OHIO LEGISLATIVE SERVICE COMMISSION

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BASELINE FORECASTS OF GRF REVENUES & MEDICAID EXPENDITURES

FY 2020-FY 2021 Biennial Budget

March 19, 2019

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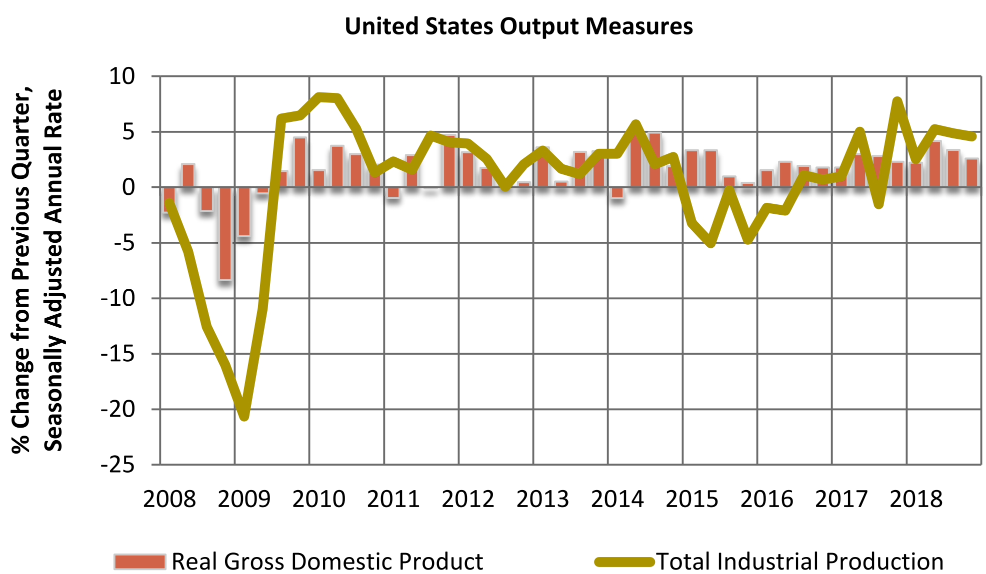
ECONOMIC CONDITIONS AND OUTLOOK

State of the Economy

Economic growth nationally was strong through much of the previous biennium. Ohio's economy continued to expand, though not as rapidly as that of the nation. Economic statistics have been mixed in early 2019. Annual growth of inflation-adjusted gross domestic product (real GDP) was 2.6% nationally in the fourth quarter of 2018. National industrial production grew at a rate of 4.6% during that time, but fell in the month of January and grew weakly in February. Employment numbers have been good in recent months, although February employment gains in the nation were minimal. The Federal Reserve Bank's Open Market Committee (FOMC) has tempered plans for further increases in the federal funds rate, resorting to a more patient approach when assessing current economic conditions.[1] On March 6, 2019, the final vehicle rolled off the assembly line at General Motors' assembly plant in Lordstown, Ohio. At least 1,700 positions were lost.[2]

The National Economy

The national economy continued to grow in 2018, extending a recovery and expansion that began in 2009. Economic indicators have turned mixed in early 2019, with employment up strongly in January but stagnating in February. Real GDP grew by 2.9% in 2018, the highest rate of growth since 2015. Growth was supported by federal tax cuts and spending increases. Interest rates generally rose during the past two years but remain low in a longer-term historical context, and monetary policy tightening of the past few years appears now to be on hold. The chart below illustrates quarterly changes in real GDP and industrial production from 2008 through last year. Industrial production is predominantly manufacturing, and also includes mining and utility output.



[1] https://www.federalreserve.gov/newsevents/pressreleases/monetary20190130a.htm.

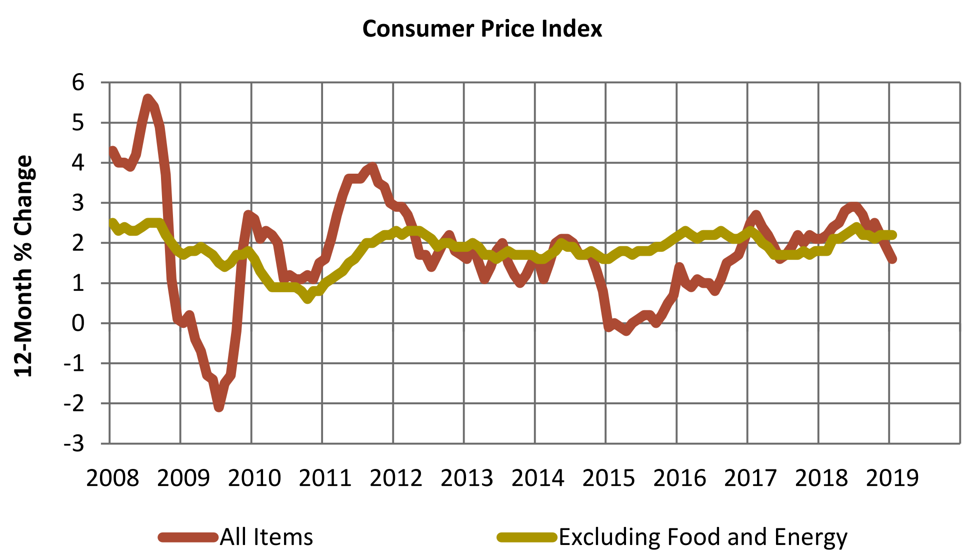
[2] https://www.chicagotribune.com/business/ct-biz-gm-lordstown-ohio-plant-closing-20190306-story.html.

Total nonfarm payroll increased by 20,000 in February after rising 311,000 in January, according to the U.S. Bureau of Labor Statistics. The unemployment rate, measured as the number of unemployed persons divided by the number of persons in the labor force, declined to 3.8%, down 0.2 percentage points from a month earlier. The number of unemployed persons decreased by 300,000 to 6.2 million persons. Employment in professional and business services increased by 42,000 workers. Construction employment declined by 31,000 in February; year over year, the construction industry has added 223,000 jobs.

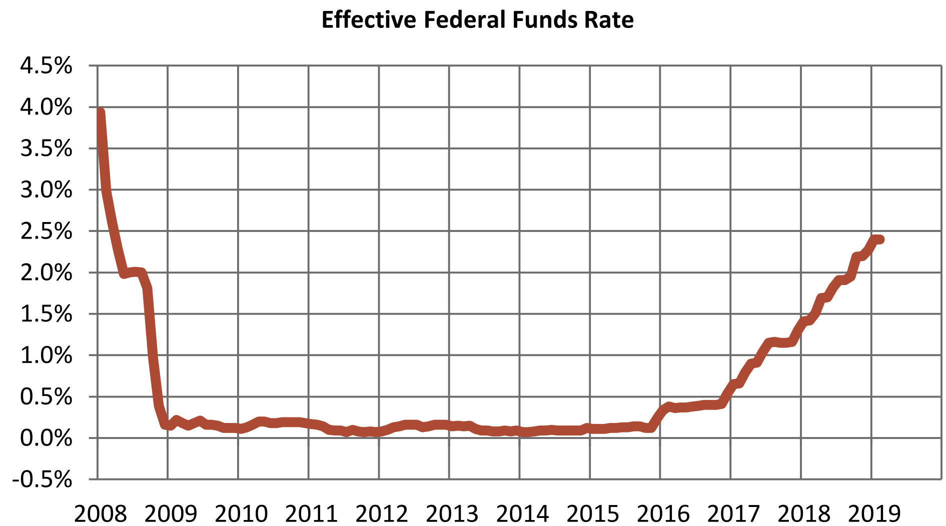
Consumer spending was strong during much of 2018, supported by employment and wage gains and the tax cuts in late 2017. Consumer durable goods spending grew during the year. Retail sales slowed late in 2018. Overall sales of new cars and light trucks were 17.2 million units in 2018, up 0.5% from 2017. The market share of light trucks and SUVs increased sharply over the last year. During 2018, automakers announced plans to reduce manufacturing in the U.S., coupled with plans to reduce the variety of models offered, particularly among the passenger car segment.

The rate of real private residential fixed investment reached its highest level (seasonally adjusted) in ten years in the fourth quarter of 2017, then declined slowly during 2018. Nonresidential fixed investment accelerated during 2018 to 7% higher than a year earlier. The largest percent change among the major investment subcategories was in intellectual property products. Export demand rose, as did government spending at both the federal level and the state and local level.

Inflation, measured by the consumer price index (CPI), remained slightly above the Federal Reserve's 2% target for much of Calendar Year 2018, and slowed in recent months. The measure which includes food and energy products has been volatile over recent history due to variable energy prices. Overall price inflation was minimal in 2015 and was slow to pick up for much of 2016 after a steep drop in energy prices at the end of 2014. The drop in energy prices in late 2018 resulted in no month-to-month increase in the all-items CPI from October 2018 to January 2019; the index moved up 0.2% in February.

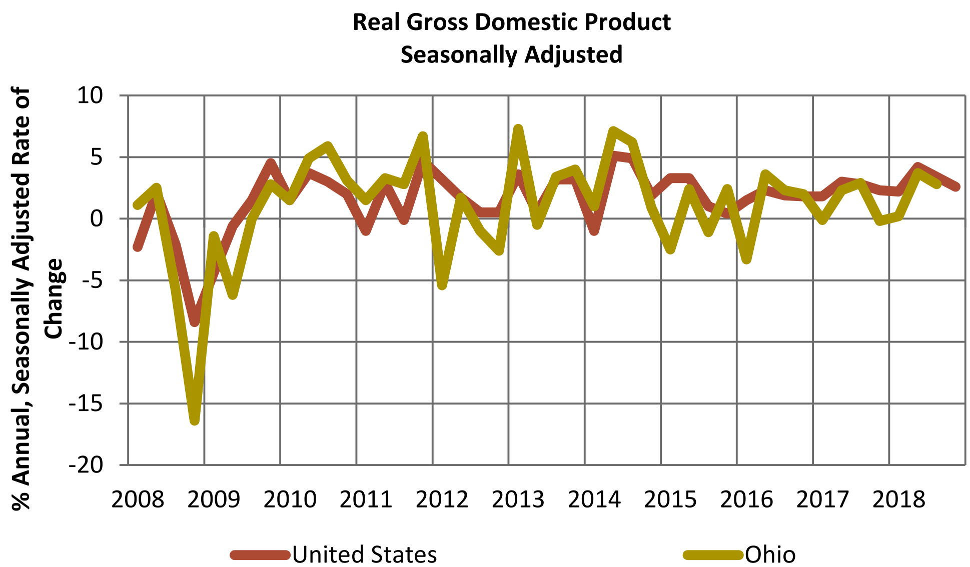


The Federal Reserve began raising short-term interest rates in December 2015, and in December 2016 determined economic conditions were strong enough for a second quarter-point increase in the target range. The Federal Reserve's interest rate range was raised consistently over 2017 and 2018 due to strength in the economy, financial markets, and labor markets. Future interest rate increases may be more gradual than previously appeared likely. The statement released after the January meeting of the central bank's monetary policy decision makers said the committee would be "patient" in considering future interest rate changes. Six weeks earlier, nearly all committee members expected to raise short-term interest rates in 2019, by 0.25 to 0.75 percentage point.

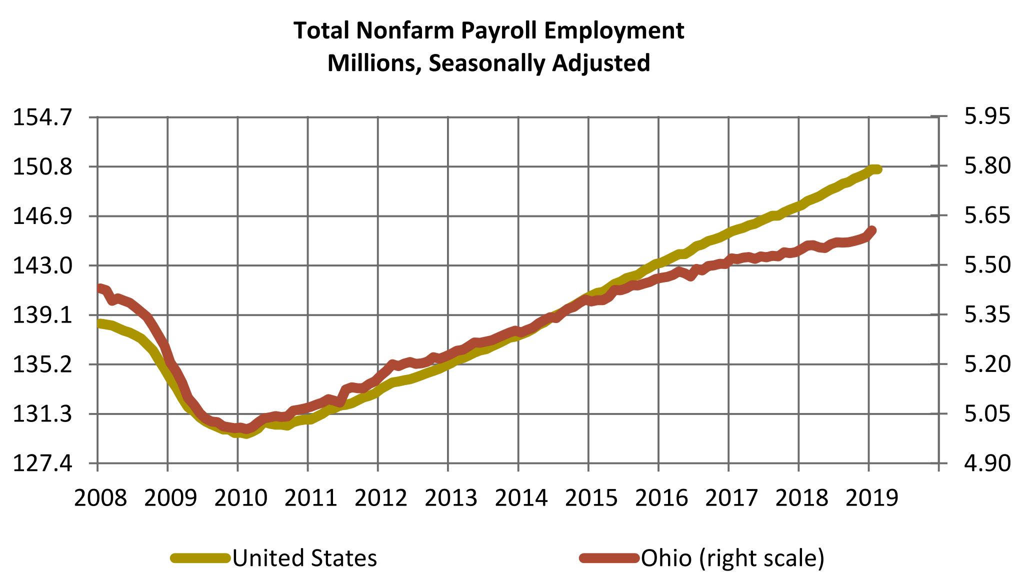


The Ohio Economy

The economy in Ohio has been growing along with the national economy since mid-2016, although the growth rate in real GDP has generally been slower in Ohio than nationally since 2015. In the third quarter of 2018, Ohio's economy grew at an annualized 2.8% rate, down from 3.7% during the second quarter and approximately the same as the third quarter of 2017. Over the same two quarters, national real GDP growth was 3.4% and 4.2%, respectively. During the third quarter of 2018, Ohio's fastest growing sector, as measured by its contribution to total GDP growth, was wholesale trade, followed closely by finance and insurance.

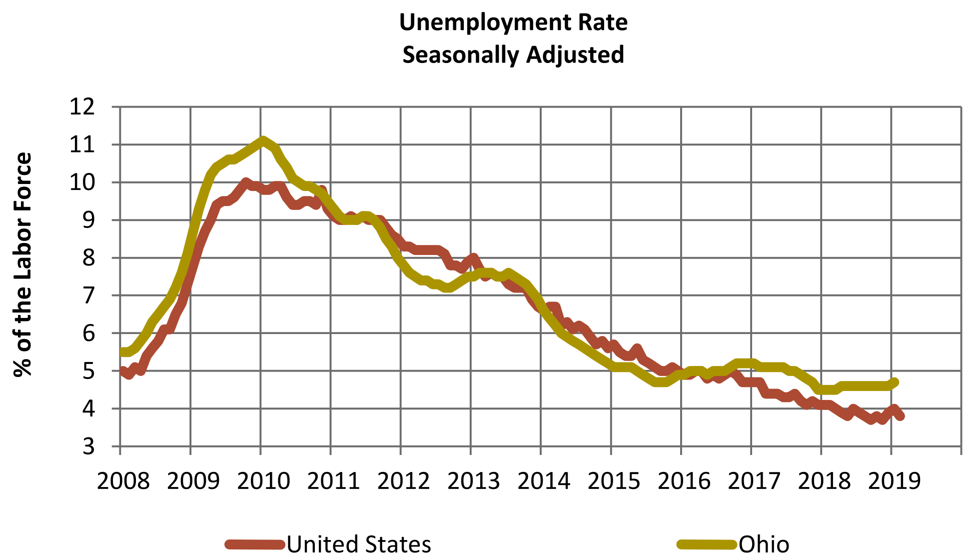


In the year to December 2018, Ohio nonfarm payroll employment grew by a revised 44,700 jobs (0.8%), and increased a further 20,300 from December to January.[3] The pace of growth picked up modestly in the past year, after slower growth in 2017. The healthcare and social assistance sector added the most jobs in Ohio in the past year, while retail trade lost the most jobs. In private industry, the goods-producing sector added 18,700 jobs in the past year, while the service-providing sector gained 38,600 workers.

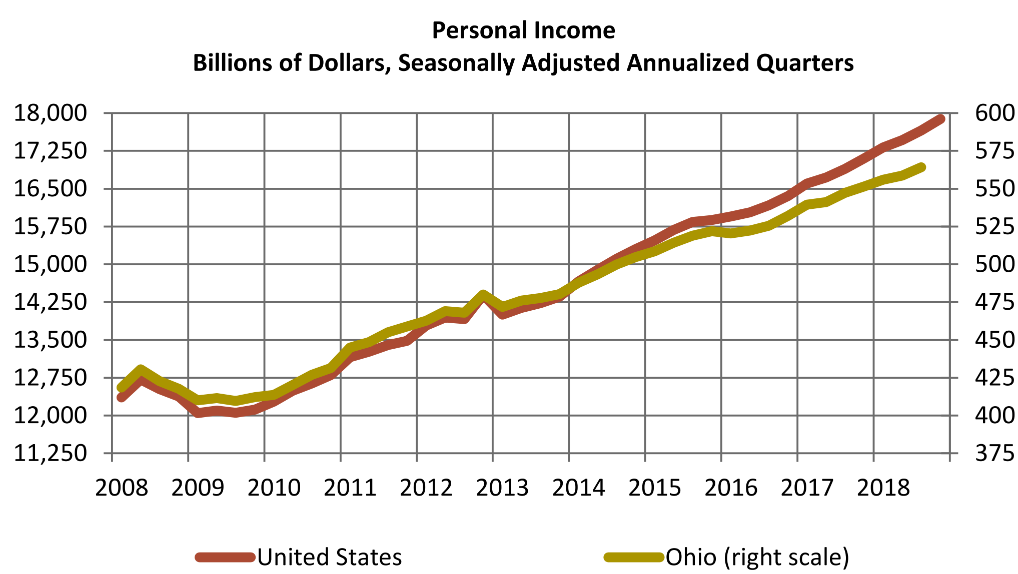


[3] Prior to revision, Ohio nonfarm payroll employment was reported to have grown 116,500 (2.1%) in the year to December. Nationwide, total nonfarm payroll employment rose 1.8% in that period.

Ohio's unemployment rate in January was 4.7%, up from 4.6% a month prior. Ohio's unemployment rate has been higher than the national average since May 2016. The number of unemployed workers in Ohio was 269,000 in January, an increase of 2,000 from December. The Ohio civilian labor force did not gain a significant number of participants in December 2018, and declined by 0.3% year over year.

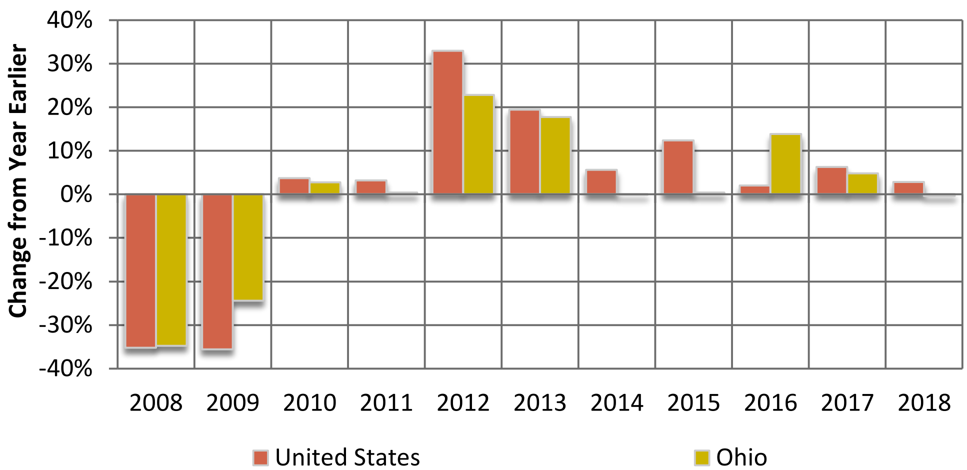


Personal income, total earnings from wages, investments, transfers, and business income, has grown in Ohio and nationally in nearly every quarter since 2009, as seen in the chart below. Figures in the chart reflect dollars of current purchasing power. Ohio's personal income grew 3.1% year over year, ending in the third quarter of 2018, while personal income in the U.S. rose 4.4%.



The Ohio statewide housing market, following a series of moderately strong years, softened in 2018. Housing construction growth, as indicated by building permits for new privately owned units (the chart below), slowed last year. On the national level, new housing construction activity grew but more slowly than in 2017. Ohio existing home sales, as measured in units, decreased by 0.7% in 2018 as compared to a year prior. According to Ohio Realtors, the average sale price of an existing Ohio home was $182,484 in 2018, an increase of $9,281 over the average sale price in 2017. The total dollar volume of existing home sales increased by 4.6% in 2018.

New Privately Owned Housing Units
Authorized by Building Permits



Economic Forecasts

The following are forecasts of key indicators of the economic environment that will determine state revenues during the next biennium. Some of the indicator forecasts were inputs to LBO models used to make state revenue forecasts. Both these economic indicator forecasts and LBO's forecasts for state revenues are inherently subject to uncertainty. The economic indicator projections are from IHS Economics' baseline forecasts released in February 2019.

The first line in each table contains quarter-by-quarter projected changes in the indicator at seasonally adjusted annual rates. The second line contains year-over-year projected changes in the indicator averaged over the four quarters of the fiscal year. The unemployment rate tables are IHS Economics' unemployment rate projections for the quarters indicated (first line) and the average of the rates in the quarters of each fiscal year (second line).

U.S. Gross Domestic Product

U.S. real GDP is projected to increase about 1.9% annually on average in the next biennium, as shown below.

U.S. Real GDP Growth												
	2019				2020				2021			
Forecast	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	---------------------------------- Percent change at annual rate ----------------------------------											
Quarterly	1.6	2.5	2.1	2.1	1.9	1.9	1.7	1.7	1.7	1.6	1.5	1.6
Fiscal Year		2.8				2.1				1.8		

Ohio Gross Domestic Product

Economic growth in Ohio is expected to continue through 2021 but at a slower pace than the nation. Ohio real GDP is projected to increase about 1.4% annually on average in the next biennium.

Ohio Real GDP Growth												
	2019				2020				2021			
Forecast	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	---------------------------------- Percent change at annual rate ----------------------------------											
Quarterly	1.1	2.0	1.7	1.7	1.3	1.2	1.0	1.0	1.0	1.0	1.0	0.9
Fiscal Year		2.2				1.6				1.1		

U.S. Inflation

IHS Economics' February baseline forecast projects that inflation measured by the rate of increase in the CPI will average about 2.1% annually in the next biennium.

U.S. Consumer Price Index Inflation												
	2019				2020				2021			
Forecast	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	---------------------------------- Percent change at annual rate ----------------------------------											
Quarterly	0.9	3.1	2.6	2.1	1.8	2.0	1.9	1.4	2.7	2.7	2.5	2.4
Fiscal Year		2.1				2.2				2.0		

U.S. Personal Income

Nationwide personal income is projected to grow about 4.3% annually in the next biennium. These growth rates are based on the dollar amounts of income, not adjusted for inflation.

U.S. Personal Income Growth												
	2019				2020				2021			
Forecast	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	---------------------------------- Percent change at annual rate ----------------------------------											
Quarterly	4.7	4.3	4.2	4.2	4.6	4.3	4.0	4.0	4.5	4.1	4.1	4.2
Fiscal Year		4.3				4.3				4.2		

Ohio Personal Income

Income to persons who reside in Ohio also is forecast to grow in the next biennium, at 3.8% annually on average, a little less than the pace of growth projected for the U.S.

Ohio Personal Income Growth												
	2019				2020				2021			
Forecast	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	---------------------------------- Percent change at annual rate ----------------------------------											
Quarterly	4.8	4.0	3.8	3.9	4.2	3.9	3.3	3.3	4.0	3.5	3.5	3.6
Fiscal Year		3.6				4.1				3.6		

U.S. Unemployment Rate

IHS Economics' February baseline forecast projects the nationwide unemployment rate to remain near recent levels through the next biennium. The U.S. unemployment rate in February, reported after this forecast was completed, was 3.8%.

U.S. Unemployment Rate												
	2019				2020				2021			
Forecast	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	---------------------------------- Percent of the labor force ----------------------------------											
Quarterly	3.8	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.7	3.7	3.7	3.8
Fiscal Year		3.7				3.6				3.7		

Ohio Unemployment Rate

Ohio's unemployment rate is projected to decline to around 4.0% during the biennium. The statewide unemployment rate in December, also released subsequent to this forecast, was 4.6%.

Ohio Unemployment Rate												
	2019				2020				2021			
Forecast	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	---------------------------------- Percent of the labor force ----------------------------------											
Quarterly	4.4	4.2	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.1	4.1
Fiscal Year		4.5				4.0				4.0		

REVENUE FORECASTS

Summary

The LBO baseline forecasts for FY 2020 and FY 2021 assume the current statutory tax structure, including tax changes enacted by the 132nd General Assembly. The most significant single tax change during the last two years was imposed administratively via a 3.3% reduction in income tax withholding rates implemented by the Tax Commissioner on January 1 of this year; the withholding rate was reduced to correspond to reductions in income tax rates enacted in H.B. 64 of the 131st General Assembly for which withholding rates had not previously been fully adjusted. Though the withholding rate change did not change income tax liabilities for taxpayers, it will reduce income tax revenue during FY 2019 by about $150 million because tax returns that would settle up the tax liabilities for the withholding during the first half of 2019 will be filed on or before April 15, 2020, i.e., in FY 2020. S.B. 8 of the 132nd General Assembly enacted an exemption for optical devices, e.g., glasses or contact lenses, from the sales tax effective July 1, 2019, reducing sales tax revenue during the upcoming biennium by about $23 million each year. Also a three-day sales tax holiday in August that had been enacted for a single year each year since 2015 was made permanent by S.B. 226 of the 132nd General Assembly.

A number of states experienced significant effects on their tax revenue from changes in federal tax law enacted in December 2017. Ohio was not one of those states. The federal changes were oriented primarily toward business taxes, and Ohio's commercial activity tax does not depend on federal definitions of the tax base. Also, the business income deduction allowable under Ohio's individual income tax, combined with the 3% flat tax rate on business income over $250,000, minimized the effects of any changes on Ohio's income tax due to the federal changes.

H.B. 49 of the 132nd General Assembly included a provision that temporarily increased the share of GRF tax revenue allocated to the Public Library Fund (PLF) from its statutory level of 1.66% of such revenue to 1.68% for the current biennium. The forecast assumes that the 1.66% share of total GRF tax revenue in codified law will resume for the upcoming biennium.

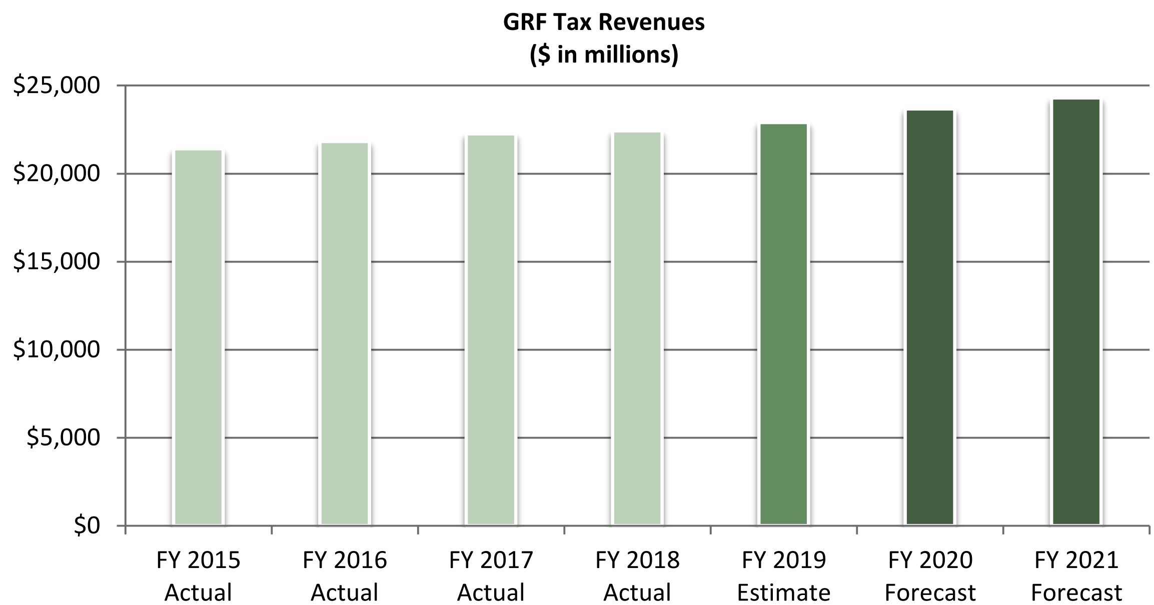
Three taxes that generated some revenue during FY 2018 and FY 2019, the corporate franchise tax (CFT), the business and property tax, and the estate tax, have been repealed. We expect no revenue from these taxes in future years.[4]

GRF tax revenue under current law is forecast to increase by $771.7 million (3.4%) in FY 2020. Growth is expected for most tax revenue sources, as the economic expansion is expected to continue. The cigarette and other tobacco products tax is a notable exception, as it historically trends downward except when an increase in tax rates is enacted (e.g., FY 2016 due to an H.B. 64 tax increase). The other exception is kilowatt hour tax revenue, for which all funds revenue is expected to decline slightly. LBO also forecasts revenue from earnings on investments and from license fees, which are projected to total $150.9 million in FY 2020.

[4] Revenue from the business and property tax was negative in FY 2018 rather than positive, implying that net refunds were paid out. Also, the financial institutions tax, which first received revenue in FY 2014, replaced the CFT and the business and property tax.

GRF tax revenue under current law is forecast to increase by $625.1 million (2.6%) in FY 2021. Growth in revenue from the nonauto sales and use tax, the largest GRF tax source, is projected to decelerate due to a reduction in the tax base: a federal exemption that had allowed Ohio and certain other states to impose a sales tax on Internet access service will expire at the end of FY 2020. Revenue from the personal income tax is projected to grow somewhat faster than in FY 2020, as are receipts from the auto sales and use tax. Moderate revenue growth is expected for most other tax sources, except for declining receipts from the tax on cigarettes and other tobacco products and the kilowatt hour tax. Earnings on investments and license revenue are forecast to total $153.4 million in FY 2021.

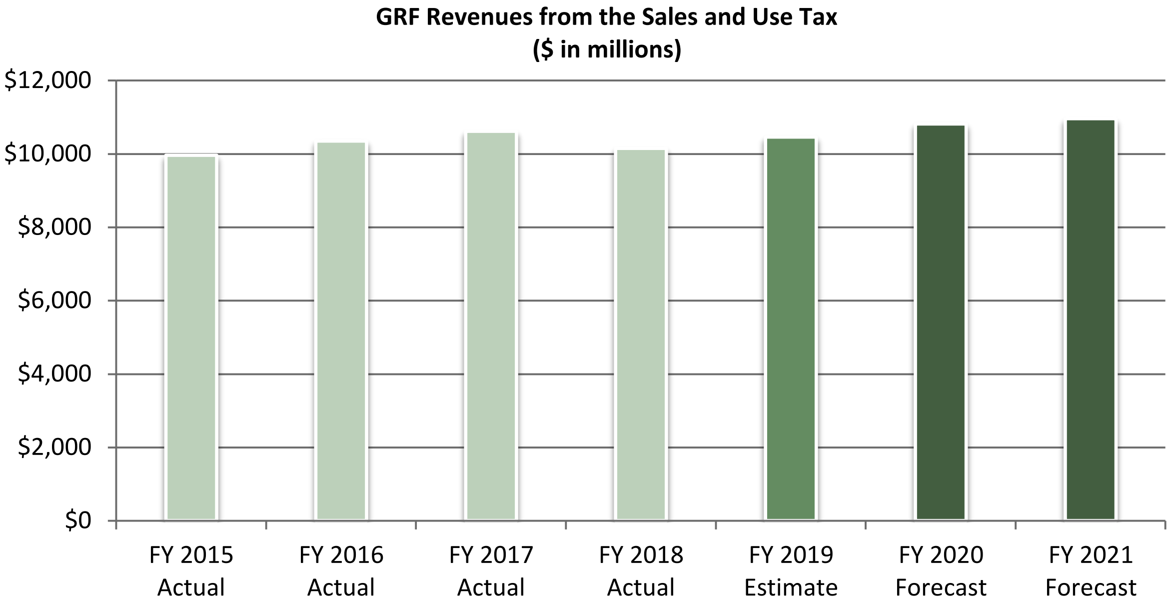
GRF tax revenue for the FY 2020-FY 2021 biennium is forecast to be $47.96 billion, 5.8% higher than the revenue received during the current biennium. The following chart and table provide overviews of GRF receipts from taxes and from two state nontax sources, earnings on investments, and receipts from charges for licenses and fees.



$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$21,405.1	$21,819.5	$21,885.6	$22,422.6	$22,896.9	$23,668.6	$24,293.7
Growth	6.3%	1.9%	0.3%	2.5%	2.1%	3.4%	2.6%

LBO Baseline Revenue Forecasts, FY 2020-FY 2021 ($ in millions)							
GRF	FY 2018 Actuals	FY 2019 Estimates	Growth Rate	FY 2020 Forecast	Growth Rate	FY 2021 Forecast	Growth Rate
TAX REVENUE							
Auto Sales & Use	$1,440.5	$1,479.0	2.7%	$1,510.0	2.1%	$1,545.0	2.3%
Nonauto Sales & Use	$8,707.6	$8,978.0	3.1%	$9,303.8	3.6%	$9,413.4	1.2%
Total Sales & Use	**$10,148.2**	**$10,457.0**	**3.0%**	**$10,813.8**	**3.4%**	**$10,958.4**	**1.3%**
Personal Income	$8,411.0	$8,465.4	0.6%	$8,841.4	4.4%	$9,290.3	5.1%
Commercial Activity	$1,522.8	$1,586.9	4.2%	$1,626.9	2.5%	$1,663.5	2.2%
Cigarette	$939.8	$921.0	-2.0%	$898.0	-2.5%	$877.0	-2.3%
Kilowatt Hour Excise	$342.4	$347.0	1.4%	$338.8	-2.4%	$320.4	-5.4%
Foreign Insurance	$276.5	$270.0	-2.4%	$276.0	2.2%	$285.0	3.3%
Domestic Insurance	$278.4	$294.6	5.8%	$305.6	3.7%	$319.3	4.5%
Financial Institutions	$201.1	$208.6	3.7%	$215.0	3.1%	$220.0	2.3%
Public Utility	$119.2	$150.0	25.8%	$155.0	3.3%	$160.0	3.2%
Natural Gas Consumption	$69.6	$80.3	15.4%	$81.1	1.0%	$81.7	0.8%
Alcoholic Beverage	$55.7	$55.9	0.4%	$57.0	2.0%	$57.1	0.2%
Liquor Gallonage	$48.1	$51.0	5.9%	$52.0	2.0%	$53.0	1.9%
Petroleum Activity	$7.8	$8.0	2.0%	$8.0	0.0%	$8.0	0.0%
Corporate Franchise	$2.2	$1.2	-45.1%	$0.0	-100.0%	$0.0	--
Business & Property	-$0.4	$0.0	-100.0%	$0.0	--	$0.0	--
Estate	$0.2	$0.0	-100.0%	$0.0	--	$0.0	--
Total Tax Revenue	**$22,422.6**	**$22,896.9**	**2.1%**	**$23,668.6**	**3.4%**	**$24,293.7**	**2.6%**
NONTAX STATE-SOURCE REVENUE							
Licenses and Fees	$59.1	$59.0	-0.2%	$60.0	1.7%	$60.0	0.0%
Earnings on Investments	$64.5	$84.8	31.5%	$90.9	7.2%	$93.4	2.8%

Sales and Use Tax



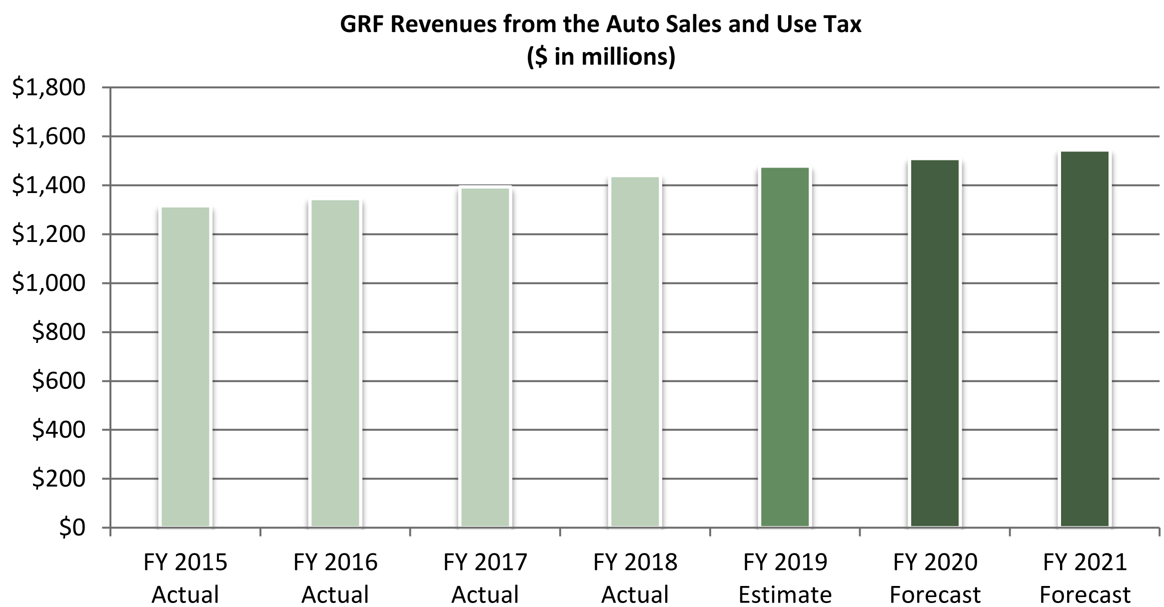
$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$9,960.2	$10,348.0	$10,614.6	$10,148.2	$10,457.0	$10,813.8	$10,958.4
Growth	8.7%	3.9%	2.6%	-4.4%	3.0%	3.4%	1.3%

Under current law, the state sales and use tax is levied at a rate of 5.75% on retail sales of tangible personal property, rental of some tangible personal property, and selected services. Major exemptions to the sales and use tax include: food for human consumption off the premises where sold, motor fuel (taxed separately), packaging and packaging equipment, prescription drugs and medical supplies, and property used primarily in manufacturing or used directly in mining or agriculture. There is also a credit for trade-ins on purchases of new motor vehicles.

For forecasting purposes, the tax is separated into two parts: auto and nonauto. Auto sales and use tax collections generally arise from the sale of motor vehicles while nonauto sales and use tax collections arise from other sales. One major exception is auto taxes arising from leases, which are paid at the lease signing and are mostly recorded under the nonauto tax, instead of the auto tax. The level of auto sales is dependent on the level of incentives provided by manufacturers and dealers and changes in gasoline prices. Those incentives have also changed the way consumers decide whether to purchase or lease their vehicles. As the share of vehicles leased and manufacturers' incentives have varied over the years, the auto sales tax has become more volatile. Also, those changes have affected the nonauto sales tax because taxes arising from leases are recorded under the nonauto sales tax.

The performance of the sales tax has been solid in recent years. Revenue growth was aided by additional tax receipts from the ACA expansion (i.e., the Medicaid expansion under the federal Affordable Care Act), and a boost from the auto portion of the tax. The impact of these factors on sales tax revenue growth declined in the FY 2016-FY 2017 biennium. FY 2018 revenue decreased due to the elimination of the sales tax on Medicaid health insuring corporations (MHICs) which was effective July 1, 2017. GRF revenues under current law are projected to rise by 3.4% in FY 2020, and 1.3% in FY 2021. Slower growth in FY 2021 was partly due to that fact that a federal exemption that had allowed Ohio and certain other states to impose a sales tax on Internet access service will expire at the end of FY 2020.

Auto Sales and Use Tax

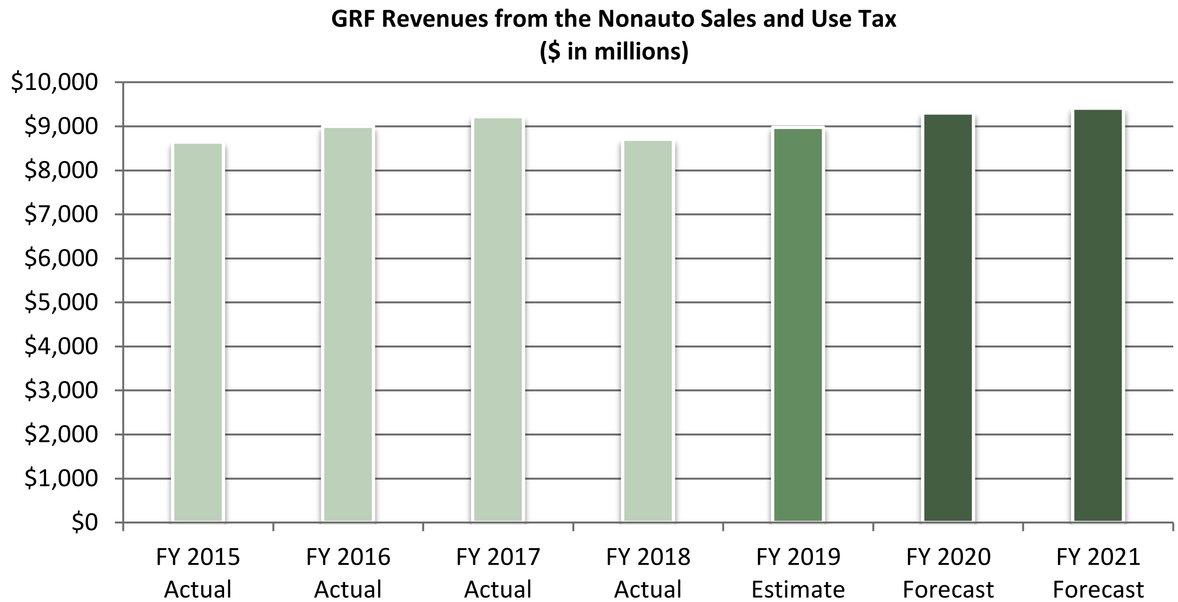


$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$1,316.6	$1,346.3	$1,394.0	$1,440.5	$1,479.0	$1,510.0	$1,545.0
Growth	8.8%	2.3%	3.5%	3.3%	2.7%	2.1%	2.3%

The forecast for the auto sales and use tax is based on statistical regressions of quarterly auto sales and use tax base against new Ohio auto registrations, wages and salaries, and interest rates.

The auto sales and use tax taxable base grew strongly in recent years supported by a long economic expansion. Also, consumer preference has shifted from passenger vehicles to light trucks, which have reached more than two-thirds of unit sales in recent years. This shift towards higher-priced vehicles has increased auto sales tax revenue. However, after four consecutive years of nationwide vehicle unit sales exceeding 17.0 million units, auto analysts predict sales to be flat or even decrease slightly in the next biennium. Thus, revenue growth is estimated to slow starting this fiscal year. The forecast for the upcoming biennium assumes gasoline prices would remain relatively low, increases in interest rates benign, but average vehicle prices would continue to rise. Revenue to the GRF is forecast to rise by 2.1% and 2.3% in FY 2020 and FY 2021, respectively.

Nonauto Sales and Use Tax



$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$8,643.6	$9,001.7	$9,220.6	$8,707.6	$8,978.0	$9,303.8	$9,413.4
Growth	8.6%	4.1%	2.4%	-5.6%	3.1%	3.6%	1.2%

The forecast for the nonauto sales and use tax is based on statistical regressions of quarterly nonauto sales and use tax revenues against Ohio employment, wages and salaries, housing starts, and changes in the Standard and Poor's 500 index.

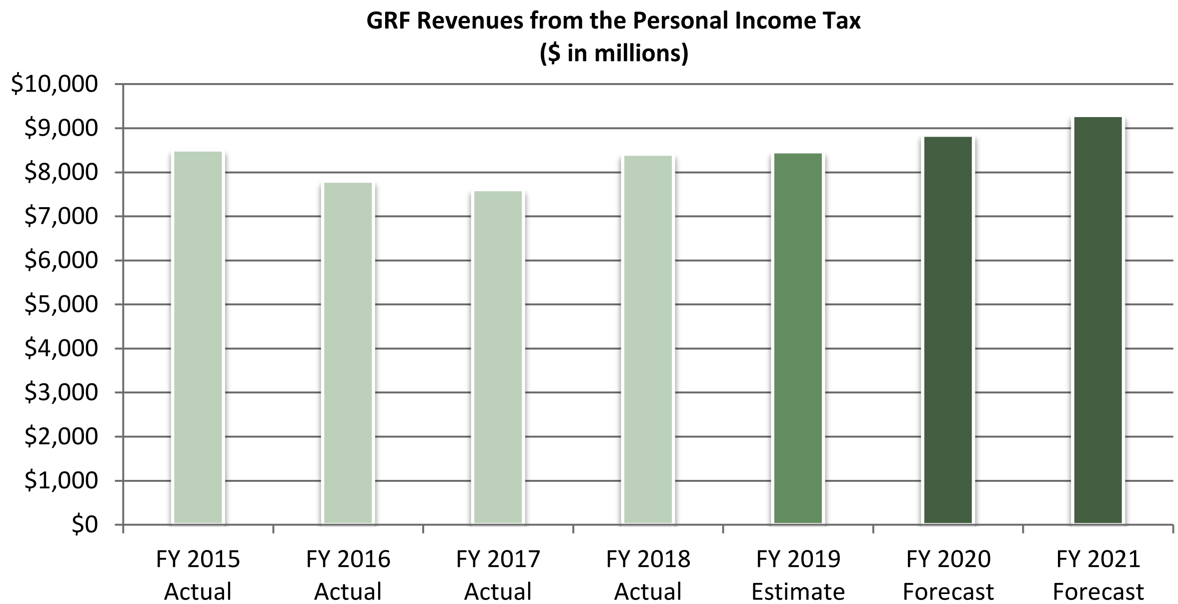
Growth in nonauto sales and use tax receipts has been supported by wage growth, and growth in tax payments by MHICs, which were added to the nonauto sales and use tax by H.B. 1 of the 128th General Assembly. The Medicaid expansion boosted revenue through FY 2015. By FY 2017, those factors had dissipated as growth fell to 2.4%. Starting July 1, 2017, Ohio's sales tax on MHICs (found to not conform to federal rules) was eliminated.[5] As a result of this reduction in the nonauto sales and use tax base, revenue declined in FY 2018, though the non-MHIC tax base expanded. Revenue growth resumed in FY 2019 and will continue as the economic expansion is expected to endure in the next biennium. GRF nonauto sales tax

[5] In FY 2017, the sales tax on MHICs provided about 9% of the nonauto sales and use tax revenue.

revenue is expected to grow by 3.6% and 1.2% in FY 2020 and FY 2021, respectively. Growth in FY 2021 is restrained by the expiration of a moratorium on Internet access sales taxes. In 2016, the 114th Congress eliminated sales taxes on Internet access services, but a "grandfather" clause allowed certain states, including Ohio, to continue to levy the tax.[6] This grandfather provision expires June 30, 2020. Thus, estimated collections from Internet access sales taxes are excluded in forecasted revenue for FY 2021.

Future nonauto sales and use tax revenues may get a boost from recent changes in nexus provisions in Ohio law (H.B. 49) and a recent decision by the U.S. Supreme Court allowing states to impose collection of sales taxes by remote sellers.[7]

Personal Income Tax



$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$8,506.7	$7,799.3	$7,606.5	$8,411.0	$8,465.4	$8,841.4	$9,290.3
Growth	5.5%	-8.3%	-2.5%	10.6%	0.6%	4.4%	5.1%

[6] The grandfather clause allowed state and local government to continue taxing Internet access if they had the tax imposed and enforced before October 1, 1998. At the time of the ban, 13 states were included under this clause.

[7] The decision on the matter of *South Dakota v. Wayfair, Inc*, handed down on June 21, 2018, overturned long-standing prohibitions regarding state sales taxation of remote sales. Though the Court ruled on the laws in another state and not on Ohio's tax laws, it was likely certain out-of-state retailers would begin to voluntarily charge and collect Ohio sales and use tax.

The personal income tax is levied on Ohio taxable income, which equals federal adjusted gross income (FAGI) as reported to the U.S. Internal Revenue Service (IRS), plus or minus various adjustments and minus personal and dependent exemptions. A taxpayer's tax liability before credits is determined by applying Ohio's graduated tax rates to the taxpayer's Ohio taxable income. Business income has been given separate treatment since tax year (TY) 2013, with the first $250,000 of a taxpayer's business income currently exempted from tax by a deduction,[8] with the balance taxable at a reduced rate. Certain credits may be subtracted from tax before credits to derive the taxpayer's final tax liability.

The estimate of personal income tax revenues in FY 2019 and the forecasts for FY 2020 and FY 2021 are based on the results of models of revenue collections. The models work with four components of state income tax collections: employer withholding, payments from individual taxpayers (quarterly estimated tax payments and annual returns), other revenues (trust income and miscellaneous collections), and refunds. The data are largely organized on a fiscal-year basis. Withholding is estimated as a function of Ohio wage and salary income, nonfarm payroll employment, withholding rates, the amount of wages per employee, and the number of employees per household. The individual taxpayer component is a function of the Standard and Poor's (S&P) 500 index (used to represent capital gains), proprietors' income, dividend income, interest income, rental income, household holdings of equities and nonfinancial assets, tax rate variables, and the estimated impact of the business income deduction and lower tax rate. All other income tax collections are a function of revenue trends in miscellaneous collections and the S&P 500 index (used as a predictor of receipts derived from taxable trusts). Refunds are a function of gross tax collections (withholding plus individual plus other), the change in gross tax collections from the previous year, the value of the personal exemption, variables for the business income deduction and 3% rate on taxable business income, refunds in the previous year, and tax rate variables. Forecasts of the explanatory variables are from IHS Economics (formerly Global Insight), except for withholding and tax rates and personal exemption amounts.

Because of the many changes made in recent years to laws governing the personal income tax, forecasting future revenue is more challenging than in years past. A withholding rate reduction in January of this year is reducing tax revenue growth in FY 2019 but will not affect revenue growth in the upcoming biennium. In the forecast, model-generated revenue estimates are adjusted for enhancement of the motion picture tax credit.

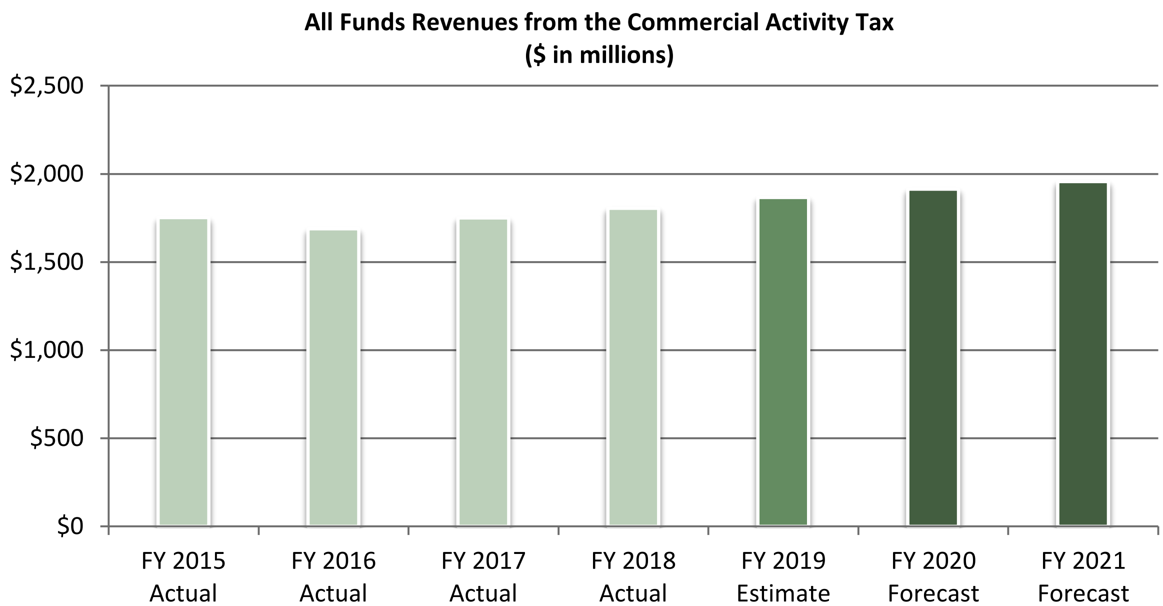
Through February, FY 2019 GRF revenues from the personal income tax were 2.0% below estimate and 2.4% above revenues in the first eight months of FY 2018. Gross collections were 1.0% below estimate and 2.8% higher than FY 2018 year-to-date levels. Refunds were 4.8% above estimate and 5.5% above FY 2018 levels. Most refunds are sent out during February through April.

The FY 2019 estimate for GRF revenues from the personal income tax is $8,465.4 million, a 0.6% increase from FY 2018 revenues. GRF revenues under current law are projected to rise by 4.4% in FY 2020 and by 5.1% in FY 2021. Income tax rates were reduced 21% between TY 2004 and TY 2011 by H.B. 66 of the 126th General Assembly, as modified by

[8] The $250,000 threshold is for single taxpayers and joint filers. Married taxpayers filing separately may deduct up to the first $125,000 of business income.

H.B. 318 of the 128th General Assembly. Income tax rates were lowered by an additional 10% between TY 2012 and TY 2014 by H.B. 59 and H.B. 483, both of the 130th General Assembly. Income tax rates were cut another 6.3% in TY 2015 by H.B. 64 of the 131st General Assembly. The 3.3% withholding rate reduction this year brought the cumulative reduction since TY 2004 of the withholding rate into line with the cumulative reduction in the tax rate on nonbusiness income.

Commercial Activity Tax



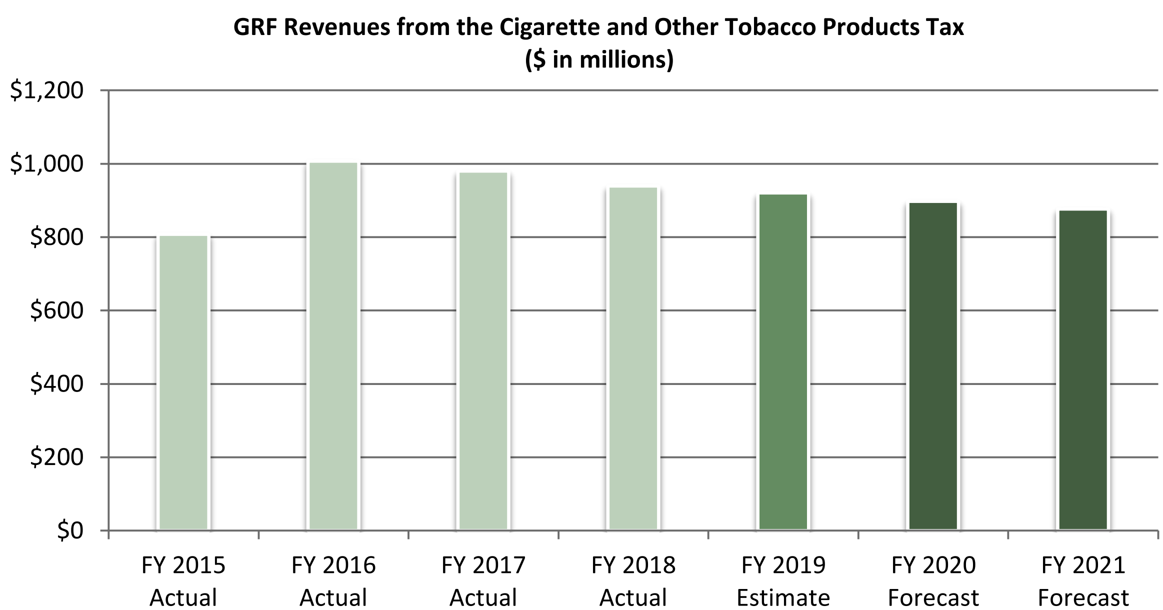
$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
All Funds Revenue	$1,752.6	$1,689.1	$1,750.8	$1,805.5	$1,866.9	$1,914.0	$1,957.0
Growth	4.0%	-3.6%	3.7%	3.1%	3.4%	2.5%	2.2%
GRF Share	$854.0	$1,255.3	$1,301.5	$1,522.8	$1,586.9	$1,626.9	$1,663.5

The commercial activity tax (CAT) is a privilege tax on business entities operating in Ohio. Generally, business entities with annual taxable gross receipts below $150,000 are exempt from the CAT and those with annual taxable gross receipts above $150,000 and less than $1 million pay the minimum tax of $150. Taxpayers with taxable gross receipts between $1 million and $2 million pay $800 plus 0.26% of the taxable gross receipts in excess of $1 million, those with taxable gross receipts between $2 million and $4 million pay $2,100 plus 0.26% of the taxable gross receipts in excess of $1 million, and those with taxable gross receipts in excess of $4 million pay $2,600 plus 0.26% of the taxable gross receipts in excess of $1 million. Taxpayers who pay the minimum tax pay the CAT once a year. The other CAT taxpayers generally pay the CAT each quarter, based on gross taxable receipts in the previous calendar quarter. Major tax credits available against the tax include the job retention, job creation, research and development (R&D), R&D loan repayment, and credit for net operating losses and other deferred tax assets.

Current law earmarks revenues from the CAT for the GRF and for reimbursing school districts and other local governments for the reductions and phase-out of local taxes on most tangible personal property. This revenue sharing has changed over the years. In FY 2015, the GRF received 75% of revenue. H.B. 49 of the 132nd General Assembly increased the GRF share to 85% effective July 1, 2017.[9] A provision in current law allows the Tax Department to deduct 0.75% of CAT collections to defray administrative costs.

Revenue fell in FY 2016 due to both a decline in taxable gross receipts and a sizable increase in tax credits and refunds. Then CAT collections grew in the ensuing years due to the expansion in economic activity. That trend is expected to continue into the next biennium. However, actual revenue from the tax would depend on the amount of tax credits and refunds claimed each year.[10] The CAT forecast is primarily based on the rate of change in Ohio's Industrial Production and Gross State Product, with some adjustments for estimates of tax credits applied against the tax.

Cigarette and Other Tobacco Products Tax



[9] Other revenues from the CAT are split between the School District Tangible Property Tax Replacement Fund (13%) and the Local Government Tangible Property Tax Replacement Fund (2%) for reimbursement purposes.

[10] Tax credits and refunds have been uneven in the last few years and change annually: they were $137.2 million in FY 2016, $104.5 million in FY 2017, and $159.2 million in FY 2018.

$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$808.2	$1,007.6	$980.5	$939.8	$921.0	$898.0	$877.0
Growth	-0.7%	24.7%	-2.7%	-4.2%	-2.0%	-2.5%	-2.3%

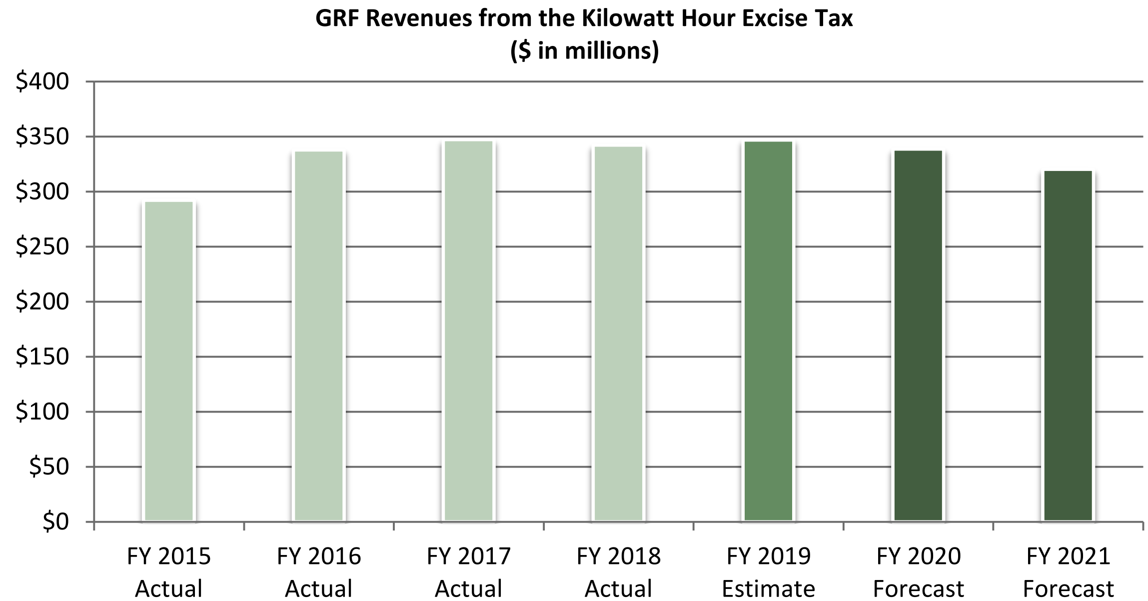
The cigarette and other tobacco products tax is levied on cigarettes, cigars, chewing tobacco, snuff, smoking tobacco, and other tobacco products. Receipts from the sales of cigarettes are about 92% of total receipts. Cigarettes are taxed at a rate of $1.60 per pack of 20 cigarettes. Other tobacco products (OTP), except for "little cigars" and "premium cigars,"[11] are taxed at 17% of their wholesale value. Little cigars are taxed at 37% of the wholesale price. The tax rate on premium cigars was $0.50 per cigar in FY 2018, and this rate is indexed annually for inflation.

Revenue from the cigarette and other tobacco products tax generally declines over time. However, receipts grew significantly in FY 2016 after a tax increase from $1.25 per pack of 20 cigarettes to $1.60 per pack on July 1, 2015 (H.B. 64 of the 131st General Assembly). FY 2016 revenue reflects the rate increase on cigarette consumption in the fiscal year and additional revenue from cigarettes in inventory at the time of the rate increase (also known as the "floor tax"). Receipts from the floor tax were not repeated in FY 2017, so that the revenue decrease in that fiscal year was larger than a normal trend decline in tax receipts. Revenue collected from the tax is deposited into the GRF.

The forecast for the cigarette and other tobacco products tax is based on trend analyses of the recent per capita consumption of cigarettes and price increases for OTP. Smokers are expected to continue to make downward adjustments to their consumption of taxed cigarettes for various reasons, including more expensive cigarettes and health concerns. Revenue from the tax on OTP generally increases each year, primarily from increases in the wholesale price of those products. The long-term annual decline in per capita cigarette consumption is expected to continue. Additional factors, such as increases in the share of nontaxed cigarettes (smuggling and Internet purchases) and the shift to e-cigarettes may create an even steeper decline in consumption of taxed cigarettes in future years.

[11] A "little cigar" is defined as a smoking roll that does not satisfy the excise tax law's definition of a cigarette, that contains an integrated cellulose acetate filter or other filter, and that is not wrapped in natural leaf tobacco. Generally, a "premium cigar" is a roll for smoking other than a cigarette or little cigar.

Kilowatt Hour Excise Tax



$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
All Funds Revenue	$539.8	$527.3	$539.2	$537.2	$546.0	$542.0	$529.0
Growth	-0.9%	-2.3%	2.3%	-0.4%	1.6%	-0.7%	-2.4%
GRF Share	$292.3	$338.0	$347.4	$342.4	$347.0	$338.8	$320.4

The kilowatt hour (kWh) tax is levied on electric distribution companies with end users in Ohio. The tax rate depends on the volume of electricity used by the customer. There are three distinct marginal tax rates: $0.00465 per kWh for the first 2,000 kilowatt hours consumed in a month, $0.00419 per kWh for the next 13,000 kilowatt hours consumed, and $0.00363 per kWh for all kilowatt hours consumed over 15,000. Very large users, those that use over 45 million kWh per year, have the option of self-assessing the tax, which enables them to pay a lower rate. Beginning January 1, 2011, self-assessors have paid a flat tax rate of $0.00257 per kWh for the first 500 million kilowatt hours used in a year and $0.001832 per kWh over 500 million.

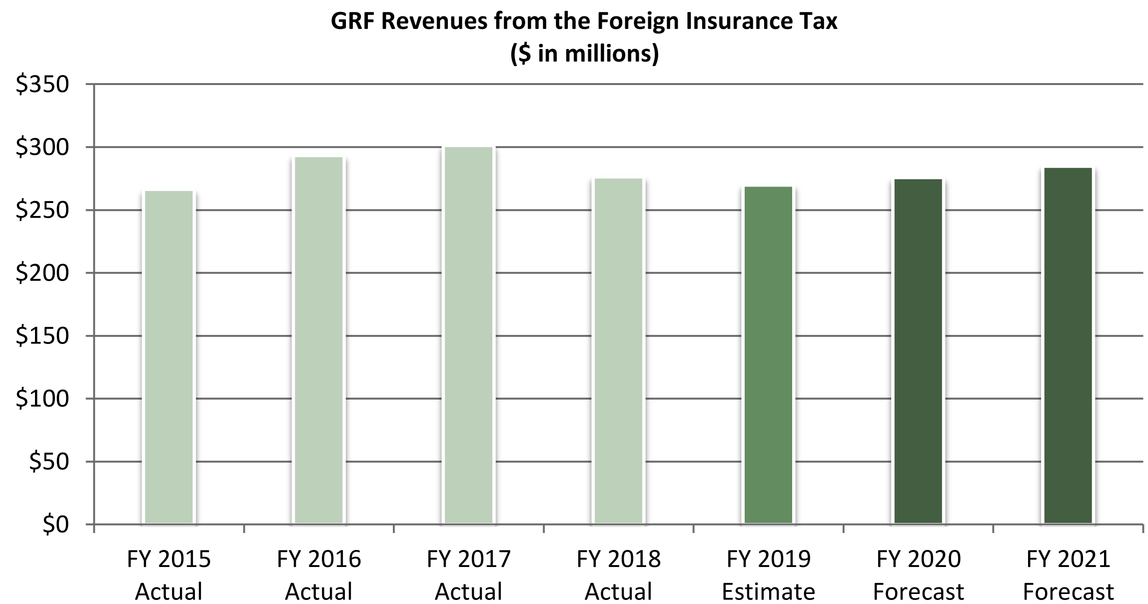
GRF revenue from this tax has varied over the years, due primarily to changes in the share of tax revenue that goes to the GRF; total (all funds) revenue from the tax has been fairly stable. Prior to FY 2016, 12% of revenues from the tax was shared with two property tax replacement funds, and 88% was deposited into the GRF.[12] Since the beginning of FY 2016, all

[12] Prior to FY 2012, the GRF received 63%, and the property tax replacement funds shared the other 37%.

revenues from this tax have been deposited into the GRF. This accounts for the significant GRF revenue increase that year. H.B. 49 of the 132nd General Assembly exempted from the kWh tax any use of electricity by a qualified end user in a chlor-alkali manufacturing process.[13] Also, half of the share of GRF total tax revenue that is transferred to the Public Library Fund (PLF) is debited against this tax source for accounting purposes.

Revenue to all funds from the tax is estimated to decrease in both FY 2020 and FY 2021. The forecasted decrease in GRF revenue each year is due to both the decreases in all funds revenue and increases in the amount allocated to the PLF and debited against this tax. The forecast of kWh tax revenues was generated using a model that used Ohio's gross state product as a proxy for overall economic conditions, and used an Ohio manufacturing industrial production index, cooling degree days, and Ohio population growth as proxies for electricity consumption growth in commercial, industrial, and residential sectors.

Foreign Insurance Tax



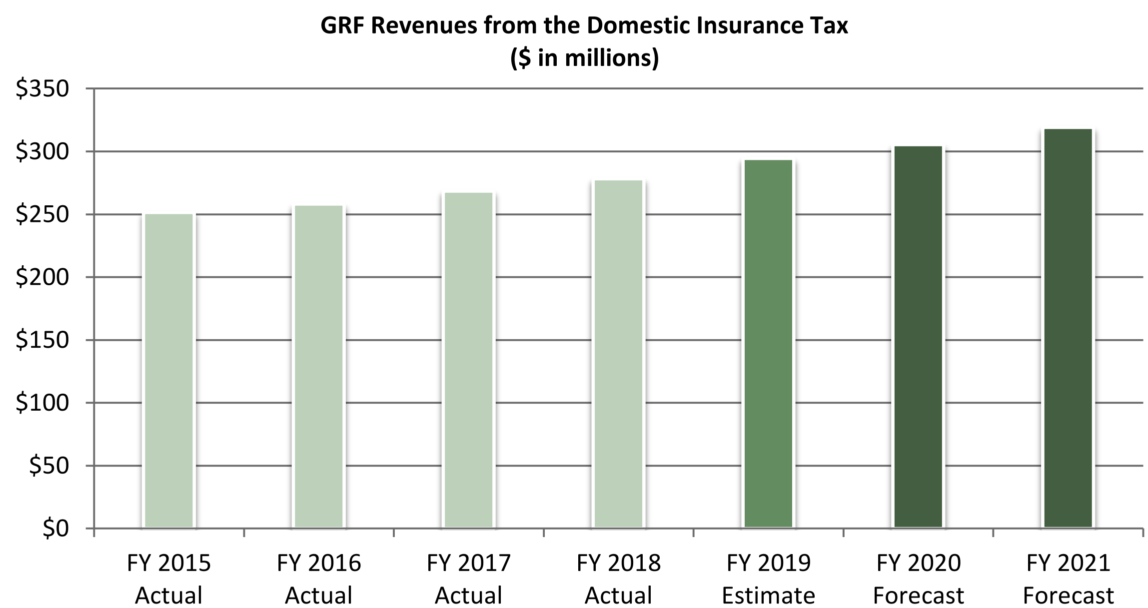
$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$266.6	$293.5	$301.5	$276.5	$270.0	$276.0	$285.0
Growth	-6.9%	10.1%	2.7%	-8.3%	-2.4%	2.2%	3.3%

[13] This is defined as a process that uses electricity to produce chlorine and other chemicals through the electrolysis of a salt solution.

The foreign insurance tax is levied on premiums collected by insurance companies headquartered in a state other than Ohio. The tax is generally 1.4% of premiums; the primary exception is foreign insurance companies that are health insuring corporations (HICs), which pay 1.0% of premiums. Premiums paid for life and health insurance accounted for slightly over half of the revenue from the tax in FY 2018, with premiums paid for property and casualty insurance accounting for a substantial portion of the remainder.

Revenue from this tax depends on overall economic conditions and on interest rates. Insurance companies derive revenue from both the premiums they collect and the interest earned from investing those premiums. The forecast is the average derived from several models, which generally used Ohio personal income as a proxy for overall economic conditions, used median home prices in Ohio as a proxy for claims growth, and used changes in six-month Treasury bill yields as a proxy for company revenues from the other main source.

Domestic Insurance Tax

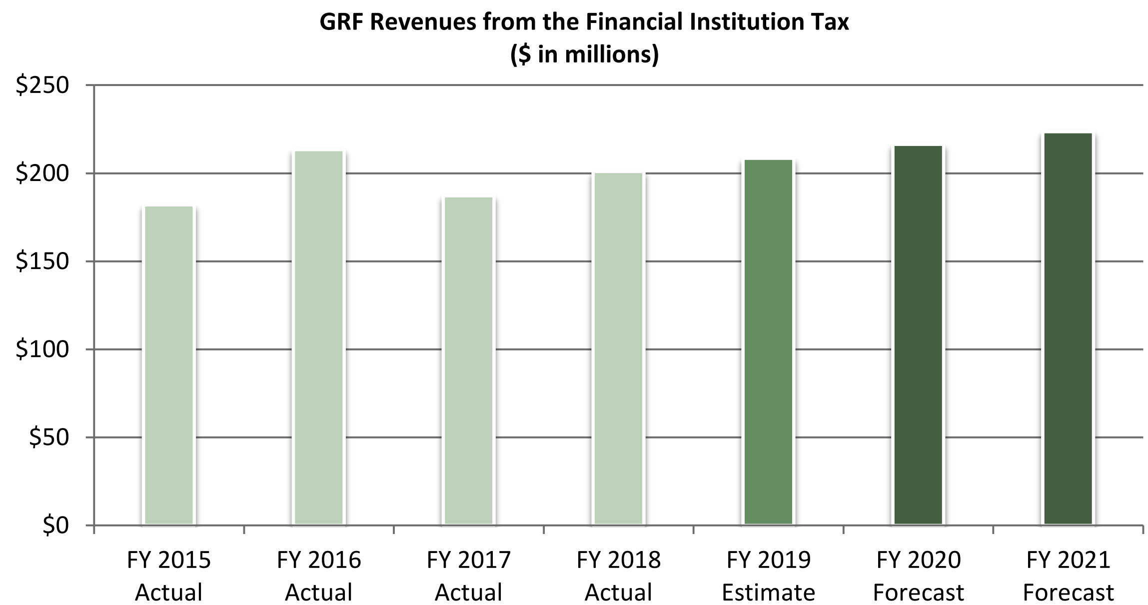


$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$251.6	$258.3	$268.6	$278.4	$294.6	$305.6	$319.3
Growth	27.8%	2.7%	4.0%	3.6%	5.8%	3.7%	4.5%

The domestic insurance tax is levied on premiums collected by insurance companies headquartered in Ohio. The tax is generally 1.4% of premiums; the primary exception is domestic insurers that are HICs, which pay 1.0% of premiums. This tax structure is the same as the foreign insurance tax structure. About 56% of the tax liability under the tax in FY 2018 was attributable to premiums paid for health insurance. Premiums paid to property and casualty insurers were responsible for about 39% of tax liabilities.

Growth in tax revenue in recent years has been primarily due to growth in revenue attributable to HICs[14] and increases in Medicaid coverage. Revenues from this tax in the future will be primarily driven by Medicaid managed care. The forecast for revenue paid by HICs is based on the LBO Medicaid forecast for expenditures for managed care. Revenue attributable to other premium sources declined for a number of years, but seems to be bottoming out. Such revenue is projected to increase during the upcoming biennium in line with growth in personal consumption expenditures for financial and insurance services.

Financial Institution Tax



$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$182.1	$213.5	$187.3	$201.1	$208.6	$215.0	$220.0
Growth	-7.9%	17.2%	-12.3%	7.4%	3.7%	3.1%	2.3%

The financial institution tax (FIT) is a tax on banks and other types of financial institutions. The FIT was first levied in TY 2014.[15] All receipts from the FIT are credited to the GRF. The FIT is levied on the "total Ohio equity capital" of financial institutions, which includes a firm's common stock, perpetual preferred stock, surplus, retained earnings, treasury stock, and

[14] H.B. 1 of the 128th General Assembly subjected premiums paid to Medicaid HICs to the tax.

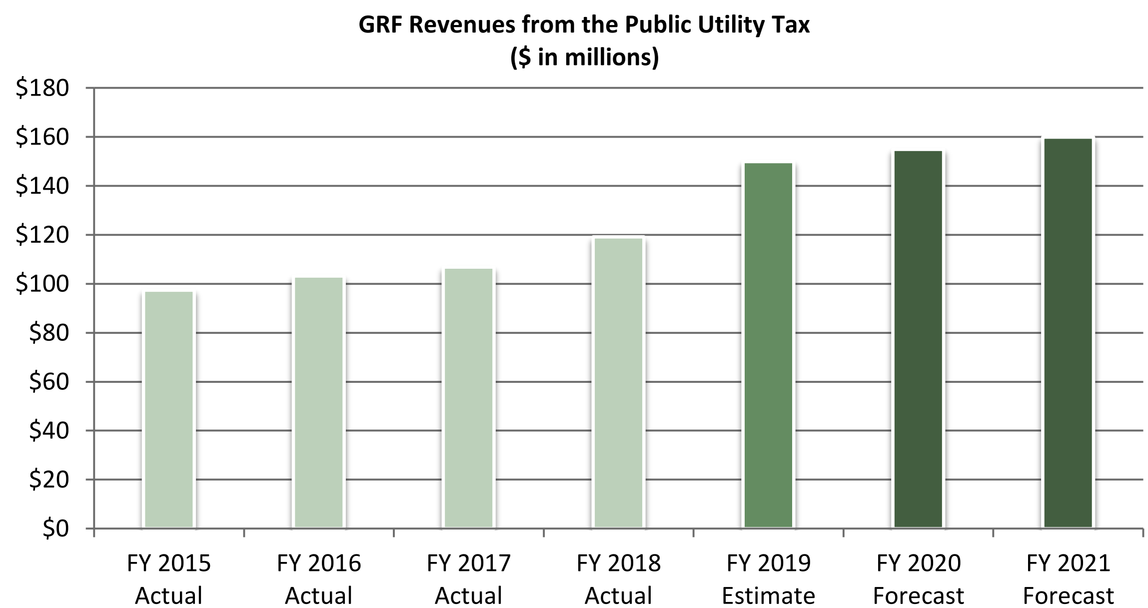
[15] The FIT was created by H.B. 510 of the 129th General Assembly as a replacement for the corporate franchise tax (CFT) and the dealers in intangibles tax (DIT) (which were both eliminated at the end of 2013).

unearned employee stock ownership plan shares. Taxpayers operating in multiple states are required to apportion total equity capital in proportion to gross receipts apportioned to Ohio.

The FIT specifies three tax rates: a rate of 0.8% (8 mills) which applies to the first $200 million of a taxpayer's total Ohio equity capital, a rate of 0.4% (4 mills) of a taxpayer's total Ohio equity capital between $200 million and $1.3 billion, and a rate of 0.25% (2.5 mills) which applies to the amount of total Ohio equity capital in excess of $1.3 billion. The minimum tax is $1,000. Estimated payments are due on January 31, March 31, and May 31 of the tax year, and each taxpayer must file an annual report and file all tax payments by October 15 of each year.

Revenues from the FIT are projected to increase slightly in the next biennium, generally in line with economic activity in Ohio's financial sector, but the forecast is not based on a formal model due to the very limited experience with FIT revenues to date.

Public Utility Tax



$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$97.5	$103.3	$106.9	$119.2	$150.0	$155.0	$160.0
Growth	-8.1%	5.9%	3.5%	11.5%	25.8%	3.3%	3.2%

The public utility excise tax is imposed on the gross intrastate receipts of some utilities. The tax is levied on natural gas utilities, pipeline companies, heating companies, waterworks, and water transportation companies. Other types of public utilities currently operating are exempt from the tax, as are public utilities owned by municipal corporations. Companies subject to the tax pay 4.75% of gross receipts, except for pipeline companies which pay 6.75%. All companies receive an annual deduction of $25,000. Gross receipts from sales of merchandise, interstate transactions, sales to other utilities for resale, sales to federal government entities, and billings on behalf of other entities are exempt from the tax.

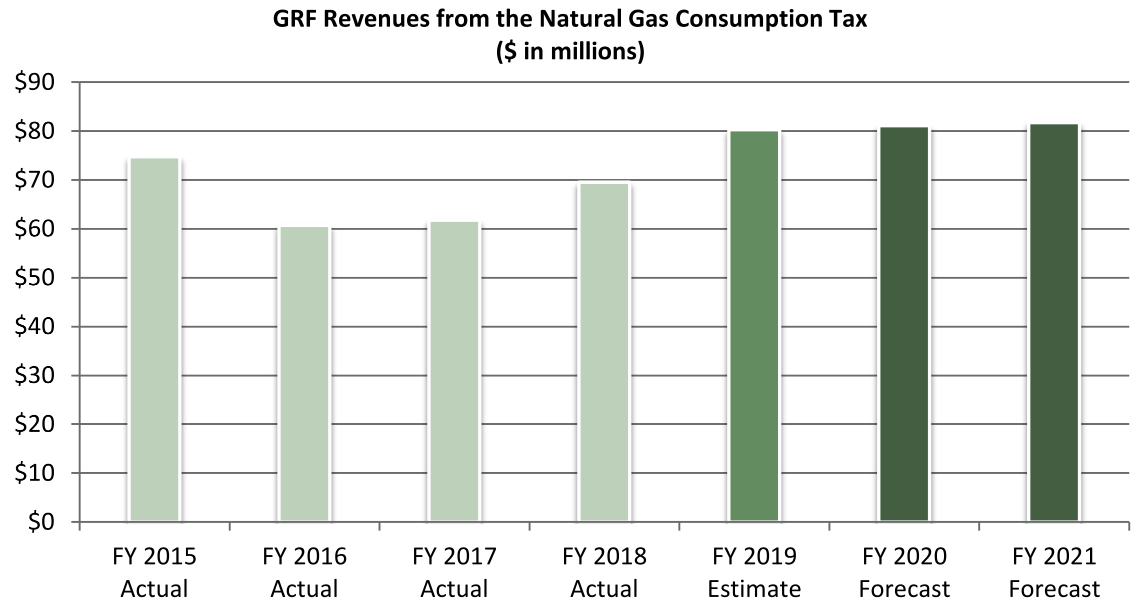
Most of the revenue from the public utility excise tax is from natural gas companies. They accounted historically for 95% or more of total public utility excise tax revenue. In recent years, pipelines have accounted for a growing share of revenues from this tax. Changes in natural gas prices and consumption remain the main determinants of public utility excise tax revenues. All revenue from the public utility excise tax goes to the GRF.

Tax revenue from the public utility excise tax fell from $184.5 million in FY 2009 to $96.7 million in FY 2013 and has since remained above that level. In FY 2018, revenue from this tax rose 12% to $119.2 million, and in FY 2019 through February was 28% above the year-earlier level. The upturn reflects strengthening volumes of natural gas deliveries to customers, rather than higher prices. Physical volumes of natural gas delivered to electric power plants have ramped up particularly strongly, as the industry relies increasingly on natural gas to power generators, and less on coal. Volumes delivered to residential, commercial, and industrial customers have been at high levels but have not grown as sharply as the electric power segment. Taxes due from pipelines have also grown in recent years and appear likely in the future to account for a larger share of revenues from this tax than in the past.

The fiscal fourth quarter, April through June, has historically accounted for a disproportionate share of annual revenues. This concentration of revenues, related to widespread use of natural gas for winter heating coupled with lags between product deliveries and tax payments, has diminished in recent years. The shift may be a result of increased use of natural gas for electricity generation along with summer use of electricity for cooling.

Tax revenues for all of FY 2019 are projected to be 26% higher than last year. In each of FY 2020 and FY 2021, annual revenues rise 3%. The forecast is based on expectations that tax revenues from natural gas companies will remain at a higher level than in recent years, and tax revenues from pipeline companies will grow. Other public utility excise taxes, on water works, water transport, and heating companies, are expected to remain relatively stable.

Natural Gas Consumption Tax

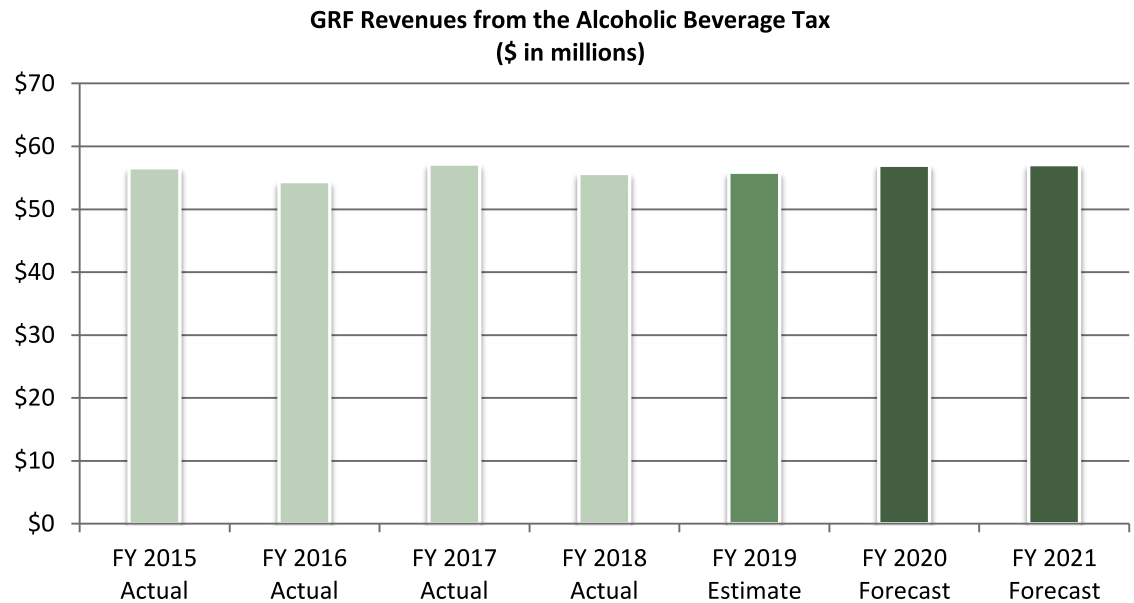


$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$74.7	$60.7	$61.8	$69.6	$80.3	$81.1	$81.7
Growth	-1.8%	-18.7%	1.8%	12.6%	15.4%	1.0%	0.8%

The natural gas consumption tax (also referred to as the natural gas distribution tax or Mcf tax) is levied on natural gas distribution companies, based on natural gas distributed through the meters of end users in Ohio. The base for the tax is the volume of natural gas measured in Mcf (1,000 cubic feet). The tax rate depends on the volume distributed to a customer. There are three marginal tax rates: $0.1593 per Mcf for the first 100 Mcfs distributed to an end user in a month, $0.0877 per Mcf for the next 1,900 Mcfs, and $0.0411 per Mcf for all natural gas distributed to the end user in excess of 2,000 Mcfs in the month. Natural gas distributors with 70,000 or fewer customers, up from 50,000 prior to 2009, may pay the rate specified on the total quantity of natural gas distributed in Ohio in a month, as if the distribution was to a single customer. Flex customers, generally industrial or commercial customers with very large natural gas consumption (over one billion cubic feet per year in any of the previous five years) at a single location, or that meet other specified requirements, pay $0.02 per Mcf.

The GRF started to receive revenues from the Mcf tax in FY 2012; prior to that, revenue was split between two property tax replacement funds. Full-year revenue from this tax has ranged from $83.7 million in FY 2003 to $57.8 million in FY 2013. FY 2019 revenue through February was 18% higher than in the corresponding period in FY 2018. About half of annual revenue from this tax is typically received in the fiscal fourth quarter, from April through June, as a result of natural gas consumption for heating during January through March coupled with a lag in the required payment of the tax from the natural gas distribution companies to the state. The forecast for the full fiscal year is based on a rise in anticipated natural gas consumption in the East North Central region predicted by the U.S. Energy Information Administration (EIA) in its January 2019 Annual Energy Outlook, and appears consistent with the higher year-to-date actual tax revenues. The EIA forecast drives a regression model based on historical natural gas deliveries to Ohio consumers, natural gas consumption tax revenues, and a variable to represent the change in the tax in 2009 noted above.

Alcoholic Beverage Tax



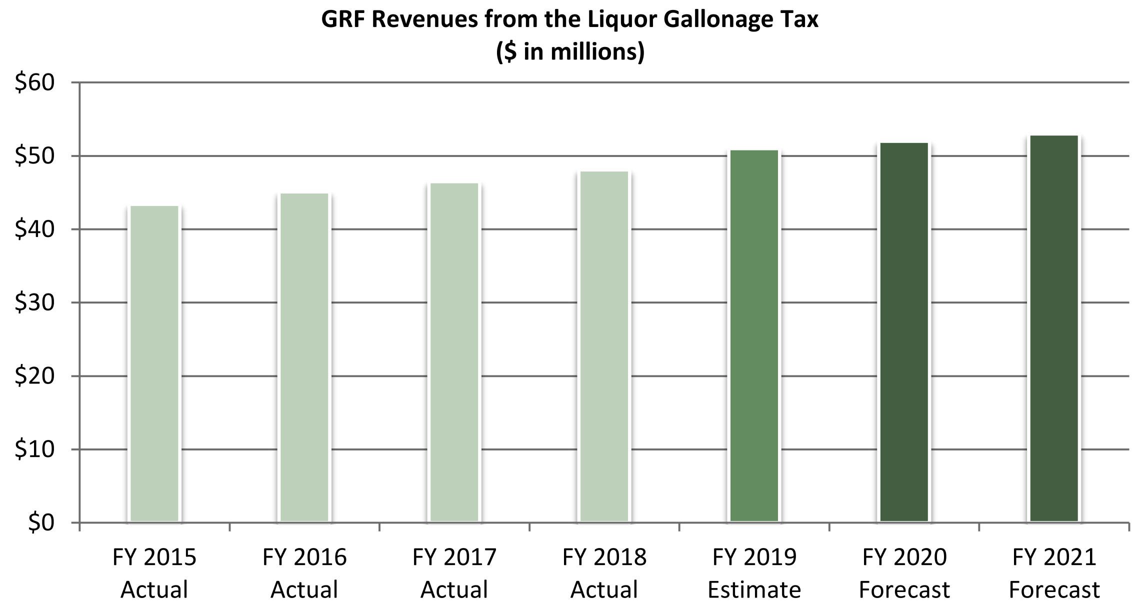
$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$56.6	$54.4	$57.2	$55.7	$55.9	$57.0	$57.1
Growth	2.0%	-3.9%	5.1%	-2.6%	0.4%	2.0%	0.2%

The alcoholic beverage tax applies to sales of beer, malt beverages, wine, and mixed alcoholic beverages. All beverages brewed or fermented from malt products and containing at least 0.5% alcohol by volume (ABV) are included in the tax base. The tax is levied on a per-container rate depending on the type of beverage sold. Beer is taxed at varying rates that are equivalent to 0.14 cents per ounce for bottles and cans with less than 12 ounces (about 8.4 cents for a six pack of 12 ounce containers). Wine containing less than 14% alcohol by volume is taxed at 32 cents per gallon (about 6.3 cents for a standard 750 ml bottle). Wine with between 14% and 21% alcohol by volume is taxed at $1.00 per gallon (or 19.8 cents for a standard 750 ml bottle). Mixed beverages are taxed at $1.20 per gallon (or 23.8 cents for a standard 750 ml bottle). Two cents of the tax on each gallon of wine is deposited into the Ohio Grape Industries Fund. All other revenue from the alcoholic beverage tax is deposited into the

GRF. In the first six months of FY 2019, about 75% of the tax revenue was from the sale of beer and malt beverages while sales of wine and other alcoholic beverages constituted the rest.

The forecast for the alcoholic beverage tax revenue is based on a combination of two models, one a time series accounting for seasonal trends and the other a linear trend regression. LBO projects revenue of $57.0 million and $57.1 million in FY 2020 and FY 2021, respectively. The projected increase in the next biennium reflects the slowing overall sales growth of alcohol beverages.

Liquor Gallonage Tax

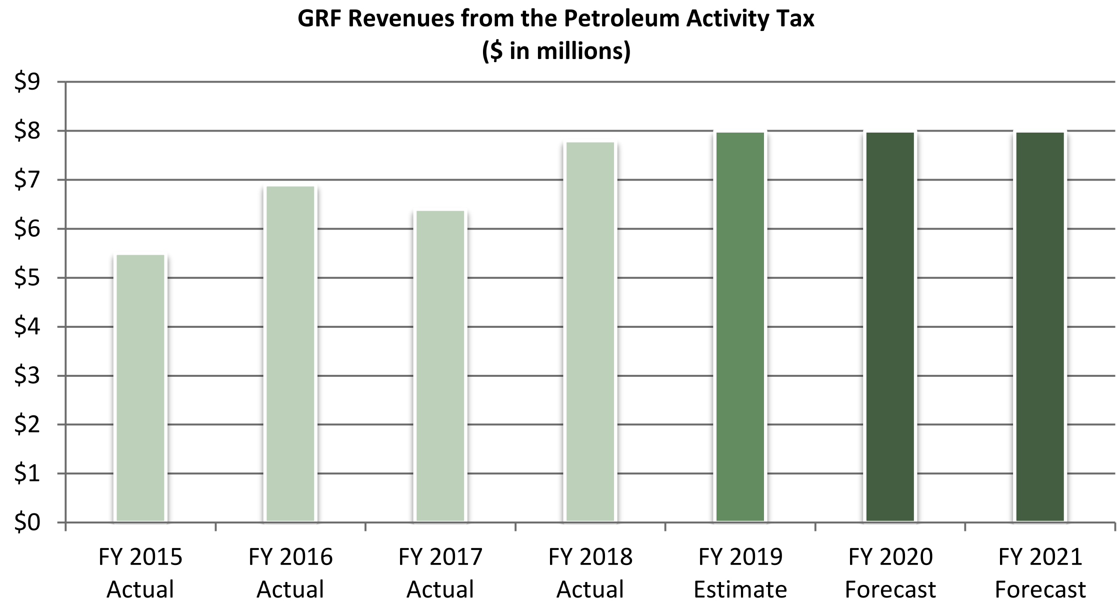


$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$43.4	$45.1	$46.5	$48.1	$51.0	$52.0	$53.0
Growth	3.8%	3.9%	3.1%	3.4%	5.9%	2.0%	1.9%

The liquor gallonage tax is levied at the rate of $3.38 per gallon of spirituous liquor. This is the equivalent of 67.0 cents per standard 750 ml bottle. Revenue from this tax is deposited into the GRF.

LBO estimates the liquor gallonage tax will produce $51.0 million in GRF revenue in FY 2019, $52.0 million in FY 2020, and $53.0 million in FY 2021. The forecast of liquor gallonage tax receipts is most closely based on a moving-average model of order 12, applied on a time series of historical receipts, which have grown consistently for over two decades. The tax is based on the volume of liquor sold and the rate has not changed since 1993, therefore growth in revenue has come from unit sales. Among alcoholic beverage market shares, spirits have grown mostly at the expense of beer sales, while the market share for wine has increased slowly. Liquor gallonage tax receipts are estimated to grow at a fairly consistent pace, although at a slower pace than previously, in FY 2020 and FY 2021.

Petroleum Activity Tax



$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$5.5	$6.9	$6.4	$7.8	$8.0	$8.0	$8.0
Growth	--	24.5%	-7.2%	22.8%	2.0%	0.0%	0.0%

The petroleum activity tax (PAT), which started on July 1, 2014, was enacted in H.B. 59 of the 130th General Assembly as a replacement for the commercial activity tax (CAT) on motor fuel. On December 7, 2012, the Supreme Court of Ohio ruled that imposing the CAT on gross receipts from the sale of motor vehicle fuel and allocating the revenues to the GRF was unconstitutional, and that revenue arising from the sale of motor fuel used on public highways must be used for public highway purposes.

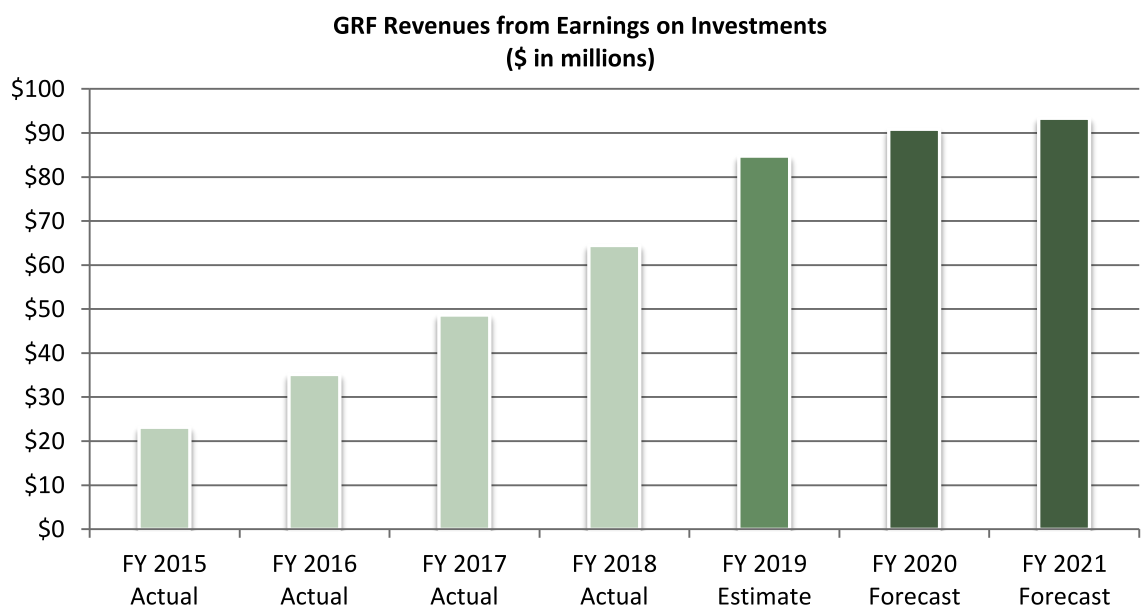
The PAT is computed on the basis of the gross receipts received by a "supplier" from the first sale of motor fuel delivered to a location in the state. The PAT tax rate is 0.65% on a supplier's gross receipts, to be paid quarterly by suppliers. A "supplier" is a person that acquires motor fuel from a terminal or refinery "rack" and distributes that fuel within the state or imports motor fuel for sale or distribution by the person within the state. A "rack" is defined as a mechanism that delivers motor fuel from a terminal or refinery into a means of transport other than a pipeline or vessel.

Generally, revenue from the tax is credited to the Petroleum Activity Tax Fund. Money in the fund is to be used first to pay any refunds owed, with 1% of the remaining amount in the fund to be transferred to the Petroleum Activity Tax Administration Fund used by the Department of Taxation, and the bulk of the receipts to the Petroleum Activity Tax Public Highways Fund to be used for public highway purposes. Any revenue from sales of motor fuel not used to propel vehicles on public highways is transferred to the GRF.

There is very limited experience with revenue from the tax, since the structure of the tax differs significantly from that of the CAT. Also, FY 2015 revenue was, in effect, a partial year of revenue because the first payment under the tax, for company receipts received in the first quarter of the fiscal year, was due in the second quarter. The limited experience means that a formal model of tax revenue would have little if any reliability. Revenue growth in FY 2019 is assumed to moderate from the FY 2018 revenue growth, and revenue in each year of the upcoming biennium is projected to be the same.

Related to the requirement that revenue arising from the sale of motor fuel used on public highways be used for public highway purposes, existing law requires the Director of the Ohio Public Works Commission to certify on or before June 15 of each year to the Director of Budget and Management the amount of debt service paid from the GRF in that fiscal year on bonds issued to finance or assist in the financing of local public subdivisions' infrastructure capital improvement projects, that are attributable to costs for construction, reconstruction, maintenance, or repair of public highways and bridges and other statutory highway purposes. Then, the Director of Budget and Management is required to allocate the total amount of debt service paid in each fiscal year according to the applicable section of the Ohio Constitution under which the bonds were originally issued.

Earnings on Investments

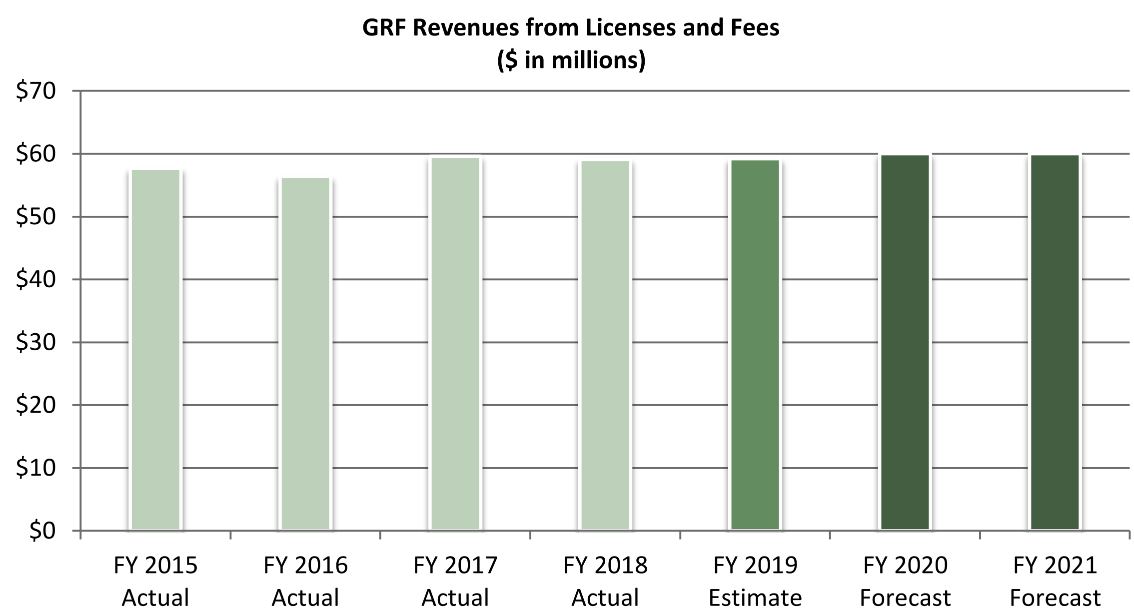


$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$23.2	$35.2	$48.7	$64.5	$84.8	$90.9	$93.4
Growth	34.1%	51.7%	38.4%	32.4%	31.5%	7.2%	2.8%

The Treasurer of State is responsible for managing the state's portfolio and investing state funds. All state funds are invested conservatively with safety of the funds as the number one investment priority. State law and investment policy provide an outline of state investment objectives, delegation of authority, and asset diversification policy, and restrict the types of investments allowed. Some of the allowable instruments are short-term and medium-term fixed-income instruments, such as U.S. Treasury securities, federal agency obligations, and highly rated commercial paper. Among the instruments that are not allowable for state fund investment are domestic or international equities, real estate, and venture capital. All earnings on investments from state funds are credited to the GRF unless stated otherwise in the Ohio Revised Code.

In FY 2019, earnings on investments are estimated to increase to $84.8 million from $64.5 million in FY 2018 because of increasing interest rates on short-term and medium-term investment instruments and higher estimated fund balances than in previous fiscal years. In FY 2020 and FY 2021, interest rates are expected to rise slightly and estimated fund balances are expected to increase moderately. Baseline earnings on investments for FY 2020 and FY 2021 are estimated at $90.9 million and $93.4 million, respectively. The calculations were based on interest rate estimates and the estimated state funds balance that will be available for investment.

Licenses and Fees



$ in millions	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Revenue	$57.7	$56.4	$59.6	$59.1	$59.0	$60.0	$60.0
Growth	0.6%	-2.2%	5.7%	-0.8%	-0.2%	1.7%	0.0%

The GRF receives revenue from a number of licenses and fees that are either completely or partially deposited into the GRF. The largest contributor of license and fee revenue has historically been license fees deposited by the Department of Insurance. Motor vehicle license fees, license revenue deposited by the Environmental Protection Agency, and various business licenses also contribute revenue to the GRF.

LBO estimates that licenses and fees will produce $59.0 million in GRF revenue for FY 2019, $60.0 million in FY 2020, and $60.0 million in FY 2021. The revenue projections for the second part of FY 2019, and all of FY 2020 and FY 2021 are based on a trend. Revenue from licenses and fees is expected to remain essentially flat during the period despite some growth in surplus lines premium tax revenue, currently the largest single source of license and fee revenue. Revenue collected from the various license fees during the first eight months of FY 2019 was 2.1% above estimate, but nearly two-thirds of the revenue is expected to be collected during the remaining months of the year.

MEDICAID SERVICE EXPENDITURE FORECAST

Overview

Medicaid is a joint state-federal program that provides health care coverage to low-income individuals. The Medicaid forecast includes both state and federal shares of Medicaid expenditures. LBO forecasts most caseload-driven service expenditures and assumes no changes from current law or administrative policies in the baseline forecast. There are other Medicaid service expenditures that are outside of LBO's forecast. These include Department of Developmental Disabilities (DDD) services, and services that do not depend on caseloads. The table below summarizes LBO's baseline forecast of caseload-driven Medicaid service expenditures over the next biennium and the Ohio Department of Medicaid's (ODM) estimates of Medicaid service expenditures for items that do not depend on caseloads. ODM estimates of these expenditures are listed as "add-ons." As seen from the table, estimates of total Medicaid service expenditures are $26.06 billion in FY 2019, increasing by $0.7 billion (2.7%) to $26.75 billion in FY 2020 and by another $1.06 billion (4.0%) to $27.82 billion in FY 2021.

Total Medicaid Service Expenditures (excluding administration) (combined state and federal dollars, $ in millions)							
Category	FY 2018 Actuals	FY 2019 Estimates	Growth Rate	FY 2020 Forecast	Growth Rate	FY 2021 Forecast	Growth Rate
LBO forecast	$20,216.9	$20,605.1	1.9%	$20,783.0	0.9%	$21,495.7	3.4%
Add-ons	$2,632.8	$2,760.3	4.8%	$2,910.5	5.4%	$3,092.7	6.3%
DDD services	$2,567.2	$2,695.5	5.0%	$3,059.1	13.5%	$3,227.8	5.5%
Total	**$25,416.9**	**$26,060.8**	**2.5%**	**$26,752.6**	**2.7%**	**$27,816.2**	**4.0%**

As shown in the equation below, forecasted Medicaid service expenditures are equal to the forecasted number of Medicaid beneficiaries (members) each month – the caseload – multiplied by the forecasted cost per Medicaid beneficiary each month – the per member per month (PMPM) cost.

$$\text{Expenditures} = \text{Caseload} \times \text{PMPM Cost}$$

Total forecasted Medicaid service expenditures are the sum of forecasted expenditures for each of the major Medicaid payment categories. Medicaid provides financial reimbursement to health care professionals and institutions for providing approved medical services, products, and equipment to Medicaid enrollees. Medicaid service expenditures can generally be placed into various payment categories. LBO performs a baseline forecast of expenditures for each of the categories listed in the table below.

LBO Baseline Forecast of Medicaid Service Expenditures by Payment Category (combined state and federal dollars, $ in millions)							
Category	FY 2018 Actuals	FY 2019 Estimates	Growth Rate	FY 2020 Forecast	Growth Rate	FY 2021 Forecast	Growth Rate
Managed Care							
CFC	$5,374.9	$5,945.0	10.6%	$6,010.8	1.1%	$6,156.4	2.4%
Group VIII	$4,078.5	$4,224.6	3.6%	$4,153.2	-1.7%	$4,330.3	4.3%
ABD	$3,202.4	$3,791.2	18.4%	$3,897.3	2.8%	$4,088.5	4.9%
My Care	$2,425.1	$2,558.9	5.5%	$2,570.3	0.4%	$2,674.9	4.1%
Fee-For-Service							
Nursing Facilities	$1,519.5	$1,527.4	0.5%	$1,531.4	0.3%	$1,534.1	0.2%
Hospitals	$729.2	$642.8	-11.8%	$652.4	1.5%	$683.0	4.7%
Aging Waivers	$345.3	$376.4	9.0%	$398.8	6.0%	$420.2	5.4%
Prescription Drugs	$305.6	$314.8	3.0%	$322.1	2.3%	$332.0	3.1%
Home Care Waivers	$119.2	$114.4	-4.0%	$114.2	-0.2%	$114.9	0.6%
Behavioral Health	$1,121.3	$126.0	-88.8%	$132.3	5.0%	$138.9	5.0%
All Other	$995.9	$983.6	-1.2%	$1,000.2	1.7%	$1,022.3	2.2%
Total	**$20,216.9**	**$20,605.1**	**1.9%**	**$20,783.0**	**0.9%**	**$21,495.7**	**3.4%**

Caseload Forecast

Summary

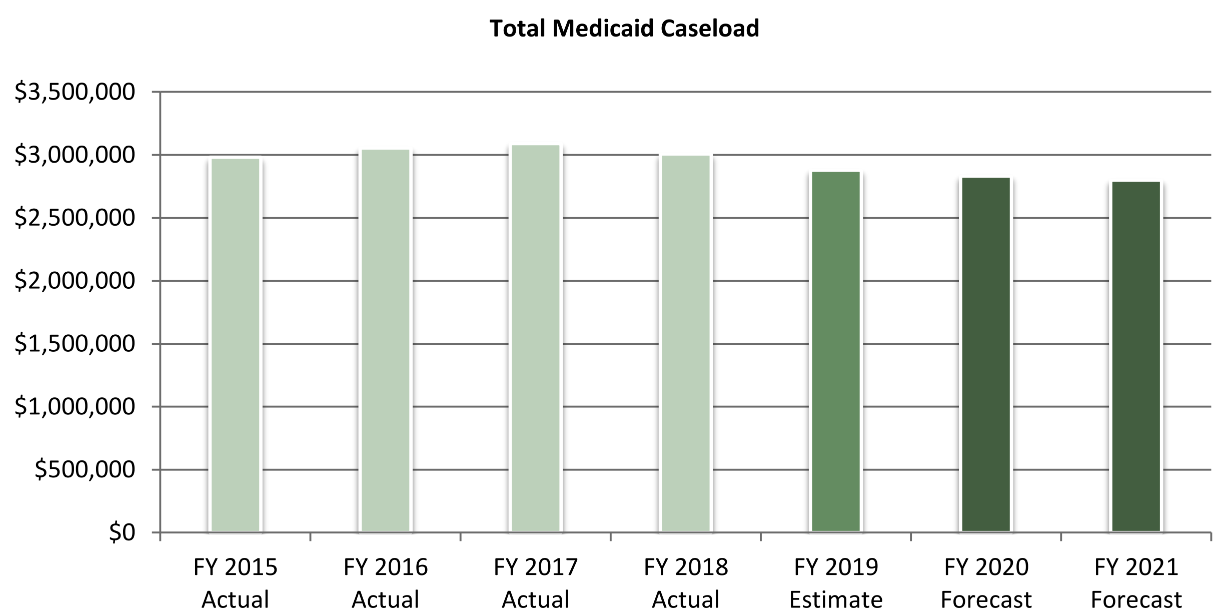
Ohio Medicaid currently provides health care coverage to (1) uninsured children up to age 19 in families with income up to 206% of federal poverty guidelines (FPG), (2) insured children up to age 19 in families with income up to 156% FPG, (3) pregnant women in families with income up to 200% FPG, (4) parents or caretaker relatives with income up to 90% FPG (5) adults age 19 to 64 with income up to 133% FPG, and (6) individuals who meet the Supplemental Security Income (SSI) standard and are age 65 and older, or are legally blind, or are determined disabled by the Social Security Administration. Medicaid coverage is also available to working Ohioans with disabilities through the Medicaid Buy-In for Workers with Disabilities Program. Under this program, individuals with income up to 250% FPG may qualify and those with income greater than 150% FPG must pay a monthly premium. Youth, who aged out of foster care on their 18th birthday, until age 26, regardless of income, are also eligible for Medicaid coverage.

The federal Medicare Program provides health care coverage for most of Ohio's elderly population; however, many of the elderly are "dually eligible" (i.e., eligible for both Medicare and Medicaid). The Medicaid Program supplements dual eligibles' Medicare benefits by providing assistance with Medicare premiums, copayments, and deductibles to certain low-income seniors.

The total number of persons enrolled in Medicaid is expected to decrease from an estimated 2.878 million in FY 2019 to 2.832 million in FY 2020, a 1.6% decrease, and continue to decrease to 2.800 million in FY 2021, a 1.1% decrease from FY 2020. This forecast is shown in the following chart and table.

Total Medicaid Caseload (in millions)

	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
Caseload	2.982	3.055	3.090	3.008	2.878	2.832	2.800
Growth	18.0%	2.5%	1.1%	-2.7%	-4.3%	-1.6%	-1.1%



Caseloads by Eligibility

The Medicaid caseload is often presented in two main eligibility categories: covered families and children (CFC) and the aged, blind, and disabled (ABD). Generally, state law does not specify which persons fit into which categories. Rather, the categories have in large part been created administratively. CFC includes families, children, and pregnant women, and, after the Patient Protection and Affordable Care Act of 2010 expansion, low-income individuals age 19 through 64. The ABD category includes certain low-income individuals who are aged (age 65 or older), blind, or disabled.

In addition to these two main categories, there are a few programs that provide partial Medicaid coverage and are treated separately in the forecast. These individuals are grouped under the Other category.

Medicaid caseloads, particularly for the CFC group, are affected by changes in the economy. As unemployment increases, workers and their dependents may lose access to employer coverage and may become eligible to enroll in public coverage. As with LBO's GRF revenue forecasts, economic indicator projections from IHS Economics were used in LBO's forecast of Medicaid caseloads. Based on those economic projections and the overall trend, caseloads are projected to decrease slightly over the biennium.

However, caseloads are also affected by policy changes. For example, the increase in caseloads in FY 2014 and FY 2015 is largely due to the expansion of Medicaid coverage to low-income individuals age 19 through 64 (Group VIII). One of the factors affecting the caseload forecast for FY 2018 and FY 2019 is Ohio's implementation, on August 1, 2016, of a new system for making Medicaid eligibility determinations for the ABD population. Under the new system, a single disability determination is used for both Medicaid and SSI. Under the old eligibility criteria, the income limit for Medicaid was more stringent than that used for SSI. This policy change resulted in an increase in ABD caseloads.

The following three tables and associated three charts detail the caseload projections by eligibility category.[16] The first table and associated chart show caseloads under the CFC category. LBO forecasts that the overall CFC caseload will decrease by 46,472, or 2.1%, in FY 2020, and by 34,037, or 1.5%, in FY 2021. The Medicaid caseload for CFC parents and children who are under the Healthy Start/Healthy Families Program, and Group VIII has been declining since the second quarter of 2017. For forecasting, the CFC category is further broken down into traditional CFC, which includes Healthy Start/Healthy Families, the Children's Health Insurance Program (CHIP), the Adopted and Foster Care Children (ADFC) Program, and individuals who are newly eligible due to Medicaid expansion (Group VIII).

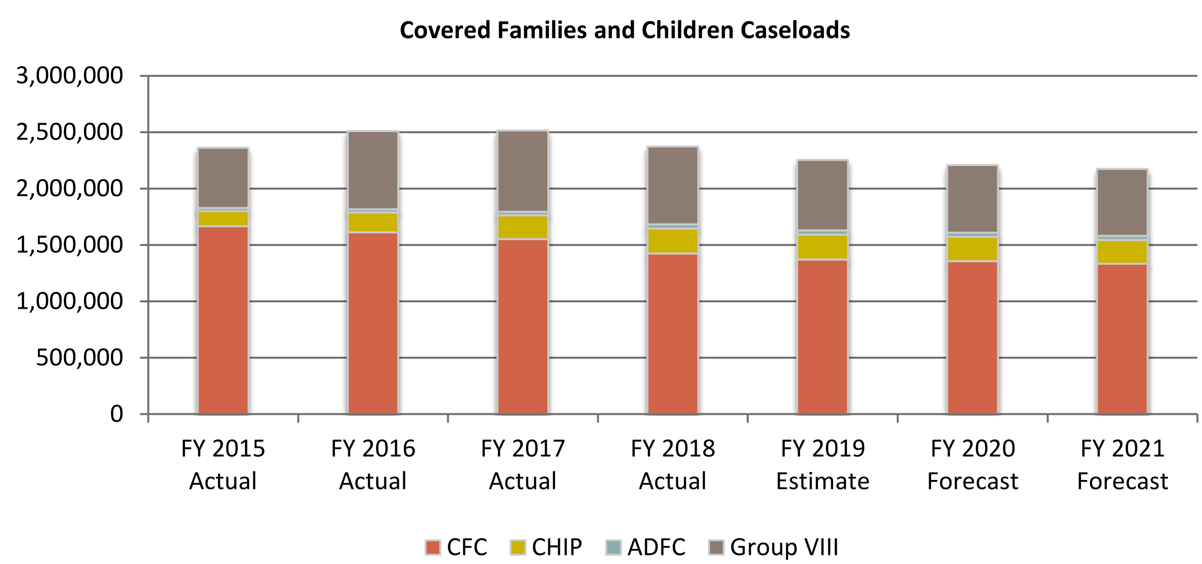
The second table and associated chart show caseloads under the ABD category. LBO forecasts that the overall ABD caseload will increase by 1,663, or 0.3%, in FY 2020, and will increase by 3,315, or 0.7%, in FY 2021. The Medicaid caseload for ABD has been increasing since the second quarter of 2016, or the implementation of using the SSI eligibility standard. However, the caseload for dual eligibles started to decline beginning in the third quarter of 2017. For forecasting, the ABD category is broken down into children (ABD-Kids), adults (ABD-Adults), and dual eligibles, who are individuals who are eligible for both Medicaid and Medicare (Dual).

[16] The total Medicaid caseload in FY 2015 and FY 2016 reported here includes individuals enrolling in the Family Planning Program. Family Planning was a limited-benefit Medicaid program that provided services for the prevention of or delay of pregnancy and for the diagnosis and treatment of sexually transmitted infections. It was eliminated beginning January 1, 2016. While the limited-benefit group was eliminated, Medicaid still provides family planning services.

The third table and associated chart show caseloads under the Other category. The Other category includes two programs: Medicare premium assistance (PREM) helps certain qualified Medicare beneficiaries pay their Medicare premiums, and the presumptive eligibility (PSUM) group includes those who receive immediate health care services through Medicaid if they are presumed to be eligible.

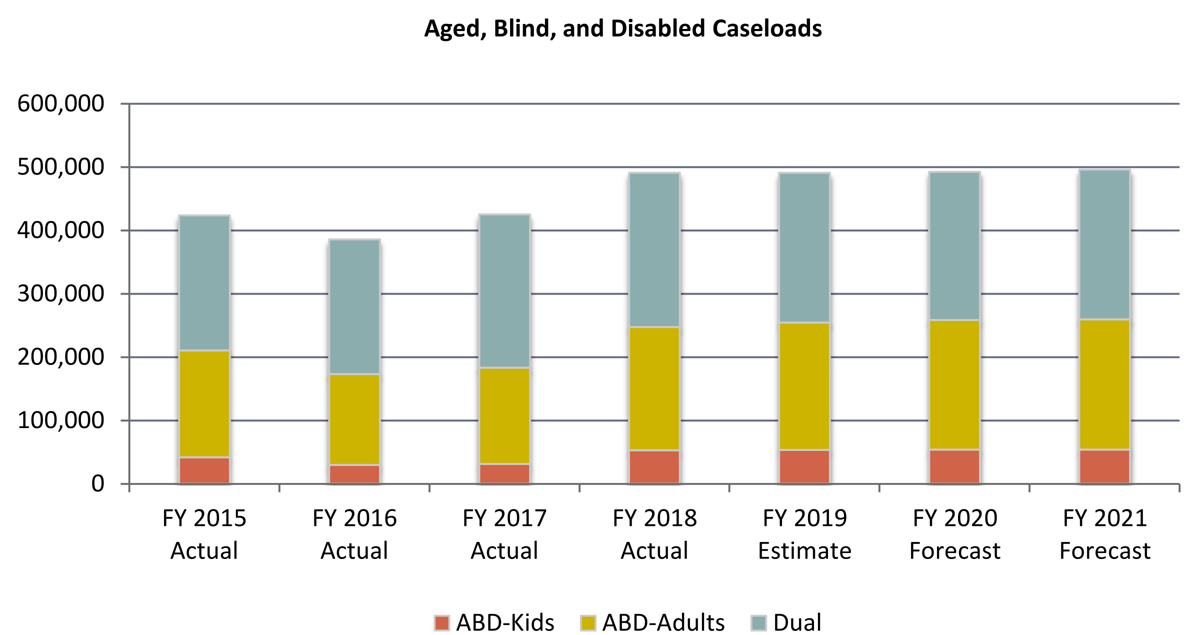
Covered Families and Children Caseloads							
	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
CFC (HS/HF)	1,664,912	1,611,248	1,550,804	1,423,674	1,368,485	1,353,585	1,332,972
Growth	9.2%	-3.2%	-3.8%	-8.2%	-3.9%	-1.1%	-1.5%
CHIP	132,564	174,270	209,131	221,440	222,316	216,801	209,500
Growth	-8.7%	31.5%	20.0%	5.9%	0.4%	-2.5%	-3.4%
ADFC	28,705	29,548	32,682	35,923	36,185	36,599	36,987
Growth	0.3%	2.9%	10.6%	9.9%	0.7%	1.1%	1.1%
Group VIII	535,163	692,042	721,938	691,634	625,804	599,331	592,821
Growth	285.0%	29.3%	4.3%	-4.2%	-9.5%	-4.2%	-1.1%
Total CFC	**2,361,344**	**2,507,107**	**2,514,555**	**2,372,671**	**2,252,789**	**2,206,317**	**2,172,280**
Growth	**28.5%**	**6.2%**	**0.3%**	**-5.6%**	**-5.1%**	**-2.1%**	**-1.5%**

CFC (HS/HF): Traditional Covered Families and Children under the Healthy Start (HS)/Healthy Families (HF) Program
CHIP: Children's Health Insurance Program; ADFC: Adopted and Foster Care Children



Aged, Blind, and Disabled Caseloads							
	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
ABD-Kids	41,724	29,803	30,985	52,567	53,445	53,660	53,668
Growth	-5.6%	-28.6%	4.0%	69.7%	1.7%	0.4%	0.0%
ABD-Adults	168,440	143,307	151,903	194,635	200,753	204,728	205,635
Growth	-7.4%	-14.9%	6.0%	28.1%	3.1%	2.0%	0.4%
Dual	213,644	212,655	242,330	243,599	236,465	233,938	236,337
Growth	0.3%	-0.5%	14.0%	0.5%	-2.9%	-1.1%	1.0%
Total ABD	**423,808**	**385,764**	**425,217**	**490,801**	**490,663**	**492,326**	**495,641**
Growth	**-3.5%**	**-9.0%**	**10.2%**	**15.4%**	**0.0%**	**0.3%**	**0.7%**

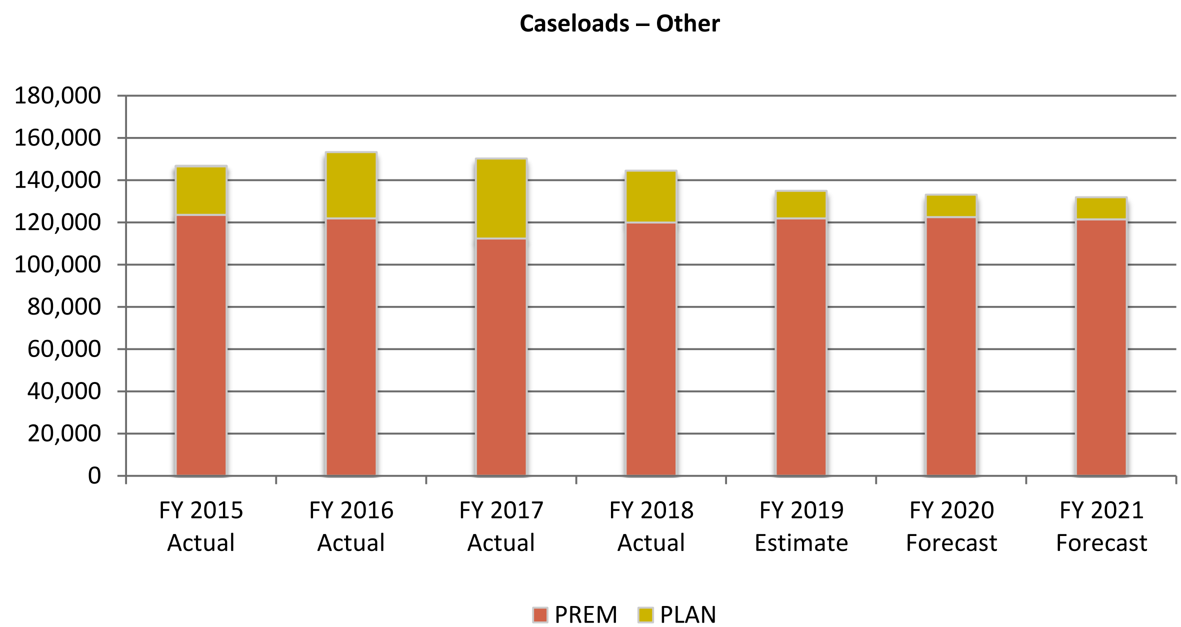
Dual: Eligible for both Medicaid and Medicare



Caseloads – Other							
	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
PREM	123,518	121,940	112,333	120,002	121,929	122,532	121,507
Growth	6.1%	-1.3%	-7.9%	6.8%	1.6%	0.5%	-0.8%
PSUM	23,034	31,420	37,986	24,498	13,079	10,632	10,395
Growth	323.9%	36.4%	20.9%	-35.5%	-46.6%	-18.7%	-2.2%
Total Other	**146,552**	**153,360**	**150,319**	**144,500**	**135,008**	**133,164**	**131,902**
Growth	**20.2%**	**4.6%**	**-2.0%**	**-3.9%**	**-6.6%**	**-1.4%**	**-0.9%**

PREM: Medicare premium assistance

PSUM: Presumptive eligibility



Caseloads by Service Delivery System

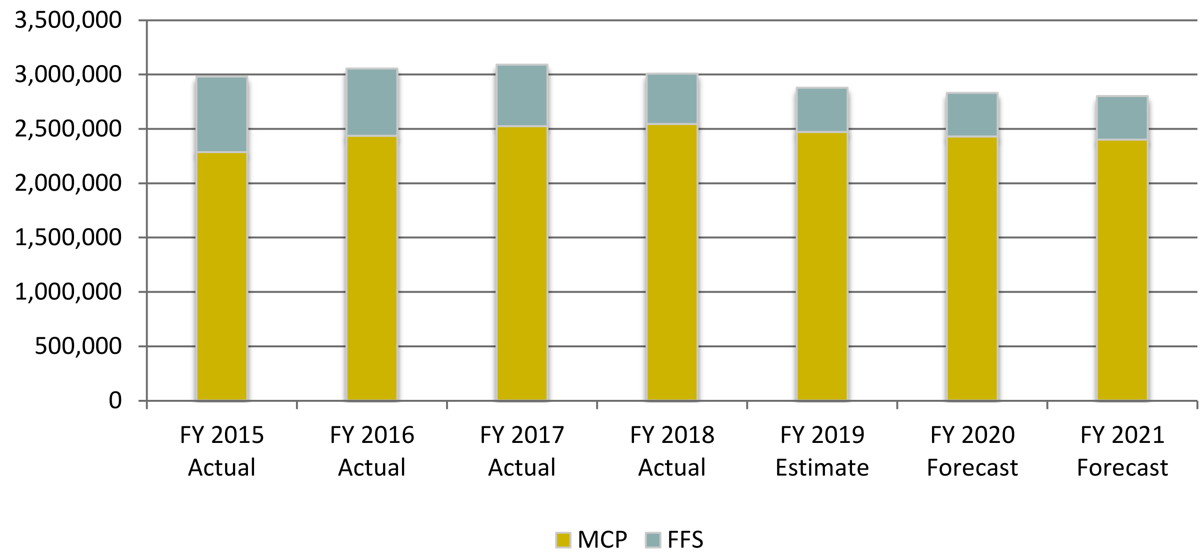
Two major service delivery systems for Medicaid are managed care plan (MCP) and fee-for-service (FFS). Historically, Medicaid paid most service providers a set fee for the specific type of service rendered to Medicaid enrollees (termed "fee-for-service" reimbursement). Increasingly, Medicaid pays for services through a managed care plan. A typical MCP is one in which the beneficiary receives all care through a single point of entry, and the plan is paid a fixed (capitated) monthly premium per beneficiary for any health care included in the benefit package, regardless of the amount of services actually used.

In forecasting Medicaid expenditures, the costs of recipients enrolled in MCPs are generally treated separately from the FFS categories. Managed care has grown in the last several years, which has dramatically shifted expenditures from the FFS categories to the managed care categories. The structure of the managed care rollout evolved from voluntary enrollment to mandatory enrollment. Now, most Medicaid recipients are required to enroll in managed care. Generally, nondual recipients who are on waivers or institutionalized, still are served on a fee-for-service basis. However, some recipients, such as individuals on developmental disabilities waivers, may enroll in managed care on a voluntary basis. Prior to July 1, 2014, children with cancer, hemophilia, or cystic fibrosis who received services through the Bureau of Children with Medical Handicaps (BCMH) and were enrolled onto Medicaid were excluded from managed care. Beginning on July 1, 2014, families of these children could choose managed care on a voluntary basis. Effective January 1, 2017, BCMH and the Breast and Cervical Cancer Project populations were required to enroll in managed care. Managed care has also become mandatory for all adopted and foster care children effective January 1, 2017.

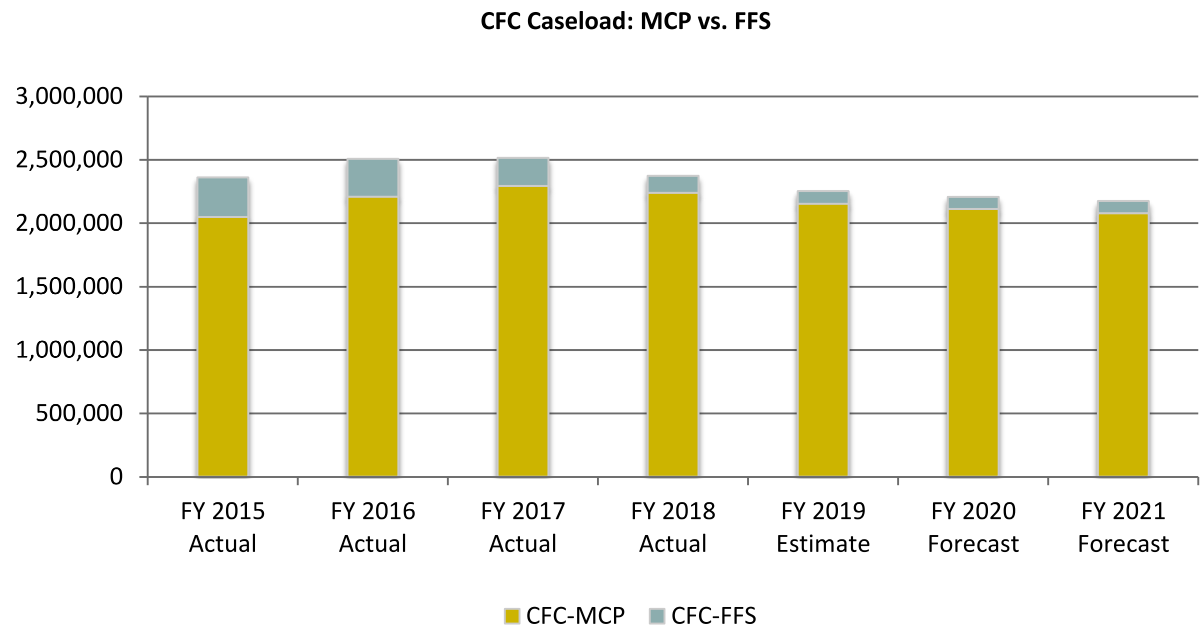
The following three tables and charts show forecasted caseloads for the two delivery systems. The first table and associated chart include both the CFC and ABD populations and the second and third show CFC and ABD populations separately.

Total ABD and CFC Caseload: Managed Care (MCP) vs. Fee-for-Service (FFS)							
	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
MCP	2,285,997	2,436,672	2,523,768	2,545,209	2,472,205	2,431,073	2,400,133
Growth	30.9%	6.6%	3.6%	0.8%	-2.9%	-1.7%	-1.3%
FFS	695,716	618,588	566,324	462,763	406,255	400,734	399,690
Growth	-10.9%	-11.1%	-8.4%	-18.3%	-12.2%	-1.4%	-0.3%

Total ABD and CFC Caseload: MCP vs. FFS

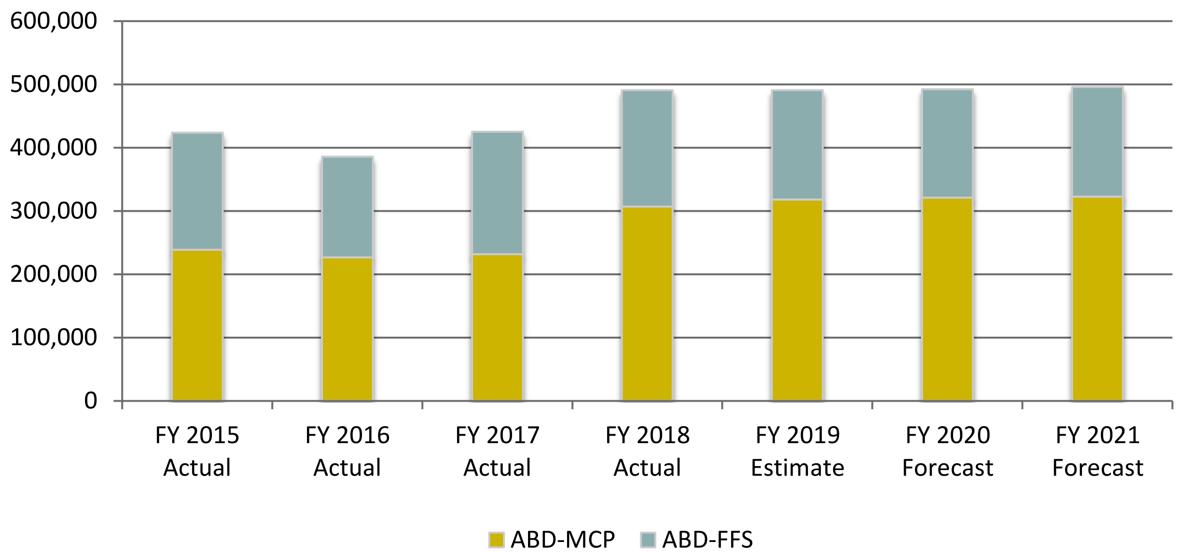


CFC Caseload: MCP vs. FFS							
	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
CFC-MCP	2,047,530	2,209,871	2,292,169	2,238,233	2,154,006	2,110,201	2,077,499
Growth	30.4%	7.9%	3.7%	-2.4%	-3.8%	-2.0%	-1.5%
CFC-FFS	313,814	297,237	222,387	134,437	98,783	96,116	94,780
Growth	17.7%	-5.3%	-25.2%	-39.5%	-26.5%	-2.7%	-1.4%



ABD Caseload: MCP vs. FFS							
	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast
ABD-MCP	238,466	226,801	231,600	306,976	318,199	320,873	322,633
Growth	36.0%	-4.9%	2.1%	32.5%	3.7%	0.8%	0.5%
ABD-FFS	185,341	158,963	193,618	183,826	172,464	171,453	173,007
Growth	-29.7%	-14.2%	21.8%	-5.1%	-6.2%	-0.6%	0.9%

ABD Caseload: MCP vs. FFS



Per Member Per Month Cost Forecast

The second component of the forecast equation is the per member per month (PMPM) cost. These costs depend on the services required for each member and reimbursement rates set by ODM. Although generally the ABD population makes up less than 20% of the total caseload, it comprises almost 60% of the total service costs. This is because the ABD population's health care needs are generally higher. The service delivery system also affects the PMPM cost forecast. The state pays for services through managed care plans at a fixed capitation rate, whereas the state pays for the fee-for-service population based on the services actually received. Generally, PMPM costs are forecasted based on the trends in the data and current policies. Following is a discussion of the PMPM forecast for the largest service categories.

Behavioral Health Redesign

On January 1, 2018, a redesign of the behavioral health system was implemented, which resulted in an updated benefit package for community behavioral health services. The redesign is an ongoing effort between ODM and the Ohio Department of Mental Health and Addiction Services (OhioMHAS) to enhance the quality and delivery of care for mental health and substance use disorder treatment. This phase of the redesign did the following: updated Medicaid behavioral health billing codes to align with national standards, developed a single fee schedule for mental health and substance use disorder services, tied rates to the qualifications of the provider, and expanded services for individuals with the most intensive needs.[17] The changes implemented on this date only impacted FFS claims and claims for individuals enrolled onto MyCare Ohio. The last phase of the redesign, which occurred on July 1, 2018, integrated behavioral health into Medicaid managed care. Thus, as of July 1, behavioral health services are now covered by MCPs instead of paid for directly by ODM. Accordingly, LBO's forecast for behavioral health expenditures under FFS reflects the behavioral health payments incurred by individuals not required to enroll in a managed care plan.

Managed Care

Effective July 1, 2017, ODM allows the use of Institutions for Mental Diseases (IMD) as an "in lieu of" service for individuals ages 21 to 64. This policy is based on the Centers for Medicare and Medicaid Services' (CMS) recent managed care regulations, which permit states to use federal Medicaid funds for capitation payments to managed care plans for persons receiving treatment in an IMD "in lieu of" other services covered under the Medicaid State Plan. Under this regulation, federal payments for IMD services are limited to 15 days per month for individuals ages 21 to 64. In addition, IMD services must be medically appropriate and cost effective and enrollees cannot be required to accept IMD services "in lieu of" other services covered under the Medicaid State Plan.

LBO's forecast assumes annual capitation rate growth of between 4.2% and 4.5% in 2020 and between 4.7% and 5.1% in 2021 for ABD and CFC populations. In addition, the forecast assumes growth of 5.4% in FY 2020 and 5.9% in FY 2021 for Group VIII. These growth rates were the mid-range rates calculated by Milliman. Generally, the MCP capitation rates are set at the beginning of each calendar year. For 2019, the statewide capitation rate is $1,431 for ABD, $304 for CFC, and $615 for Group VIII.

Nursing Facilities

Effective July 1, 2016, ODM updated the methodology used to measure resident acuity in the state's nursing facilities to coincide with the calculation of new rates beginning in 2017. Effective January 1, 2017, ODM rebased nursing facility per diem rates using calendar year 2013 costs as a basis. These changes increased average per diem rates in 2017. The average per diem was about $172 in FY 2016, and it was increased to about $193 in 2017. The statewide average per diem is about $196 effective January 1, 2019. LBO's baseline forecast assumes the 2019 rate will continue throughout the FY 2020-FY 2021 biennium.

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[17] Among them, Ohio Medicaid has created a Specialized Recovery Services (SRS) Program beginning in August 2016 for adults with Serious and Persistent Mental Illness (SPMI) who have income above the need standard to qualify for Medicaid. To be eligible, individuals must have monthly income below $2,245, meet diagnosis criteria, and not live in a nursing facility, hospital, or similar setting. Individuals enrolled in SRS receive full Medicaid plus recovery management care coordination services, assistance to find and keep a job, and support from others with similar life experiences.

Assumptions and Methodology

As indicated earlier, the Medicaid service expenditure and enrollment projections made by LBO economists are "baseline" or based on current law; that is, they are consistent with current legislation and administrative policy. These projections did not analyze any proposed changes included in the executive budget or future changes in state or federal policy that would affect the Medicaid Program. Furthermore, various "add-ons," including Medicaid Part D and Medicare Buy-In, were projected by ODM and added to the LBO baseline forecast; LBO economists did not forecast the add-ons.

Assumptions and Data Sources

Projections of Medicaid service expenditures and enrollment are dependent on demographic and economic assumptions such as economic growth, population growth, and the growth in health care prices. In addition, assumptions regarding participation rates and the coverage of and enrollment in other health insurance programs affect Medicaid expenditures and enrollment projections. Lastly, the projections also depend on the nature and quality of the available data.

The data on which the LBO forecast is based are provided by ODM. ODM data sources include the following:

Ohio MITS (Medicaid Information Technology System);

BIAR (Business Intelligence Analytical Reporting);

Data Warehouse;

OAKS (Ohio Administrative Knowledge System); and

QDSS (Quality Decision Support System).

Ohio MITS is a browser-based healthcare administration platform that allows providers to submit claims and other relevant data electronically. BIAR is a subsystem of MITS that among other things, allows users to run queries and develop reports. The Data Warehouse stores data accumulated from various sources within ODM. OAKS is a system used by the state to manage its purchasing, general ledger, accounts receivable, and accounts payable information. Lastly, QDSS accesses data from the Data Warehouse and provides software tools to analyze aspects of the Medicaid Program.

Methodology

To forecast Medicaid service expenditures for the FY 2020-FY 2021 biennium, LBO economists used both trend analysis and regression analysis.[18] Trend analysis uses historical results to predict future outcome. Regression analysis is used to predict the value of one variable from known or assumed values of other variables related to it.

Trend analysis might be employed, for example, to estimate the change in the cost of providing a specific set of benefits over time. In order to estimate this change, trend factors

[18] To perform these analyses, LBO uses SAS Forecast Studio. SAS Forecast Studio enables users to set up forecasting projects, perform large-scale automatic forecasting, identify exceptions, override forecasts, and construct their own models if desired.

may also be applied. To select appropriate trend factors the forecaster consults sources that provide regional and national economic indicators and indices that offer broad perspectives of industry trends in the U.S., the Midwest region, and Ohio. For example, the U.S. Department of Labor Consumer Price Index data (local, regional, and national), federal reports and projections such as National Health Expenditures, and IHS Economics data were all considered by LBO to produce this forecast.

Regression analysis is used for estimating the relationship between a dependent variable and one or more independent variables. For example, the unemployment rate might be included in a regression analysis as the independent variable when forecasting Medicaid caseloads (i.e., the dependent variable).

After numerous forecasts are produced using the methodologies described above, LBO economists choose the most appropriate models by employing statistical tests for goodness of fit and considering expected growth patterns. The models with the poorest fit are eliminated. LBO also considers historical patterns, along with economic and policy expectations when determining the best model and producing the final forecasts.

LBO economists generate baseline forecasts for major expenditure categories by first calculating the PMPM costs for each category. For each typical expenditure category and subcategory, separate forecasts are done for the average cost per recipient.

Background on Medicaid

Medicaid, established in 1965 in Title XIX of the Social Security Act, is a joint state-federal program that provides health care coverage to low-income individuals. State agencies administer Medicaid subject to oversight by the CMS in the U.S. Department of Health and Human Services (HHS). State participation in Medicaid is voluntary, but all states participate. The federal government provides reimbursement to the states and offers guidance on how to use federal funds, but each state shapes and administers its program to suit the needs of its own population. For instance, states determine their own eligibility requirements and scope of services, set provider payment rates, and administer their own programs. Consequently, Medicaid operates as more than 50 distinct programs – one for each state and territory, and the District of Columbia.

Federal Poverty Guidelines

States use federal poverty guidelines (FPG) in developing their income eligibility criteria for various Medicaid groups. FPG is the income guideline established and issued each year in the Federal Register by HHS. Public assistance programs usually define income standards in relation to FPG. The table below provides the 2019 poverty guidelines for various family sizes for the 48 contiguous states and the District of Columbia. Alaska and Hawaii are provided a different set of guidelines.

2019 Federal Poverty Guidelines	
Family Size	**Poverty Guidelines**
1	$12,490
2	$16,910
3	$21,330
4	$25,750
5	$30,170
6	$34,590
7	$39,010
8	$43,430

Changes to the Medicaid Program Over Time

Medicaid has undergone many changes since its inception. The program was initially established to provide medical assistance only to those individuals receiving assistance through Aid to Families with Dependent Children (AFDC) and state programs for the elderly. Over the years, Congress has incrementally expanded Medicaid eligibility to reach more Americans living below or near poverty, regardless of their welfare eligibility.

In 1972, Congress enacted a federal cash assistance program for the aged, blind, and disabled called Supplemental Security Income (SSI), which broadened Medicaid coverage to include this population. A significant expansion of Medicaid was to provide health insurance coverage not just to the welfare population but also to other low-income families, especially low-income children and pregnant women.

In 1996, Medicaid was delinked from welfare with the enactment of the Temporary Assistance to Needy Families (TANF) Program. Families who receive TANF benefits do not automatically qualify for Medicaid as they did under the AFDC Program.

In 1997, the State Children's Health Insurance Program (SCHIP) was created. Title XXI of the Social Security Act added health care coverage for children in low- and moderate-income families who were ineligible for Medicaid, but could not afford private insurance. Under SCHIP, states were offered the option of implementing this health care coverage as a stand-alone program with different benefit packages, or as part of their existing Medicaid benefit. Ohio opted to implement SCHIP as a Medicaid expansion beginning in 1998.

The most recent changes to Medicaid came with the enactment of the Patient Protection and Affordable Care Act of 2010. The goal of the ACA was to increase access to health insurance through a coordinated system of "insurance affordability programs," including a mandatory expansion of Medicaid to all individuals under age 65 whose income is at or below 133% FPG,[19] and the creation of health insurance exchanges. The ACA required that nearly all U.S. citizens and legal residents have some form of qualifying private or public health insurance. This requirement is otherwise known as the "individual mandate." Compliance with the individual mandate is facilitated through state-based or federally facilitated online insurance exchanges and expansion of the Medicaid Program. Under the insurance exchanges, individuals with income between 100% FPG and 400% FPG qualify for federally funded premium credits and cost-sharing subsidies.

Although the ACA made Medicaid expansion mandatory for states, the U.S. Supreme Court, in its 2012 ruling, effectively made the expansion optional by prohibiting the U.S. Secretary of HHS from withholding all or part of a state's other federal Medicaid funds for failure to implement the expansion. Ohio has chosen to implement the Medicaid expansion. As of January 1, 2019, 36 other states and the District of Columbia have also expanded their Medicaid programs under the ACA.

The ACA also modified how income is calculated for most Medicaid applicants, including those in the new eligibility group. In 2014, states began using modified adjusted gross income (MAGI) to determine eligibility of most applicants. MAGI is adjusted gross income as defined in the Internal Revenue Code, modified by applying a 5% "disregard." This method of determining eligibility eliminated resource tests.

Conclusions

Medicaid expenditures are generally forecasted for two reasons. First, Medicaid services are an "entitlement" for those who meet eligibility requirements. This means that if an individual is eligible for the program then he or she is guaranteed the benefits and the state is obligated to pay for them. Second, the program's costs represent a significant portion of the GRF budget. In FY 2018, Medicaid expenditures represent approximately 46% of total GRF expenditures (including both state and federal shares) and 22% when only the state share of the GRF is considered. The forecasts are LBO's best estimate of what Medicaid service expenditures will be over the biennium based on the information available at the time the forecast is made. They are point estimates, which do not indicate the uncertainty involved in the forecast.

[19] Under the ACA, the eligibility is 133% FPG. However, a 5% income disregard is allowed, which makes the effective minimum threshold 138% FPG.