	18.1	24.3	25.2	24.1
OTHER REIMBURSEMENTS	570.9	666.1	642.4	676.7	866.3	883.5
GIFTS AND CONTRIBUTIONS	7.8	9.7	7.3	5.4	4.8	4.8
INVESTMENT INCOME	5.2	7.5	7.2	5.9	5.1	5.1
SALES OF ASSETS	0.4	0.3	0.1	0.4	0.4	0.4
LOANS REPAYMENTS	4.0	5.1	3.7	3.6	3.6	3.5

Actual and Estimated Revenues

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
LICENSES AND FEES/ISTV	0.6	1.4	1.6	0.5	0.5	0.5
FEDERAL PASS THRU/ISTV	1.2	0.3	2.7	1.7	2.0	2.0
PRIOR YEAR REV ADJ/ISTV	0.0	-0.4	0.0	0.0	0.0	0.0
RECOVERIES AND REFUNDS/ISTV	9.8	5.7	6.8	17.5	7.5	7.5
EARNINGS-INVESTS/ISTV	5.6	8.4	18.3	0.9	0.6	0.7
INTRAGOVERNMENTAL SERVICE/ISTV	55.0	53.2	54.4	88.7	91.5	90.3
TRANSFERS-STATE FUNDS	0.0	0.0	0.0	2.3	2.3	2.3
STATEWIDE INDIRECT COST ALLOCA	11.0	5.4	11.7	9.0	11.2	11.2
OTHER FINAN SOURCES/ISTV	0.0	0.0	0.0	0.0	0.0	0.0
PAYROLL CHECKOFFS/ISTV	2.3	2.7	2.7	0.0	0.0	0.0
PAYROLL EMPLOYEE REIMBURS/ISTV	2.9	1.6	2.0	2.0	2.0	2.0
INTRAGOVERNMENTAL TRANSFERS	5.0	8.3	6.0	0.0	0.0	0.0
PR/PAYROLL PROCESSING	0.0	0.0	0.0	0.0	0.0	0.0
Total Non-Tax Receipts	**4,990.6**	**5,304.8**	**9,193.6**	**5,961.2**	**6,023.1**	**5,994.3**
Total Revenue	**5,211.4**	**5,539.5**	**9,417.9**	**6,161.3**	**6,254.5**	**6,228.9**
Transfers						
OPER TRANSFERS IN	0.0	0.0	0.0	59.0	61.0	62.0
TRANSFERS IN - OTHER	634.5	494.3	859.8	1,777.5	746.0	732.9
TEMPORARY TRF IN	0.0	0.0	0.0	12.0	12.0	12.0
Total Transfers	**634.5**	**494.3**	**859.8**	**1,848.5**	**819.0**	**806.9**
Total Sources	**5,845.8**	**6,033.7**	**10,277.8**	**8,009.8**	**7,073.5**	**7,035.8**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023
Facilities Establishment (FCE)
(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
N.A.						
Non-Taxes						
BUSINESS LICENSES & FEES	0.0	0.0	0.0	0.0	0.0	0.0
RENTALS & MISC REIMBURSEMENTS	41.8	39.3	23.2	18.7	15.7	12.7
OTHER REIMBURSEMENTS	0.0	0.0	0.0	0.0	0.0	0.0
LOANS REPAYMENTS	24.1	21.0	11.4	22.1	22.8	14.8
EARNINGS-INVESTS/ISTV	5.2	7.7	8.0	0.0	0.0	0.0
INTRAGOVERNMENTAL SERVICE/ISTV	0.0	0.0	0.0	8.0	6.9	6.7
Total Non-Tax Receipts	**71.2**	**67.9**	**42.6**	**48.8**	**45.4**	**34.2**
Total Revenue	**71.2**	**67.9**	**42.6**	**48.8**	**45.4**	**34.2**
Transfers						
TRANSFERS IN - OTHER	2.0	0.0	25.0	2.0	2.0	2.0
Total Transfers	**2.0**	**0.0**	**25.0**	**2.0**	**2.0**	**2.0**
Total Sources	**73.2**	**67.9**	**67.6**	**50.8**	**47.4**	**36.2**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023

Federal (FED)

(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
NON-AUTO SALES AND USE	0.0	0.0	0.0	0.0	0.0	0.0
PERMISSIVE TAXES NEC	0.0	0.0	0.0	0.1	0.0	0.0
Total Tax Receipts	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**
Non-Taxes						
BUSINESS LICENSES & FEES	0.2	0.2	0.8	0.1	0.1	0.1
WILDLIFE WATER LIC FEE PERMIT	0.5	0.0	0.0	0.2	0.2	0.2
SALES AND SERVICE	0.0	0.0	0.0	0.0	0.0	0.0
AGRICULTURE	901.2	911.8	755.7	377.9	387.4	392.3
COMMERCE	4.5	5.8	9.1	6.3	6.3	6.3
DEFENSE	40.4	53.8	38.9	43.7	44.7	44.6
HEALTH AND HUMAN SERVICES	8,939.7	9,017.3	9,888.7	13,959.5	12,107.3	11,919.0
HOUSING AND URBAN DEVELOPMENT	61.1	63.2	76.4	245.6	98.2	98.2
INTERIOR	3.6	8.2	15.3	11.4	11.2	11.2
JUSTICE	8.0	20.5	32.9	29.2	33.6	29.6
LABOR	211.4	218.6	250.2	424.1	412.6	399.1
TRANSPORTATION	17.6	19.1	20.0	33.2	34.5	34.5
VETERANS ADMINISTRATION	32.4	32.4	33.4	26.4	22.2	30.8
ENVIRONMENTAL PROTECTION AG	36.9	36.0	33.3	38.9	39.8	36.5
FEDERAL EMERGENCY MANAGEMENT	3.2	29.3	30.4	225.2	209.2	209.2
EDUCATION	1,332.5	1,398.2	1,441.2	2,761.8	3,531.6	3,494.2
HOMELAND SECURITY	15.7	20.0	19.2	10.0	10.0	10.0
OTHER FEDERAL PARTICIPATION	253.7	248.5	265.1	280.8	268.5	269.9
PARTICIPATION--LOCAL GOVT	2.4	0.8	0.0	34.0	0.0	0.0
COVID RELIEF FUNDS	0.0	0.0	264.5	30.0	0.0	0.0
FINES AND PENALTIES	13.2	11.6	8.1	34.3	22.9	10.1
RENTALS & MISC REIMBURSEMENTS	66.6	62.9	64.4	6.1	6.2	6.4
RECOVERIES	78.0	66.5	100.8	97.8	94.5	94.9
INTERGOV'TAL REIMBURSEMENTS	53.7	54.3	49.1	31.8	31.4	31.7
OTHER REIMBURSEMENTS	1,410.3	1,557.9	1,426.6	1,661.7	2,069.4	2,069.2
GIFTS AND CONTRIBUTIONS	0.8	1.4	1.5	2.1	1.1	1.0
INVESTMENT INCOME	0.0	0.0	0.0	3.0	1.0	1.3
LOANS REPAYMENTS	4.3	4.2	2.8	4.0	3.5	6.3
FEDERAL PASS THRU/ISTV	94.5	105.1	110.4	179.8	170.8	171.0
PRIOR YEAR REV ADJ/ISTV	0.0	0.0	0.0	0.0	0.0	0.0
RECOVERIES AND REFUNDS/ISTV	0.7	0.3	0.8	0.0	0.0	0.0
EARNINGS-INVESTS/ISTV	4.2	3.0	2.4	1.1	0.5	0.2
INTRAGOVERNMENTAL SERVICE/ISTV	43.9	128.5	103.1	9.7	5.2	5.2
STATEWIDE INDIRECT COST ALLOCA	2.3	1.6	0.5	0.0	0.0	0.0
OTHER FINAN SOURCES/ISTV	0.6	0.3	0.3	0.3	0.3	0.3
Total Non-Tax Receipts	**13,638.0**	**14,081.2**	**15,046.2**	**20,570.0**	**19,624.2**	**19,383.2**
Total Revenue	**13,638.1**	**14,081.2**	**15,046.2**	**20,570.1**	**19,624.2**	**19,383.2**

Actual and Estimated Revenues

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Transfers						
TRANSFERS IN - OTHER	58.6	6.1	0.5	0.1	0.1	0.1
Total Transfers	**58.6**	**6.1**	**0.5**	**0.1**	**0.1**	**0.1**
Total Sources	**13,696.6**	**14,087.3**	**15,046.7**	**20,570.1**	**19,624.3**	**19,383.2**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023
Fiduciary Funds (FID)
(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
NON-AUTO SALES AND USE	112.4	114.8	138.1	131.8	136.1	140.3
PERSONAL INCOME TAX	1,915.4	2,033.3	2,064.3	2,311.4	2,065.7	2,189.7
CORPORATE FRANCHISE TAX	1.2	-0.1	0.7	0.3	0.3	0.3
FINANCIAL INSTITUTIONS TAX	41.9	46.2	49.7	52.6	55.5	58.2
COMMERCIAL ACTIVITY TAX	159.2	136.6	122.1	131.9	131.9	131.9
PETROLEUM ACTIVITY TAX	0.2	0.5	0.1	0.3	0.3	0.3
PUBLIC UTILITY EXCISE TAX	25.4	25.6	26.3	26.0	26.2	26.3
KILOWATT HOURS EXCISE TAX	0.3	0.3	0.6	0.4	0.4	0.4
NATURAL GAS DISTRIB TAX (MCF)	0.0	0.0	7.6	0.0	0.0	0.0
FOREIGN INSUR COMPANIES TAX	43.3	22.9	27.4	0.0	0.0	0.0
DOMESTIC INSUR FRANCHISE TAX	3.0	20.9	3.8	0.0	0.0	0.0
SEVERENCE TAX	0.0	0.0	0.0	0.7	0.6	0.7
MOTOR VEHICLE FUEL TAX	14.9	15.9	18.8	18.5	18.9	18.9
HORSE RACING WAGER TAX	0.2	0.2	0.2	0.2	0.2	0.2
INTANGIBLE TAXES	0.4	0.0	0.0	1.9	1.9	1.9
CIGARETTE TAX	2.3	2.6	1.9	2.0	2.0	2.0
ESTATE TAXES	0.0	0.0	0.0	0.0	0.0	0.0
PERMISSIVE SALES/USE TAX	2,519.9	2,597.7	2,697.1	2,830.5	2,948.8	3,077.7
PERMISSIVE TAXES NEC	505.1	538.3	513.9	521.7	591.6	624.9
MUNICIPAL INCOME TAX	24.4	63.4	55.5	47.0	82.5	88.0
Total Tax Receipts	**5,369.7**	**5,619.2**	**5,728.3**	**6,077.1**	**6,062.7**	**6,361.6**
Non-Taxes						
MOTOR VEHICLE LICENSES	182.1	199.5	210.0	222.7	235.0	242.0
BUSINESS LICENSES & FEES	7.2	6.5	11.2	7.7	7.7	7.7
SALES AND SERVICE	0.4	0.4	0.4	0.4	0.4	0.4
PARTICIPATION--LOCAL GOVT	0.3	0.2	0.1	0.6	0.6	0.6
RENTALS & MISC REIMBURSEMENTS	1.3	1.2	1.3	1.6	1.7	1.8
RECOVERIES	97.5	89.7	257.7	0.0	0.0	0.0
OTHER REIMBURSEMENTS	0.0	0.4	0.0	102.6	102.6	102.6
GIFTS AND CONTRIBUTIONS	2.6	2.6	2.6	2.9	2.9	2.9
INVESTMENT INCOME	0.0	0.0	0.0	160.0	120.0	120.0
UNDISTRIB INVESTMENT INCOME	124.4	211.8	240.5	0.0	0.0	0.0
RECOVERIES AND REFUNDS/ISTV	11.4	12.7	16.7	0.0	0.0	0.0
EARNINGS-INVESTS/ISTV	3.2	6.2	8.1	3.1	3.1	3.1
INTRAGOVERNMENTAL SERVICE/ISTV	0.0	0.0	0.0	14.0	14.0	14.0
PAYROLL EMPLOYEE REIMBURS/ISTV	1.3	1.3	4.0	0.0	0.0	0.0
PAYROLL BENEFITS & DEDUCTIONS	907.8	957.5	1,022.5	1,936.0	2,013.1	2,094.4
INTRAGOVERNMENTAL TRANSFERS	781.1	802.1	830.0	1.4	1.4	1.4
PR/PAYROLL PROCESSING	17.3	50.8	48.5	21.1	22.2	23.3
Total Non-Tax Receipts	**2,137.9**	**2,342.9**	**2,653.6**	**2,474.1**	**2,524.7**	**2,614.2**
Total Revenue	**7,507.6**	**7,962.1**	**8,381.9**	**8,551.3**	**8,587.3**	**8,975.8**

Actual and Estimated Revenues

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Transfers						
TRANSFERS IN - OTHER	3.9	4.4	4.4	0.0	0.0	0.0
Total Transfers	**3.9**	**4.4**	**4.4**	**0.0**	**0.0**	**0.0**
Total Sources	**7,511.5**	**7,966.5**	**8,386.4**	**8,551.3**	**8,587.3**	**8,975.8**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023

General Revenue (GRF)

(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
NON-AUTO SALES AND USE	8,707.6	9,071.7	9,183.0	9,422.6	9,951.5	10,289.5
AUTO SALES AND USE	1,440.5	1,501.7	1,502.7	1,616.7	1,652.1	1,680.5
PERSONAL INCOME TAX	8,411.0	8,910.2	7,881.3	9,389.7	9,175.5	9,571.4
CORPORATE FRANCHISE TAX	2.2	2.1	-0.4	6.0	0.0	0.0
FINANCIAL INSTITUTIONS TAX	201.1	202.4	214.9	189.7	190.0	190.0
COMMERCIAL ACTIVITY TAX	1,522.8	1,629.5	1,671.7	1,535.3	1,660.3	1,746.3
PETROLEUM ACTIVITY TAX	7.8	11.6	8.7	6.0	8.0	9.0
PUBLIC UTILITY EXCISE TAX	119.2	143.2	141.0	120.0	131.6	133.0
KILOWATT HOURS EXCISE TAX	342.4	343.6	331.8	296.2	307.1	294.8
NATURAL GAS DISTRIB TAX (MCF)	69.6	75.9	59.7	65.0	68.0	69.0
FOREIGN INSUR COMPANIES TAX	276.5	296.3	305.1	308.1	311.2	314.3
DOMESTIC INSUR FRANCHISE TAX	278.4	276.0	303.0	304.4	315.3	321.6
MOTOR FUEL USE TAX	0.1	0.0	0.0	0.0	0.0	0.0
MOTOR TRANSPORT TAX	0.5	0.3	0.4	0.0	0.0	0.0
INTANGIBLE TAXES	-0.4	0.0	0.0	0.0	0.0	0.0
CIGARETTE TAX	939.8	918.2	913.0	927.8	910.4	898.5
ALCOHOLIC BEVERAGES TAX	55.7	56.3	53.6	56.0	56.0	56.0
LIQUOR GALLONAGE TAX	48.1	50.3	53.4	51.0	52.0	53.0
ESTATE TAXES	0.2	0.2	0.1	0.0	0.0	0.0
PERMISSIVE TAXES NEC	0.0	0.0	0.0	0.0	0.0	0.0
Total Tax Receipts	**22,423.2**	**23,489.6**	**22,623.2**	**24,294.4**	**24,789.0**	**25,626.9**
Non-Taxes						
MOTOR VEHICLE LICENSES	0.3	0.3	1.3	0.0	0.0	0.0
BUSINESS LICENSES & FEES	58.9	64.1	65.4	58.8	65.0	65.0
WILDLIFE WATER LIC FEE PERMIT	0.0	0.0	0.0	0.0	0.0	0.0
SALES AND SERVICE	19.4	19.2	19.3	0.0	0.0	0.0
DEFENSE	0.0	0.0	0.0	0.0	0.0	0.0
HEALTH AND HUMAN SERVICES	9,461.7	9,757.9	10,473.4	11,442.3	10,994.0	13,243.5
LABOR	0.0	0.0	0.0	0.0	0.0	0.0
PARTICIPATION--LOCAL GOVT	0.0	0.0	0.0	0.0	0.0	0.0
COVID RELIEF FUNDS	0.0	0.0	0.0	0.0	0.0	0.0
STIMULUS BAB SUBSIDY	8.2	6.0	8.6	7.0	6.0	6.0
FINES AND PENALTIES	1.9	1.6	2.1	0.0	0.0	0.0
RENTALS & MISC REIMBURSEMENTS	213.9	37.3	56.7	94.8	105.4	109.2
RECOVERIES-TOBACCO SETTLEMENT	0.0	0.3	0.1	0.0	0.0	0.0
RECOVERIES	0.0	0.0	0.0	0.0	0.0	0.0
INTERGOV'TAL REIMBURSEMENTS	1.0	0.9	0.8	0.0	0.0	0.0
OTHER REIMBURSEMENTS	13.9	11.3	13.3	0.0	0.0	0.0
GIFTS AND CONTRIBUTIONS	0.1	0.1	0.0	0.0	0.0	0.0
INVESTMENT INCOME	0.0	0.0	0.0	0.0	0.0	0.0
UNDISTRIB INVESTMENT INCOME	0.2	0.4	0.3	0.0	0.0	0.0
LOANS REPAYMENTS	0.0	0.0	0.0	0.0	0.0	0.0
FEDERAL PASS THRU/ISTV	0.0	0.0	0.0	0.0	0.0	0.0

Actual and Estimated Revenues

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
RECOVERIES AND REFUNDS/ISTV	0.0	0.0	0.8	0.0	0.0	0.0
EARNINGS-INVESTS/ISTV	64.2	114.4	131.4	25.0	10.0	10.0
INTRAGOVERNMENTAL SERVICE/ISTV	0.4	0.0	6.1	0.0	0.0	0.0
TRANSFERS-STATE FUNDS	15.2	16.4	11.5	9.0	9.0	9.0
STATEWIDE INDIRECT COST ALLOCA	0.0	0.0	0.0	0.0	0.0	0.0
PAYROLL EMPLOYEE REIMBURS/ISTV	0.0	0.0	1.2	0.0	0.0	0.0
INTRAGOVERNMENTAL TRANSFERS	0.1	0.0	9.1	0.0	0.0	0.0
Total Non-Tax Receipts	**9,859.3**	**10,030.3**	**10,801.5**	**11,636.9**	**11,189.4**	**13,442.7**
Total Revenue	**32,282.6**	**33,519.9**	**33,424.7**	**35,931.3**	**35,978.4**	**39,069.6**
Transfers						
TRANSFERS IN - OTHER	188.6	247.9	81.0	278.2	373.0	467.9
Total Transfers	**188.6**	**247.9**	**81.0**	**278.2**	**373.0**	**467.9**
Total Sources	**32,471.2**	**33,767.8**	**33,505.7**	**36,209.5**	**36,351.4**	**39,537.5**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023
Highway Operating (HOF)
(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
NON-AUTO SALES AND USE	0.0	0.0	0.0	0.0	0.0	0.0
MOTOR FUEL USE TAX	34.7	37.4	44.4	35.0	35.0	35.0
MOTOR VEHICLE FUEL TAX	657.3	681.4	1,014.0	1,047.2	1,057.9	1,068.5
Total Tax Receipts	**691.9**	**718.7**	**1,058.4**	**1,082.2**	**1,092.9**	**1,103.5**
Non-Taxes						
MOTOR VEHICLE LICENSES	1.2	1.2	4.2	7.4	7.4	7.4
BUSINESS LICENSES & FEES	46.7	43.0	43.2	39.3	39.8	39.8
SALES AND SERVICE	1.1	2.0	1.3	1.7	1.7	1.7
TRANSPORTATION	1,444.1	1,556.0	1,581.3	1,423.8	1,453.2	1,453.3
PARTICIPATION--LOCAL GOVT	153.0	129.7	165.9	80.0	80.0	80.0
STIMULUS BAB SUBSIDY	3.7	3.5	3.1	2.6	2.1	1.6
RENTALS & MISC REIMBURSEMENTS	5.2	5.4	4.1	3.3	3.3	3.3
RECOVERIES	0.0	0.0	0.1	0.0	0.0	0.0
OTHER REIMBURSEMENTS	15.9	18.2	18.8	10.6	11.4	12.7
GIFTS AND CONTRIBUTIONS	1.0	1.1	0.9	0.5	0.5	0.5
LOANS REPAYMENTS	26.8	21.8	24.7	17.1	22.7	21.8
EARNINGS-INVESTS/ISTV	11.0	16.5	18.7	1.7	1.7	1.7
INTRAGOVERNMENTAL SERVICE/ISTV	11.8	6.9	15.4	2.0	2.0	2.0
Total Non-Tax Receipts	**1,721.3**	**1,805.3**	**1,881.6**	**1,590.0**	**1,625.8**	**1,625.8**
Total Revenue	**2,413.2**	**2,524.1**	**2,940.0**	**2,672.1**	**2,718.6**	**2,729.3**
Transfers						
TRANSFERS IN - OTHER	564.9	558.8	474.6	437.0	445.6	437.3
Total Transfers	**564.9**	**558.8**	**474.6**	**437.0**	**445.6**	**437.3**
Total Sources	**2,978.1**	**3,082.8**	**3,414.6**	**3,109.1**	**3,164.2**	**3,166.6**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023
Highway Safety (HSF)
(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
NON-AUTO SALES AND USE	0.0	0.0	0.0	0.0	0.0	0.0
Total Tax Receipts	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Non-Taxes						
MOTOR VEHICLE OPERATOR LICENSE	65.6	63.5	55.2	60.3	64.7	62.1
MOTOR VEHICLE LICENSES	384.0	397.5	382.5	399.8	510.4	548.7
BUSINESS LICENSES & FEES	7.3	7.6	6.8	1.3	1.3	1.3
WILDLIFE WATER LIC FEE PERMIT	0.6	0.6	0.5	0.1	0.1	0.1
SALES AND SERVICE	16.2	17.0	16.5	17.2	18.1	18.9
FINES AND PENALTIES	18.8	18.1	15.2	14.8	16.5	16.6
RENTALS & MISC REIMBURSEMENTS	2.8	2.3	2.0	2.5	2.8	2.6
OTHER REIMBURSEMENTS	12.1	12.0	12.8	12.7	13.0	12.9
LICENSES AND FEES/ISTV	0.0	0.0	0.0	0.0	0.0	0.0
FEDERAL PASS THRU/ISTV	0.0	0.0	0.1	0.0	0.0	0.0
PRIOR YEAR REV ADJ/ISTV	0.0	0.0	0.0	0.0	0.0	0.0
EARNINGS-INVESTS/ISTV	1.7	2.6	2.4	0.0	0.0	0.0
INTRAGOVERNMENTAL SERVICE/ISTV	1.3	1.3	1.5	0.9	0.9	0.9
Total Non-Tax Receipts	**510.2**	**522.5**	**495.5**	**509.5**	**627.7**	**663.9**
Total Revenue	**510.2**	**522.5**	**495.5**	**509.5**	**627.7**	**663.9**
Transfers						
OPER TRANSFERS IN	0.0	0.0	3.0	0.0	0.0	0.0
TRANSFERS IN - OTHER	42.4	43.1	2.1	8.8	1.5	1.5
Total Transfers	**42.4**	**43.1**	**5.1**	**8.8**	**1.5**	**1.5**
Total Sources	**552.6**	**565.6**	**500.6**	**518.3**	**629.2**	**665.5**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023
Holding Account (HLD)
(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
NON-AUTO SALES AND USE	26.0	75.9	126.3	-15.5	61.4	61.4
PERSONAL INCOME TAX	0.1	-0.1	0.0	0.0	0.0	0.0
Total Tax Receipts	**26.1**	**75.8**	**126.3**	**-15.5**	**61.4**	**61.4**
Non-Taxes						
MOTOR VEHICLE LICENSES	0.0	0.0	0.0	0.0	0.0	0.0
BUSINESS LICENSES & FEES	0.0	0.0	0.0	0.1	0.1	0.1
WILDLIFE WATER LIC FEE PERMIT	0.0	0.0	0.4	6.0	7.0	8.0
SALES AND SERVICE	0.0	0.0	0.4	0.0	0.0	0.0
HEALTH AND HUMAN SERVICES	0.0	0.0	0.0	0.0	0.5	0.5
FINES AND PENALTIES	0.6	2.7	1.6	2.9	2.2	2.2
RENTALS & MISC REIMBURSEMENTS	3.5	0.9	0.5	5.5	5.5	5.5
RECOVERIES	0.2	0.6	0.0	0.0	0.0	0.0
OTHER REIMBURSEMENTS	0.1	0.0	0.7	1.0	0.3	0.3
LICENSES AND FEES/ISTV	0.0	0.0	0.0	0.0	0.0	0.0
RECOVERIES AND REFUNDS/ISTV	0.0	0.0	0.0	0.0	0.0	0.0
EARNINGS-INVESTS/ISTV	0.2	0.3	0.3	0.0	0.0	0.0
INTRAGOVERNMENTAL SERVICE/ISTV	0.0	2.6	2.3	3.0	0.4	0.4
STATEWIDE INDIRECT COST ALLOCA	0.0	0.0	0.0	0.0	0.0	0.0
Total Non-Tax Receipts	**4.5**	**7.1**	**6.4**	**18.5**	**16.0**	**17.0**
Total Revenue	**30.6**	**82.9**	**132.7**	**2.9**	**77.4**	**78.4**
Transfers						
TRANSFERS IN - OTHER	0.0	0.0	0.1	0.0	0.0	0.0
Total Transfers	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**
Total Sources	**30.6**	**82.9**	**132.8**	**2.9**	**77.4**	**78.4**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023

Internal Service Activity (ISA)

(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
NON-AUTO SALES AND USE	0.0	0.0	0.0	0.0	0.0	0.0
FOREIGN INSUR COMPANIES TAX	0.0	0.0	0.0	0.0	0.0	0.0
Total Tax Receipts	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Non-Taxes						
BUSINESS LICENSES & FEES	9.9	2.6	5.5	78.0	96.0	96.0
WILDLIFE WATER LIC FEE PERMIT	0.0	0.0	0.0	0.0	0.0	0.0
SALES AND SERVICE	37.3	24.3	23.9	39.9	43.4	41.4
AGRICULTURE	0.0	0.4	0.0	0.0	0.0	0.0
DEFENSE	0.1	0.1	0.1	0.1	0.1	0.1
HEALTH AND HUMAN SERVICES	0.1	0.0	0.0	0.0	0.0	0.0
INTERIOR	0.0	0.0	0.1	0.0	0.0	0.1
ENVIRONMENTAL PROTECTION AG	4.1	4.8	3.8	4.3	4.3	4.3
HOMELAND SECURITY	0.0	0.0	0.0	0.0	0.0	0.0
OTHER FEDERAL PARTICIPATION	0.1	0.1	0.1	0.1	0.1	0.1
PARTICIPATION--LOCAL GOVT	0.0	0.0	0.0	0.0	0.0	0.0
COVID RELIEF FUNDS	0.0	0.0	0.8	0.0	0.0	0.0
FINES AND PENALTIES	0.1	0.0	0.1	0.1	0.1	0.1
RENTALS & MISC REIMBURSEMENTS	25.3	26.5	26.5	11.1	3.0	3.0
RECOVERIES	0.0	0.0	0.0	0.0	0.0	0.0
INTERGOV'TAL REIMBURSEMENTS	0.0	0.0	0.0	0.9	0.8	0.8
OTHER REIMBURSEMENTS	26.4	22.8	19.6	61.7	65.6	66.6
GIFTS AND CONTRIBUTIONS	0.2	0.0	0.0	0.8	0.2	0.2
SALES OF ASSETS	0.0	0.1	0.0	0.0	0.0	0.0
LOANS REPAYMENTS	0.1	0.0	0.1	0.2	0.2	0.2
LICENSES AND FEES/ISTV	5.2	5.1	4.0	5.0	4.9	4.9
FEDERAL PASS THRU/ISTV	1.1	0.0	0.0	5.5	5.0	5.0
PRIOR YEAR REV ADJ/ISTV	0.1	0.0	0.0	0.0	0.0	0.0
RECOVERIES AND REFUNDS/ISTV	0.0	2.1	0.6	0.0	0.0	0.0
EARNINGS-INVESTS/ISTV	2.4	4.1	4.8	0.0	0.0	0.0
INTRAGOVERNMENTAL SERVICE/ISTV	566.5	626.1	563.1	732.3	739.2	757.6
STATEWIDE INDIRECT COST ALLOCA	10.6	8.5	6.6	7.8	8.5	8.5
PAYROLL CHECKOFFS/ISTV	90.6	97.1	114.0	18.3	20.1	21.0
PAYROLL EMPLOYEE REIMBURS/ISTV	94.7	92.1	105.1	43.9	40.7	41.6
INTRAGOVERNMENTAL TRANSFERS	0.0	0.0	0.0	0.0	0.0	0.0
Total Non-Tax Receipts	**874.9**	**916.8**	**878.8**	**1,010.0**	**1,032.1**	**1,051.4**
Total Revenue	**874.9**	**916.8**	**878.8**	**1,010.0**	**1,032.1**	**1,051.4**
Transfers						
OPER TRANSFERS IN	41.5	27.6	74.7	36.4	34.3	33.6
Total Transfers	**41.5**	**27.6**	**74.7**	**36.4**	**34.3**	**33.6**
Total Sources	**916.3**	**944.4**	**953.5**	**1,046.5**	**1,066.4**	**1,085.0**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023
Revenue Distribution Funds (RDF)
(dollars in millions)

	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
NON-AUTO SALES AND USE	438.2	452.3	447.1	689.3	694.5	714.8
PERSONAL INCOME TAX	366.2	382.9	393.6	536.1	517.6	521.2
COMMERCIAL ACTIVITY TAX	268.8	287.6	295.0	8.6	7.0	6.0
PETROLEUM ACTIVITY TAX	66.0	83.9	73.8	0.0	0.0	0.0
KILOWATT HOURS EXCISE TAX	194.8	203.9	199.0	0.0	0.0	0.0
FOREIGN INSUR COMPANIES TAX	0.0	0.0	0.0	1.0	1.0	1.0
MOTOR VEHICLE FUEL TAX	1,121.3	1,139.4	1,354.6	576.0	900.0	920.0
HORSE RACING WAGER TAX	0.8	0.8	0.6	1.1	1.1	1.1
Total Tax Receipts	2,456.2	2,550.9	2,763.8	1,812.0	2,121.2	2,164.1
Non-Taxes						
MOTOR VEHICLE OPERATOR LICENSE	1.3	1.4	1.4	2.3	2.3	2.3
MOTOR VEHICLE LICENSES	346.7	341.6	329.8	353.3	353.3	351.0
BUSINESS LICENSES & FEES	24.4	25.5	18.8	14.6	14.6	14.6
RENTALS & MISC REIMBURSEMENTS	56.8	0.0	0.0	0.0	0.0	0.0
OTHER REIMBURSEMENTS	0.0	0.0	0.0	0.0	0.0	0.0
LICENSES AND FEES/ISTV	0.0	0.0	0.0	0.0	0.0	0.0
EARNINGS-INVESTS/ISTV	0.9	1.6	1.5	0.0	0.0	0.0
Total Non-Tax Receipts	430.1	370.1	351.5	370.1	370.1	367.9
Total Revenue	**2,886.3**	**2,921.0**	**3,115.3**	**2,182.1**	**2,491.3**	**2,531.9**
Transfers						
OPER TRANSFERS IN	28.4	158.0	170.4	0.0	0.0	0.0
TRANSFERS IN - OTHER	355.4	31.1	0.0	0.0	0.0	0.0
Total Transfers	383.8	189.1	170.4	0.0	0.0	0.0
Total Sources	**3,270.1**	**3,110.1**	**3,285.7**	**2,182.1**	**2,491.3**	**2,531.9**

Actual and Estimated Revenues

State of Ohio Income Sources, Fiscal Years 2018- 2023

State Lottery (SLF)

(dollars in millions)

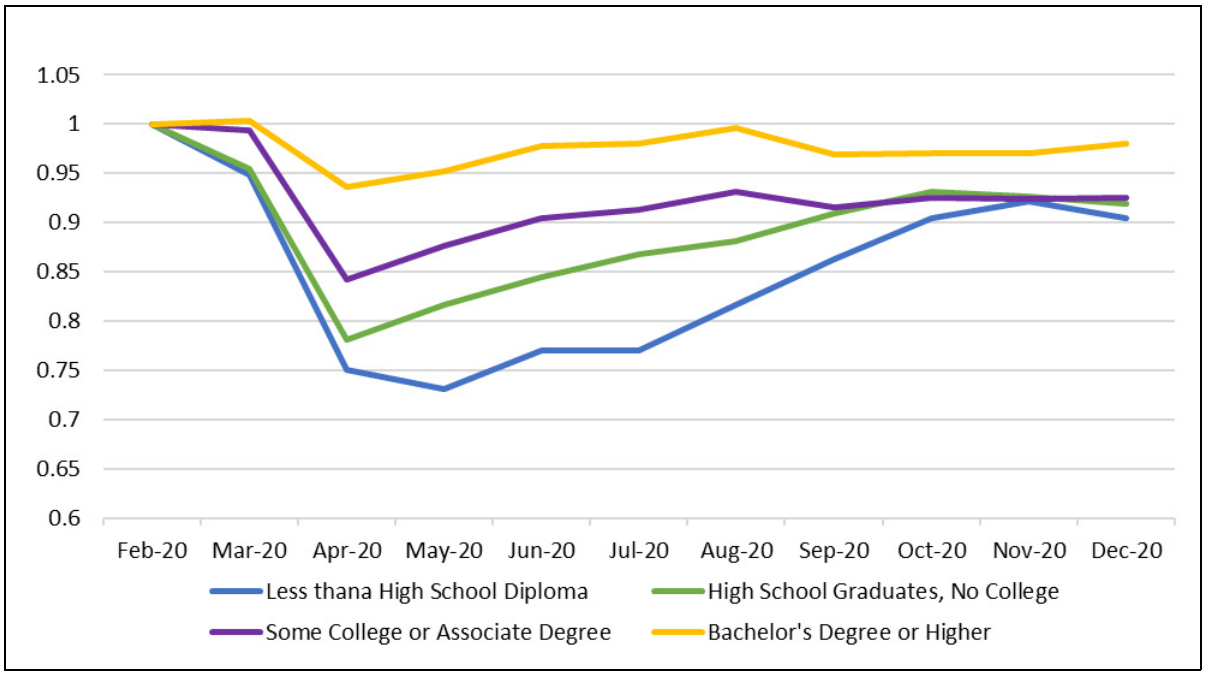
	Actual			Estimate		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY2023
Taxes						
N.A.						
Non-Taxes						
BUSINESS LICENSES & FEES	0.1	0.2	0.1	0.1	0.1	0.1
SALES AND SERVICE	1,501.8	1,536.0	1,552.6	1,557.8	1,591.0	1,625.7
FINES AND PENALTIES	0.0	0.1	0.1	0.0	0.0	0.0
RENTALS & MISC REIMBURSEMENTS	0.2	0.2	0.2	0.2	0.2	0.2
RECOVERIES	0.0	0.0	0.0	3.5	3.5	3.5
OTHER REIMBURSEMENTS	2.4	2.7	2.4	0.0	0.0	0.0
INVESTMENT INCOME	21.0	40.3	22.7	22.0	22.0	22.0
EARNINGS-INVESTS/ISTV	4.8	7.8	8.3	0.0	0.0	0.0
INTRAGOVERNMENTAL SERVICE/ISTV	0.0	0.0	0.0	0.0	0.0	0.0
Total Non-Tax Receipts	**1,530.3**	**1,587.3**	**1,586.6**	**1,583.6**	**1,616.8**	**1,651.5**
Total Revenue	**1,530.3**	**1,587.3**	**1,586.6**	**1,583.6**	**1,616.8**	**1,651.5**
Transfers						
TRANSFERS IN - OTHER	1,184.3	1,170.4	1,146.7	1,230.9	1,234.0	1,263.0
Total Transfers	**1,184.3**	**1,170.4**	**1,146.7**	**1,230.9**	**1,234.0**	**1,263.0**
Total Sources	**2,714.6**	**2,757.6**	**2,733.3**	**2,814.4**	**2,850.8**	**2,914.5**

Appendix

APPENDIX A – The K-Shaped Recovery and Employment

The first dimension along which we measure job loss and recovery in the pandemic is education level. As shown in Figure B-28, this measure shows a strong recovery by the lowest tier – in this case the least educated – of workers since the low point in May of 2020, when job losses hit 27 percent relative to pre-pandemic levels. By November, employment for the least educated workers was back to being only 8 percent below pre-pandemic level, but December brought a small reversal of those gains, to 10 percent job loss.

Figure B-28: Employment by Education Level, Indexed to February 2020

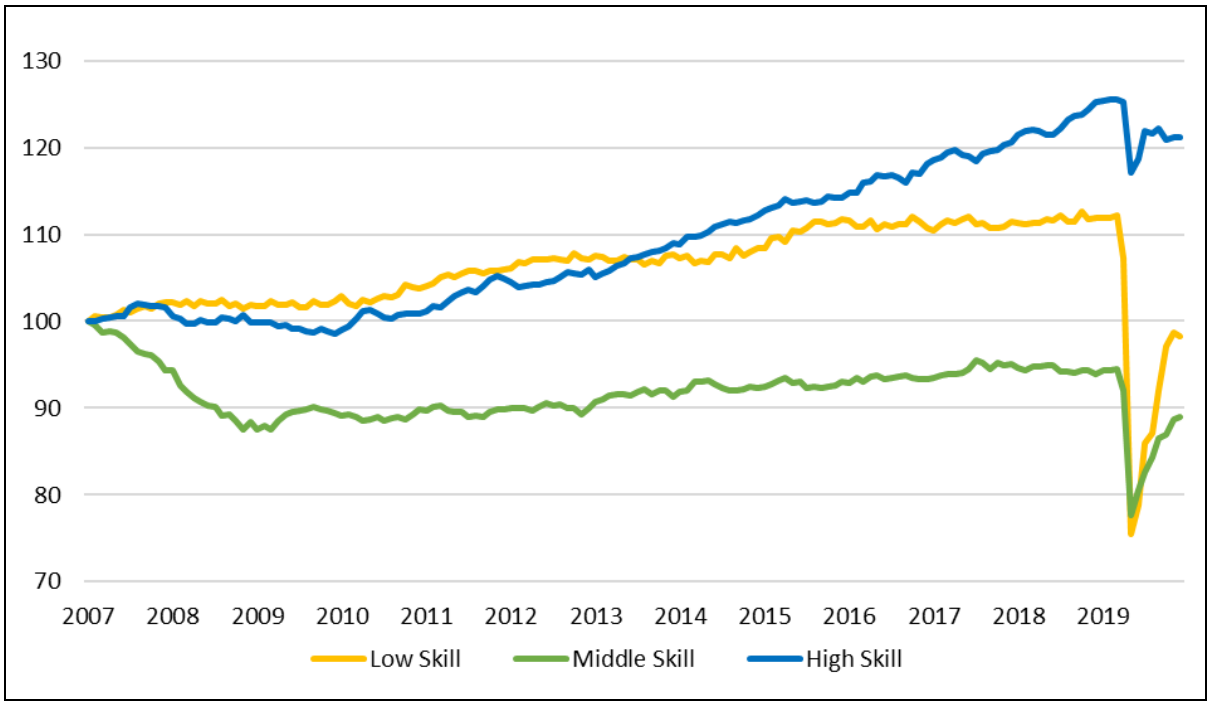


Source: Bureau of Labor Statistics, Household Survey

The second dimension along which we examine job loss and job recovery during the pandemic is by skill level of the occupation of workers. While skill level and educational attainment are correlated, the correlation is imperfect, and so the data do not tell the same story.

Again, using BLS data, Figure B-29 shows high skilled workers – these are managerial, professional, and technical jobs [10] – have done best over the past 13 years. As previously discussed, the long expansion had been favorable for low-skilled workers, up until the pandemic. Middle-skilled workers have done relatively poorly throughout the period, never recovering pre-Great Recession levels of employment.

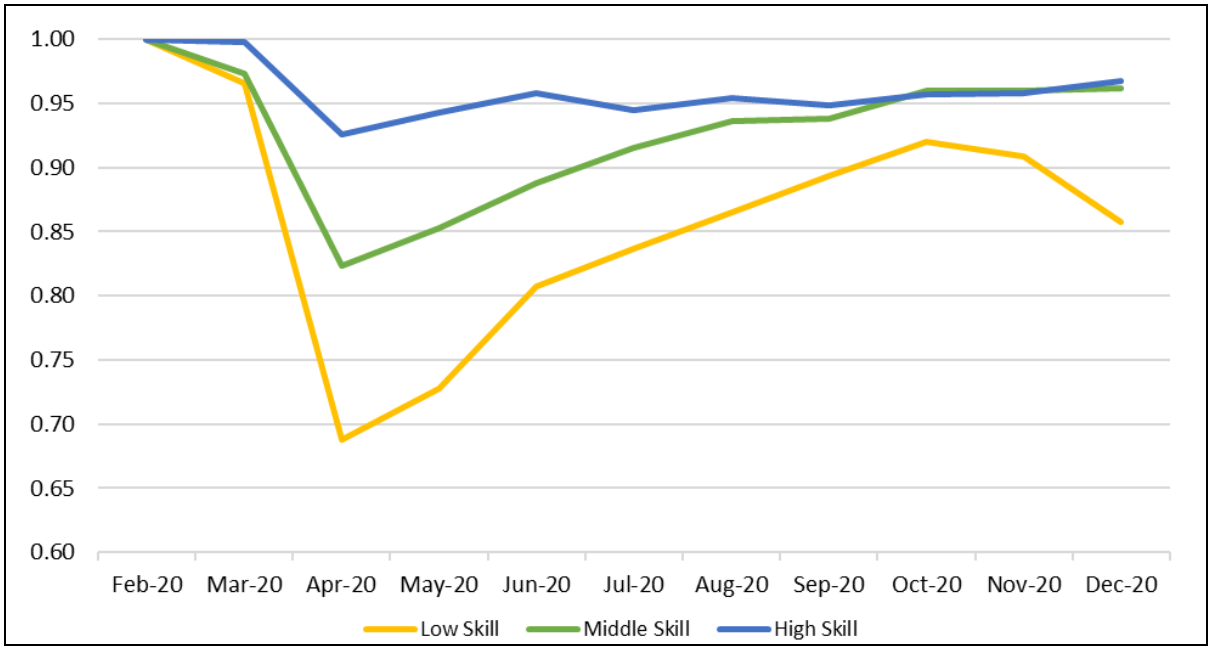
Figure B-29: Employment Growth by Skill Level, Indexed to December 2007



Source: Bureau of Labor Statistics via FRED, and Atlanta Fed

Over the shorter time horizon, looking back only to the end of the pre-pandemic period, the picture is somewhat different. As in the graph by education level, high-skilled workers, like the best educated workers, do not lose much employment, and they almost get back to the pre-pandemic level. As shown in Figure B-30, low-skilled workers, like the lowest educated workers, see employment fall sharply through April then steadily recover for a while. The surprise is that middle-skill workers, who lost more than 15 percent of employment early in the pandemic, have recovered to the same levels of employment as highly skilled workers.

Figure B-30: Employment by Skill Level, Indexed to February 2020

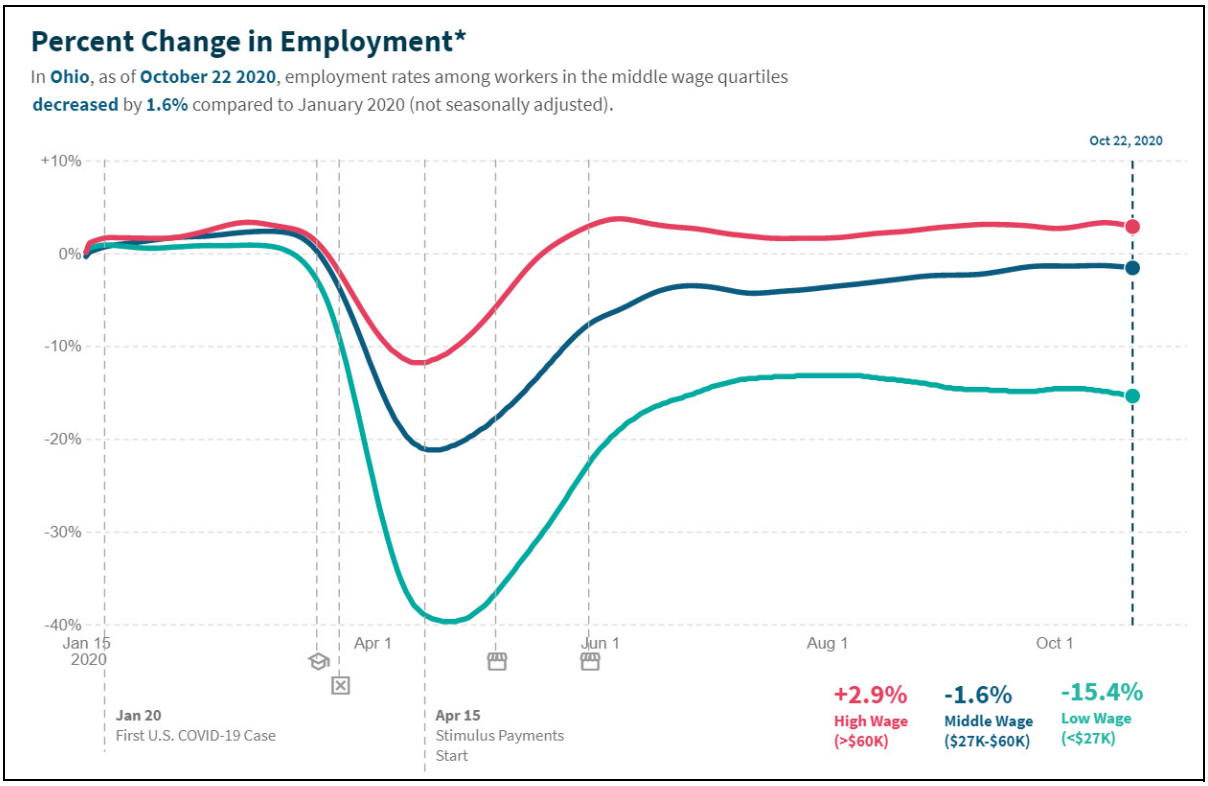


Source: Bureau of Labor Statistics via FRED, and Atlanta Fed

The third dimension along which we examine job growth and recovery is wage level. For this analysis we turn to data from Opportunity Insights, uses high frequency data to track the economic impacts of the pandemic for months. Opportunity Insights has combined high frequency employment and wage data from several private sector data providers to construct a data series that shows employment loss and recovery by wage quartile on a weekly basis.

As shown in Figure B-31, as of October 22, 2020, the highest-wage workers have slightly higher than pre-pandemic employment levels. Second, the gap between high-wage and middle-wage workers is larger than in the skill data, at six percentage points, and thus more closely correlates with the education data. As with the skill data, the employment of the lowest wage workers greatly lags that of the high- and middle-wage workers, and the gap seems to be starting to widen further in the most recent data.

Figure B-31: Employment by Wage Level Compared to January 2020



* Change in employment rates (not seasonally adjusted), indexed to January 4-31, 2020. This series is based on payroll data from Paychex and Intuit, worker-level data on employment and earnings from Earnin, and timesheet data from Kronos. The dotted line in the low-wage series is a prediction of employment rates based on Kronos data.

Data from Opportunity Insights Economic Tracker, January 20, 2021.

Appendix

Although the education, skill, and wage-based employment data do not tell exactly the same story, they agree on certain key points:

(i) The best educated, most skilled, and highest compensated workers have fared relatively well in the pandemic, with either very small job losses or very small gains, depending on the measure used. They are on the upper arm of the K.

(ii) The least educated, lowest skilled, and lowest compensated workers have fared poorly, with job losses in the 10 to 20 percent range, depending on the measure used. Furthermore, the latest data show that after regaining some of the jobs lost early in the pandemic, this group may be starting to slide down again.

(iii) Middle tier workers have not fared as well as the highest tier workers, but the picture is cloudier here. By skill level, middle tier workers have done as well as highest tier workers, but the education and wage-based data suggest that these workers have lost 4 percent to 10 percent of their pre-pandemic employment levels.

[10] The classification scheme was developed by the Atlanta Federal Reserve Bank.

APPENDIX B – Key U.S. and Ohio Variable Forecasts in the IHSM December Baseline

**Table B-14: History and Forecast of Key Economic Variables,
Fiscal Year 2018 – 2023**
(annual percent change, unless otherwise indicated)

Output	Actual			Estimate	Forecast	
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
U.S. Real GDP	2.9	2.5	-1.1	1	3.8	3
Ohio Real GDP	1.6	2.1	-1.9	0.4	3.4	2.5
Income						
U.S. nominal personal income	5.4	4.8	5.2	2.8	1.5	4.1
Ohio nominal personal income	4.1	4	4.7	2.9	1.1	3.7
Ohio nominal wage and salary income	4	4.1	0.6	3.2	4.8	3.6
Employment						
U.S. nonfarm employment	1.5	1.5	-1.9	-2.7	4.3	2
Ohio nonfarm employment	0.7	0.6	-5.3	0.5	3.7	1.1
U.S. unemployment rate (percentage)	4.1	3.8	6	7	5.1	4.5
Ohio unemployment rate (percentage)	4.5	4.2	7.9	6.2	5.29	4.8
Consumer Spending						
U.S. real personal consumption expenditure	2.7	2.5	-1.3	1.7	4.5	2.6
U.S. nominal personal consumption expenditure	4.7	4.4	0	3.1	6.5	4.6
U.S. retail and food service sales	4.8	3.5	0.3	8.3	5.7	4.2
U.S. light vehicle sales (millions of units)	17.14	17.15	16.48	14.65	16.06	15.98
U.S. light vehicle average price (thousands)	$33.09	$33.96	$35.38	$37.38	$38.15	$39.18

Source: IHSMarkit December 2020 Baseline

Released February 1, 2021