



Ohio Legislative Service Commission

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Baseline Forecast of GRF Revenues & Medicaid Expenditures

FY 2018-FY 2019 Biennial Budget

February 1, 2017

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ECONOMIC CONDITIONS AND OUTLOOK

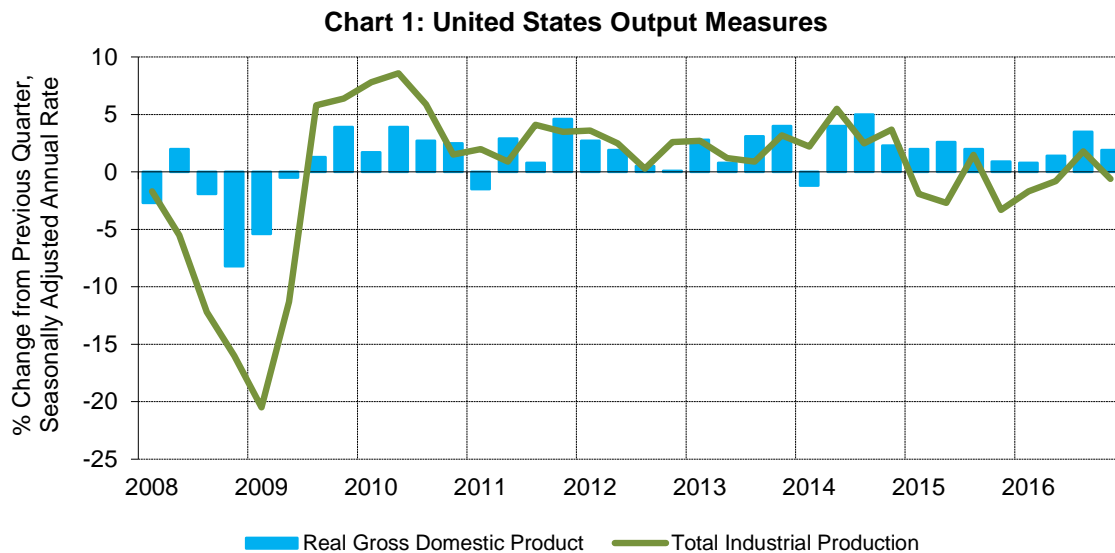
State of the Economy

The economic expansion continued in 2016 for both the U.S. and Ohio, though some sectors have slowed. Nationwide, employment grew for 75 straight months through December, and by the end of 2016, wage growth was stronger than at any point since the 2007-2009 recession. This has supported healthy consumer spending, including a record number of light vehicle sales in 2016. Inflation, though still low, is increasing and employment growth was deemed strong enough by the Federal Reserve for a further increase in its target interest rate in December, with more expected in 2017. In contrast, business investment remains soft and exports are struggling under the weight of a strong U.S. dollar, which rose significantly again late in 2016. Nationwide industrial production declined in 2016.

Many of these issues are highlighted in Ohio's economy which features plenty of manufacturing and production for export. Ohio's employment growth slowed significantly in 2016. On the other hand, home sales and real estate investment have been strong in the state and Columbus is one of the fastest growing metropolitan areas in the Midwest. Other statewide sectors have helped to pick up some of the slack too, such as growth in health care. Overall, further growth is predicted nationwide and also in Ohio, though at a bit of a slower pace.

National

The national economy continued to grow in 2016 as measured by total output, though at a slowed pace from 2015. Inflation-adjusted gross domestic product (real GDP) grew by 1.6% in 2016, down from 2.6% growth in 2015. Growth picked up in the second half of 2016 after a weak first half. Output during 2015 and early 2016 was weighed down in part by the oil and gas industry. Industrial production, which includes mining, fell in six of the last eight quarters, including a 0.6% decline in the fourth quarter of 2016. Manufacturing, the largest component of industrial production, was nearly flat in 2016, increasing just 0.1% in the calendar year. Chart 1 illustrates quarterly changes in real GDP and industrial production from 2008 through last year.



The current U.S. economic expansion has been marked by its length and its weakness. December 2016 marked 90 months since the last recession ended in June 2009,¹ which makes it the fourth longest expansion since 1854. However, it has also been the weakest expansion in terms of economic growth in the post-World War II era. Quarterly growth of real GDP averaged a 2.1% annual rate from the 2009 second quarter through the 2016 fourth quarter, while previous post-World War II expansions averaged a 4.6% annual growth rate.

Employment has been among the most consistent sources of growth during the current expansion. The economy added another 2.2 million jobs² in 2016, though growth did slow a bit from 2015. December 2016 marked 75 straight months in which the national economy added more jobs than it lost. Wage growth, which has been sluggish throughout the recovery, showed signs of picking up by the end of 2016 as well. By December, average hourly earnings for private, nonfarm workers had grown at a faster pace year-over-year than at any point since the recession.

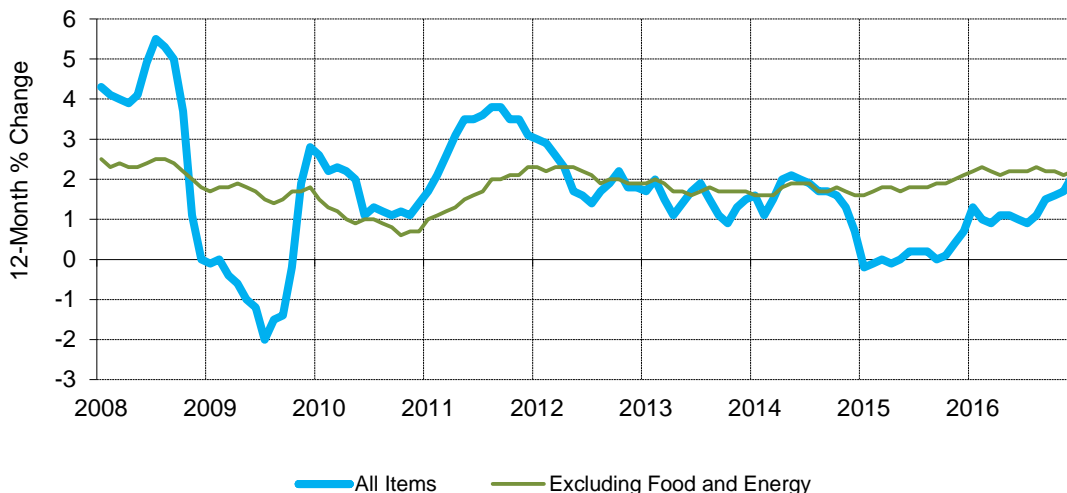
On the back of employment and wage gains, consumer spending was strong in 2016, driving economic growth despite weakness in other sectors. Consumer durable goods spending grew at a high pace. U.S. sales of cars and light trucks were 17.5 million units in 2016, setting the all-time record for the second straight year. The market share of light trucks and SUVs increased sharply over the last two years, driven in part by low gasoline prices. By the end of 2016 though, auto production had been cut at some domestic plants, based on expectations that demand may have peaked.

¹ Business cycle trough and peak dates used in calculating the numbers on which these statements are based are from the National Bureau of Economic Research.

² Nonfarm payroll employment.

Consumer price increases reached the Federal Reserve's 2% target over a 12-month span in December for the first time in over two years, though the measure which excludes food and energy products exceeded that level throughout the year (Chart 2). Overall price inflation was minimal in 2015 and slow to pick up for much of 2016 after a steep drop in energy prices at the end of 2014. Gasoline prices remain low relative to levels during the last ten years, but are no longer declining.

**Chart 2: Consumer Price Index
Seasonally Adjusted**



In contrast to consumers, business activity generally softened in 2016. Overall business fixed investment fell after slowing in 2015. Industrial capacity utilization declined in 2016 despite some recovery in mining. Manufacturing capacity utilization had its biggest decline year-over-year since the recession ended. Exporters have been hurt by a strong U.S. dollar.

Nationwide residential fixed investment growth slowed in 2016 after double-digit growth in 2015, although much of the decline was related to apartment construction in the Northeast region of the country. Many regions still experienced healthy investment growth. Housing starts in the Midwest region grew by 17.4% in 2016. Nationwide sales volume of single-family existing homes (the bulk of the residential real estate market) in 2016 was the highest in a decade.³ Healthy demand in the market, but low supply relative to historical standards, led to rising prices in most regions. Nationwide home prices were up about 6% in 2016 relative to 2015.⁴

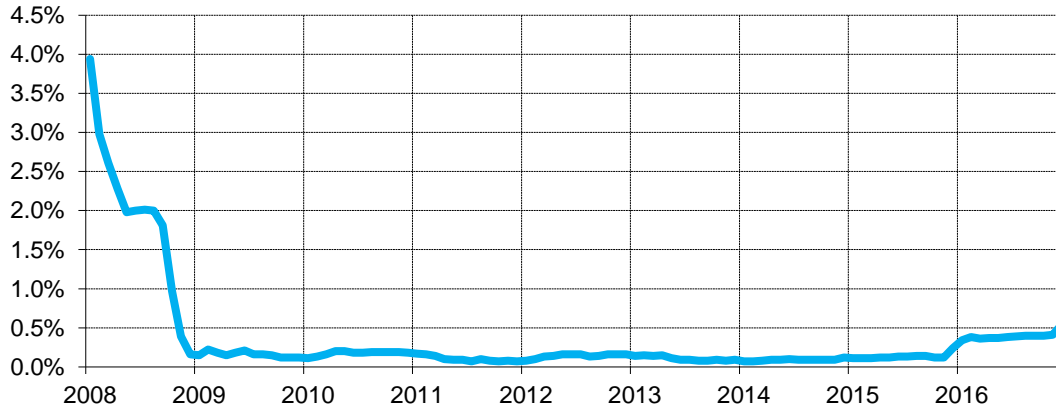
The Federal Reserve began raising short-term interest rates in December 2015, and in December 2016 determined economic conditions were strong enough for a second quarter-point increase in the target range. With inflation near (or already at by

³ Data on existing home sales are from the National Association of Realtors.

⁴ Home prices according to the Federal Housing Finance Agency.

some measures) the Federal Reserve's 2% target, and employment continuing to increase on a monthly basis nationwide, more increases are expected in 2017. Prior to December 2015, U.S. monetary policy had held short-term interest rates near zero for seven years (Chart 3).

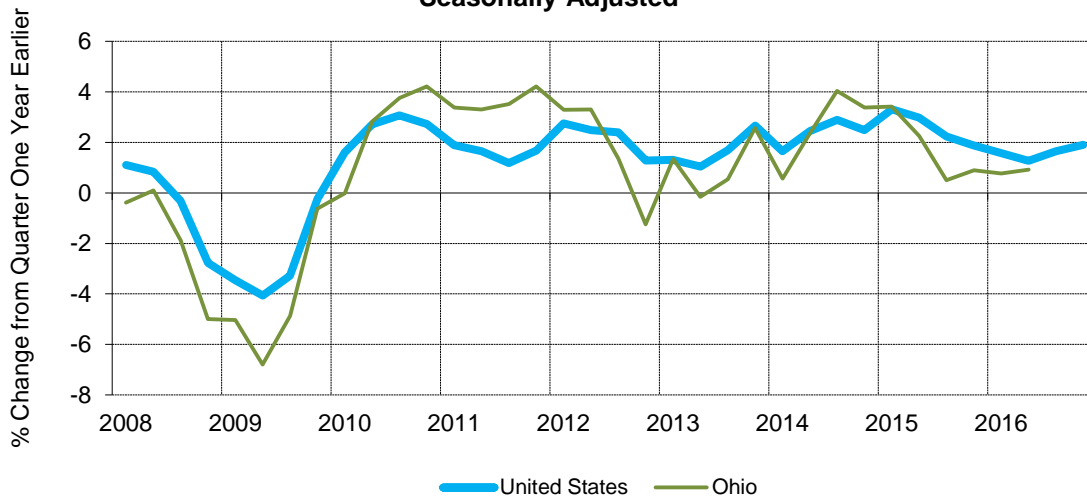
Chart 3: Effective Federal Funds Rate



Ohio

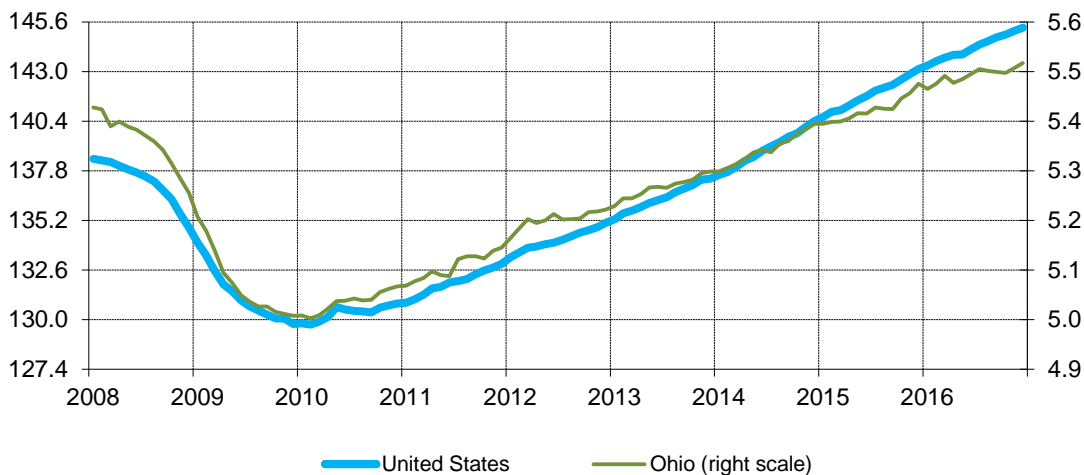
The 2007-2009 recession was more severe in Ohio than nationwide, but so was the initial recovery as measured by gross product. By 2015 and the first half of 2016 (the most recent state GDP estimate available), Ohio's growth rate of total output trailed the nation's (Chart 4). During that time period, the national economy experienced declines in industrial production, an outsized portion of which takes place in Ohio. Overall four-quarter output growth in Ohio trailed the nation in each of the five most recently reported quarters.

**Chart 4: Real Gross Domestic Product
Seasonally Adjusted**



Ohio nonfarm payroll employment has grown each year since reaching a low point in 2010, but the pace of growth slowed considerably in 2016. Ohio added 41,800 jobs in 2016, the lowest total in a calendar year since 2009. The healthcare and social assistance sector added the most jobs in Ohio in 2016, while durable goods manufacturing lost the most. Nationwide nonfarm payroll growth slowed in 2016 as well, though not as much as in Ohio (Chart 5).

**Chart 5: Total Nonfarm Payroll Employment
Millions, Seasonally Adjusted**

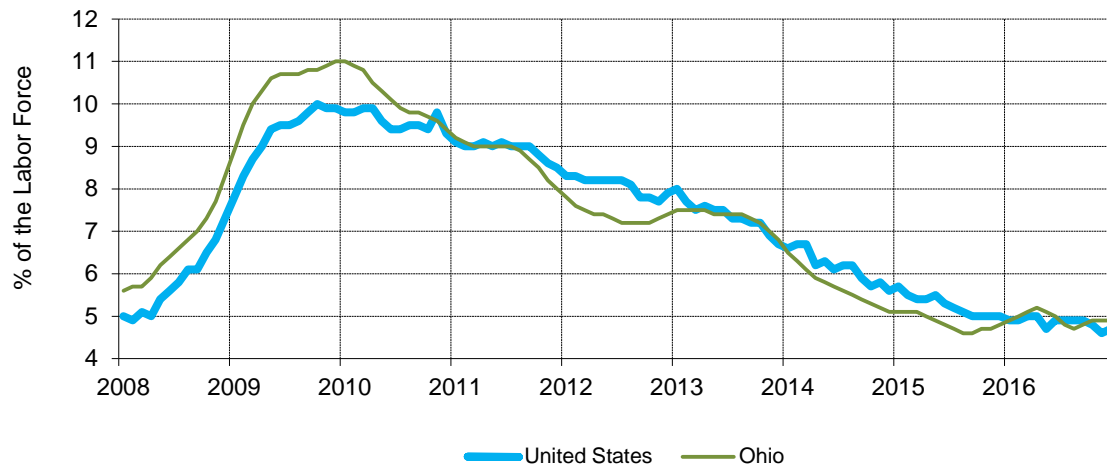


Ohio's statewide unemployment rate in December was 4.9%, finishing the year higher than it began for the first time since 2009. It was also the first time since 2013 that Ohio ended the year with a higher unemployment rate than the nation, which finished the year at 4.7% (Chart 6). Labor markets still appear to have more slack than these unemployment rates suggest. Since the end of the 2007-2009 recession, the rate of participation in the labor force⁵ has declined steeply, both in Ohio and the U.S. as a whole. Some of the decline is demographic in nature as the baby-boomer generation retires, but the labor force participation rate has declined even among those younger than 65. In December, Ohio's labor force participation rate fell to its lowest level since the 1970s. This reduction in labor force has caused the reported rate of unemployment⁶ to correspond to lower levels of actual employment for the population than in past eras. For instance, when Ohio's unemployment rate was 4.9% in October of 2001, 63.8% of its working-age population was employed, whereas in December 2016, Ohio's unemployment rate was the same, but the employment to working-age population percentage was only 59.1%.

⁵ The labor force is the number of civilians age 16 and over who are either currently employed or unemployed but looked for work in the last four weeks.

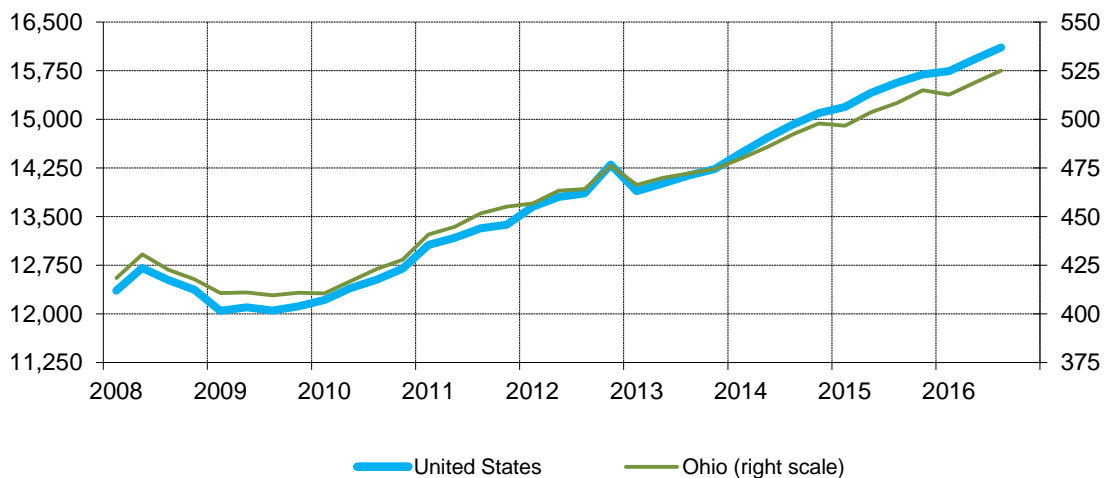
⁶ The unemployment rate is the number of people not employed but who have looked for work within the last four weeks as a percent of the labor force.

**Chart 6: Unemployment Rate
Seasonally Adjusted**



Personal income has generally been growing in Ohio and nationwide since 2009, though Ohio's pace of growth has trailed the nation's (Chart 7). Figures in the chart reflect dollars of current purchasing power. Ohio's personal income grew 3.3% in the most recently reported four quarters (ending in the third quarter of 2016), while personal income in the U.S. rose 3.5%.

**Chart 7: Personal Income
Billions of Dollars, Seasonally Adjusted Annualized Quarters**

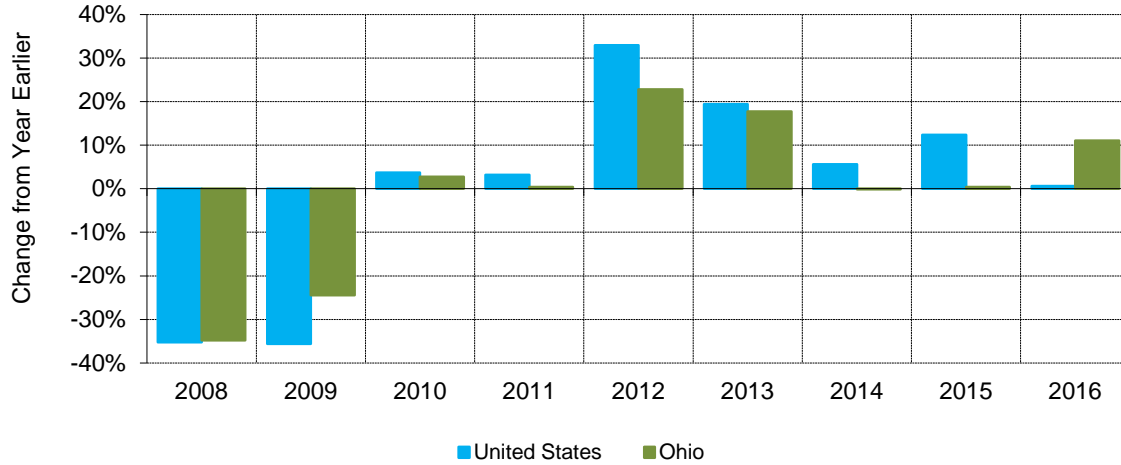


The Ohio statewide housing market had a very strong 2016. Housing construction growth increased substantially while the nationwide rate slowed, as indicated by building permits data for new privately owned units (Chart 8). Ohio home sales were an all-time high in 2016 by both unit sales and average price.⁷ Both measures

⁷ Ohio home sales data are from the Ohio Association of Realtors.

eclipsed previous records set in 2005. The average home sales price in Ohio was \$163,503 in 2016, with all regions experiencing higher prices than in 2015.

Chart 8: New Privately Owned Housing Units Authorized by Building Permits



Economic Forecasts

The following are forecasts of key economic indicators that serve to illustrate the economic environment in which LSC state revenue forecasts for the next biennium were made. The forecasts are point estimates, which do not indicate the sizable, and varying, uncertainty involved in each forecast. Some of the indicator forecasts were used as direct inputs of various LSC econometric models used to make state revenue forecasts. Therefore, LSC's forecasts for state revenues also reflect the inherent uncertainties of economic indicator forecasts. Economic indicator projections are taken from IHS Economics' baseline forecasts released in December 2016, with the exception of Ohio personal income. Ohio personal income projections are based on an alternative forecast from IHS Economics which takes Ohio's recent personal income tax withholding performance into further account.

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

U.S. Gross Domestic Product

U.S. real GDP is projected to increase about 2.5% annually on average in the next biennium, as shown below.

U.S. Real GDP Growth												
Forecast	2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	-----percent change at annual rate-----											
Quarterly	2.4	2.4	2.2	2.2	3.3	2.6	2.6	2.4	2.4	2.0	2.0	1.9
Fiscal Year	2.0				2.4				2.6			

Ohio Gross Domestic Product

Economic growth in Ohio is expected to continue through 2019 but at a slower pace than the nation. Ohio real GDP is projected to increase about 1.8% annually on average in the next biennium.

Ohio Real GDP Growth												
Forecast	2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	-----percent change at annual rate-----											
Quarterly	1.8	1.8	1.5	1.6	2.7	1.7	1.8	1.8	1.8	1.5	1.6	1.6
Fiscal Year	1.5				1.7				1.9			

U.S. Inflation

IHS Economics' December baseline forecast projects the consumer price index rate of increase to peak in the third quarter of calendar year 2017, and average about 2.4% annually in the next biennium.

U.S. Consumer Price Index Inflation

Forecast	2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	-----percent change at annual rate-----											
Quarterly	2.0	2.4	2.9	2.1	2.0	2.6	2.4	2.3	2.5	2.5	2.6	2.6
Fiscal Year	2.0				2.5				2.4			

U.S. Personal Income

Nationwide personal income is projected to grow about 5.2% 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

Forecast	2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	-----percent change at annual rate-----											
Quarterly	4.5	5.0	4.8	4.9	5.7	5.4	5.1	5.2	5.9	4.8	4.8	4.7
Fiscal Year	4.3				5.0				5.3			

Ohio Personal Income

Income to persons who reside in Ohio also is forecast to grow in the next biennium, at 4.2% annually on average, a reduced pace of growth compared to the U.S. These projections reflect an alternative, slightly more pessimistic forecast from IHS Economics relative to their December baseline forecast.

Ohio Personal Income Growth

Forecast	2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	-----percent change at annual rate-----											
Quarterly	3.6	4.2	3.8	3.9	4.9	4.4	4.1	4.3	5.2	4.0	4.0	3.9
Fiscal Year	3.1				4.1				4.4			

U.S. Unemployment Rate

IHS Economics' December baseline forecast projects the nationwide unemployment rate will decline slowly through the next biennium.

U.S. Unemployment Rate												
Forecast	2017				2018				2019			
	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>
	-----percent of the labor force-----											
Quarterly	4.7	4.6	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.1	4.1	4.1
Fiscal Year	4.7				4.4				4.1			

Ohio Unemployment Rate

Ohio's unemployment rate is also projected to decline throughout the next biennium, as shown below.

Ohio Unemployment Rate												
Forecast	2017				2018				2019			
	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>
	-----percent of the labor force-----											
Quarterly	4.7	4.7	4.6	4.6	4.6	4.5	4.4	4.3	4.3	4.2	4.2	4.2
Fiscal Year	4.7				4.6				4.3			

REVENUE FORECASTS

The LSC baseline forecasts for FY 2018 and FY 2019 assume the current statutory tax structure, including tax changes enacted by the 131st General Assembly. The most significant tax changes enacted during the last two years were enacted by the budget act for the current biennium, H.B. 64; those changes are discussed in detail below. One significant change is being required by federal rules, which require Ohio to discontinue applying the sales tax to Medicaid health insuring corporations (HICs). Despite the requirement, the executive has included Medicaid HICs in the sales tax base for purposes of its baseline forecast, so LSC has done this as well in order to make the baseline forecasts comparable. Some tax changes were made in S.B. 208, but the only significant change made there affected tax revenue for FY 2016 only. S.B. 264 enacted a three-day sales tax holiday in August 2016, affecting FY 2017 receipts; the forecasts do not assume that the holiday is continued in future years. S.B. 172 enacted a sales tax exemption for investment bullion and coins, and H.B. 340 repealed a tax credit available under the financial institutions tax.

H.B. 64 made substantial changes to the personal income tax that took effect in FY 2016. That act reduced income tax rates by 6.3% across all brackets, expanded the small business income deduction (originally enacted two years earlier), and added means tests for the retirement income credit and the senior citizen credit. H.B. 64 also increased the tax rate on cigarettes from \$1.25 per pack of 20 cigarettes to \$1.60 per pack. The act made a number of smaller changes to the sales and use tax, the commercial activity tax, and to tax credits that may be taken against various taxes. Estimates of revenue effects of the business income deduction are still rather rough, due to time lags associated with the Internal Revenue Service (and the Department of Taxation) publishing detailed data on various sources of income under the income tax, and to somewhat limited data on historical deduction claims.

H.B. 64 also 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%⁸ of such revenue to 1.70% for the current biennium. The forecast assumes that the 1.66% share of total GRF tax revenue will resume for the upcoming biennium.

The most recent edition of this forecast book dropped pages devoted to a handful of taxes that have been repealed: those for the corporate franchise tax (CFT), the dealers in intangibles tax (DIT), and the estate tax. All three taxes generated some revenue

⁸ The 1.66% ratio was determined by the Tax Commissioner under the authority of section 131.51 of the Revised Code. The Local Government Fund receives a similar 1.66% share, determined under the same section.

during FY 2016 even though none was expected, but we expect no revenue from these taxes in future years.⁹

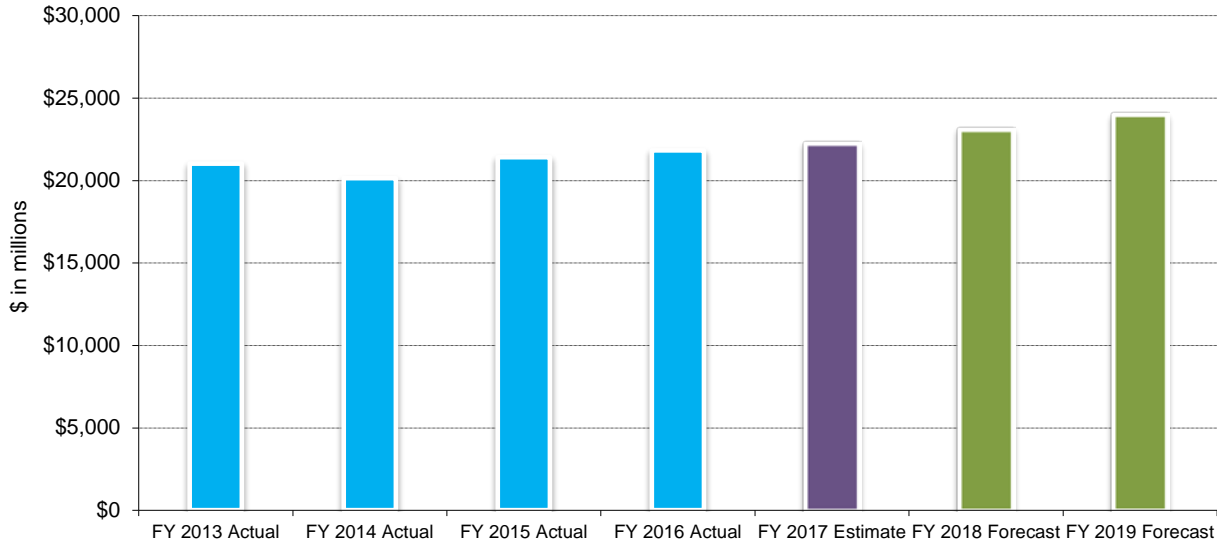
GRF tax revenue under current law is forecast to increase by \$821.1 million (3.7%) in FY 2018. Growth is expected for most tax revenue sources, as the economic recovery is expected to continue. The cigarette and other tobacco products tax is a notable exception, as it is expected to resume its steady decline after having jumped in FY 2016 due to the H.B. 64 tax increase. A projected leveling off in kilowatt-hour tax revenue is due to the growing share of PLF receipts, half of which are debited against this tax, in combination with slow growth in all-funds revenue. No revenues are expected from either the CFT or the DIT as those taxes are eliminated, but late tax reconciliations may result in nonzero revenue. The estate tax, which ended for deaths after December 31, 2012, is projected to yield no GRF tax receipts after FY 2017. LSC also forecasts revenue from earnings on investments and from license fees, which are projected to total \$110.6 million in FY 2018.

GRF tax revenue under current law is forecast to increase by \$884.7 million (3.8%) in FY 2019. Growth in revenue from the nonauto sales and use tax, the largest GRF tax source, is projected to accelerate slightly, while revenue from the personal income tax is projected to grow at about the same rate as in FY 2018. Receipts from the auto sales and use tax are projected to decline slightly, primarily reflecting the effects of increasing interest rates on willingness of consumers to take out loans to finance purchases. The domestic insurance tax is projected to grow strongly, due primarily to growth in taxes paid by Medicaid HICs. Except for declining receipts for the tax on cigarettes and other tobacco products and the kilowatt-hour tax, the remaining taxes are expected to exhibit smaller rates of revenue growth. Earnings on investments and license revenue are forecast to total \$133.3 million in FY 2019.

GRF tax revenue for the FY 2018-FY 2019 biennium is forecast to be \$47.04 billion, 6.7% higher than the revenue received during the current biennium. The following chart and table provide overviews of GRF receipts from taxes and from state sources including earnings on investments and receipts from charges for licenses and fees.

⁹ The financial institutions tax (FIT), which first received revenue in FY 2014, replaced the CFT and the DIT.

GRF Tax Revenues
(in millions)

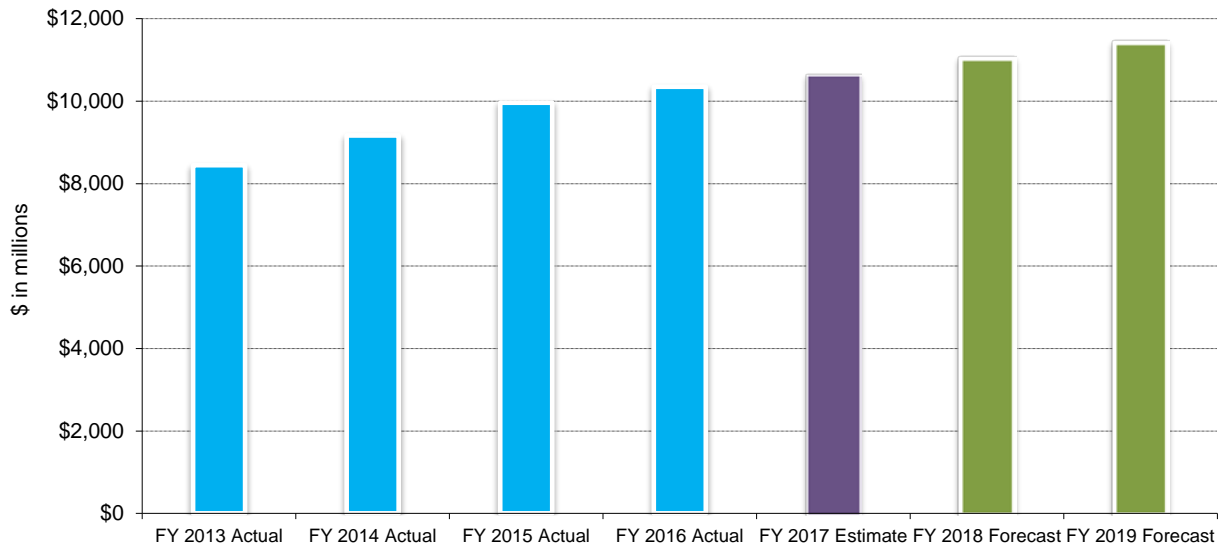


	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$21,015.5	\$20,134.4	\$21,405.1	\$21,819.5	\$22,254.4	\$23,075.5	\$23,960.2
Growth	10.6%	-4.2%	6.3%	1.9%	2.0%	3.7%	3.8%

LSC Baseline Revenue Forecasts, FY 2018-FY 2019 (\$ in millions)							
GRF	FY 2016 Actuals	FY 2017 Estimates	Growth Rate	FY 2018 Forecast	Growth Rate	FY 2019 Forecast	Growth Rate
TAX REVENUE							
Auto Sales & Use	\$1,346.3	\$1,370.0	1.8%	\$1,388.0	1.3%	\$1,379.0	-0.6%
Nonauto Sales & Use	\$9,001.7	\$9,268.8	3.0%	\$9,636.3	4.0%	\$10,039.1	4.2%
Total Sales & Use Taxes	\$10,348.0	\$10,638.8	2.8%	\$11,024.3	3.6%	\$11,418.1	3.6%
Personal Income	\$7,799.3	\$7,993.4	2.5%	\$8,383.1	4.9%	\$8,795.5	4.9%
Commercial Activity	\$1,255.3	\$1,254.8	0.0%	\$1,277.4	1.8%	\$1,324.7	3.7%
Petroleum Activity	\$6.9	\$7.0	1.6%	\$7.0	0.0%	\$7.0	0.0%
Corporate Franchise	\$33.2	-\$0.3	-100.9%	\$0.0	-100.0%	\$0.0	--
Financial Institutions	\$213.5	\$220.0	3.1%	\$225.0	2.3%	\$230.0	2.2%
Public Utility	\$103.3	\$101.0	-2.1%	\$106.6	5.5%	\$111.7	4.8%
Kilowatt-Hour Excise	\$338.0	\$344.7	2.0%	\$345.0	0.1%	\$338.3	-1.9%
Natural Gas Consumption	\$60.7	\$61.4	1.2%	\$62.3	1.4%	\$63.3	1.5%
Foreign Insurance	\$293.5	\$294.0	0.2%	\$303.0	3.1%	\$313.0	3.3%
Domestic Insurance	\$258.3	\$271.0	4.9%	\$290.0	7.0%	\$321.0	10.7%
Business & Property	\$0.1	-\$0.7	-786.3%	\$0.0	--	\$0.0	--
Cigarette	\$1,007.6	\$964.0	-4.3%	\$946.0	-1.9%	\$929.0	-1.8%
Alcoholic Beverage	\$54.4	\$58.0	6.5%	\$57.8	-0.3%	\$59.1	2.2%
Liquor Gallonage	\$45.1	\$46.7	3.5%	\$48.1	3.0%	\$49.6	3.1%
Estate	\$2.2	\$0.5	-76.8%	\$0.0	-100.0%	\$0.0	--
Total Tax Revenue	\$21,819.5	\$22,254.4	2.0%	\$23,075.5	3.7%	\$23,960.2	3.8%
NONTAX STATE-SOURCE REVENUE							
Earnings on Investments	\$35.2	\$42.0	19.4%	\$51.0	21.4%	\$72.0	41.2%
Licenses and Fees	\$56.4	\$60.0	6.4%	\$59.6	-0.7%	\$61.3	2.9%

Sales and Use Tax

GRF Revenues from the Sales and Use Tax
(in millions)



	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$8,444.9	\$9,165.8	\$9,960.2	\$10,348.0	\$10,638.8	\$11,024.3	\$11,418.1
Growth	4.4%	8.5%	8.7%	3.9%	2.8%	3.6%	3.6%

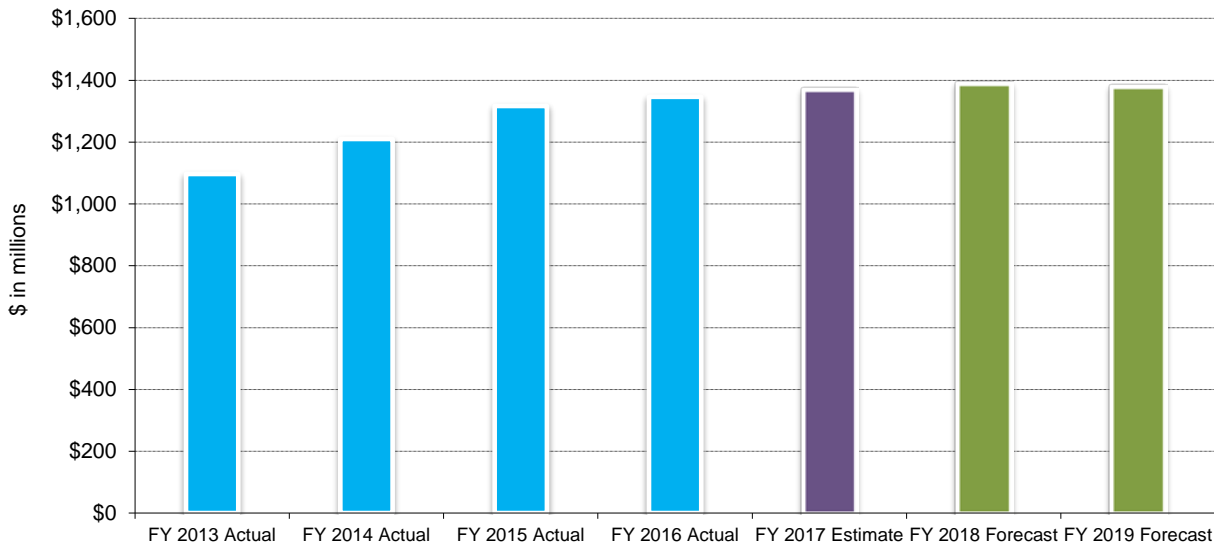
Under current law, the state sales and use tax is levied at a rate of 5.75% on retail sales of tangible personal property, rental of some tangible personal property, and selected services. Major exemptions to the sales and use tax include: food for human consumption off the premises where sold, motor 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 tax has been strong in recent years. Revenue growth resulted from an increase in the tax rate from 5.5% to 5.75% starting September 2013, a base expansion from H.B. 59 of the 130th General Assembly, and 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 current biennium, as revenue increased by 3.9% in FY 2016, and is estimated to increase 2.8% in FY 2017. Growth is expected to continue in the FY 2018-FY 2019 biennium, at a slightly higher rate than the current one. GRF revenues under current law are projected to rise by 3.6% in FY 2018, and 3.6% in FY 2019.

Auto Sales and Use Tax

GRF Revenues from the Auto Sales and Use Tax
(in millions)



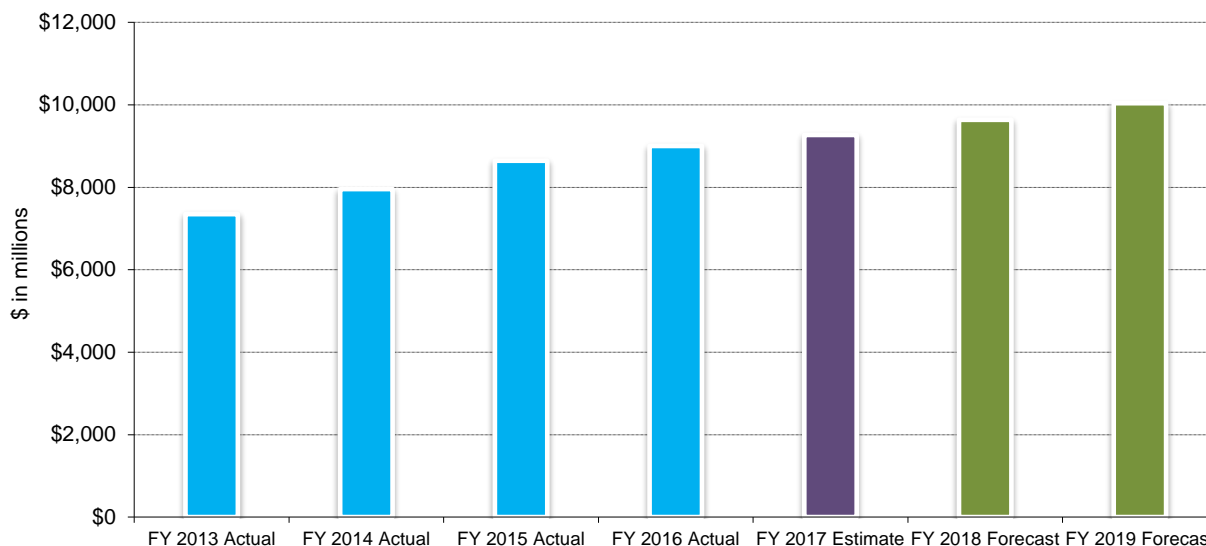
	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$1,096.7	\$1,209.9	\$1,316.6	\$1,346.3	\$1,370.0	\$1,388.0	\$1,379.0
Growth	4.1%	10.3%	8.8%	2.3%	1.8%	1.3%	-0.6%

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. The need to replace aging vehicles increased demand and the sales tax rate increase boosted revenue growth in FY 2014 and FY 2015. Growth slowed in FY 2016 as the total number of new vehicles purchased in Ohio fell, though low gasoline prices and favorable interest rates increased the share of light truck sales compared to autos and average taxable sales. Continued high levels of light truck sales also helped increase receipts in FY 2017. However, if the pent-up auto demand had been worked out of the new vehicle market in recent years as predicted in economic forecasts, then revenue from this tax may be flat in the next biennium, as forecasts of both gasoline prices and interest rates are higher. Higher interest rates would make auto loans more expensive; and higher gasoline prices would decrease the sale of light trucks and average prices of sales, which in turn, would restrain growth of the auto sales and use tax.

Nonauto Sales and Use Tax

GRF Revenues from the Nonauto Sales and Use Tax
(in millions)



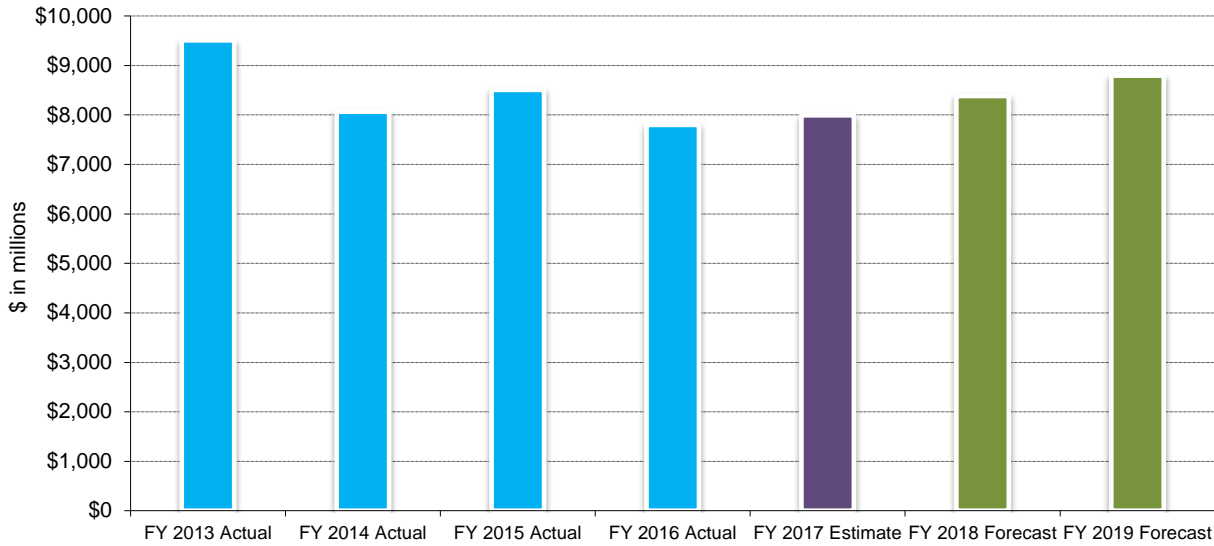
	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$7,348.2	\$7,955.9	\$8,643.6	\$9,001.7	\$9,268.8	\$9,636.3	\$10,039.1
Growth	4.5%	8.3%	8.6%	4.1%	3.0%	4.0%	4.2%

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 (S&P) 500 index.

Growth in nonauto sales and use tax receipts was robust in recent years, supported by wage growth, and growth in tax payments by Medicaid health insuring corporations (MHICs), which were added to the nonauto sales and use tax by H.B. 1 of the 128th General Assembly, and other legislated changes. H.B. 59 of the 130th General Assembly extended the tax to the sale of certain digital products and repealed the exemption for subscription magazines. Also, the Medicaid expansion in 2014 effectively served as another base expansion which boosted revenue in FY 2014 and FY 2015. Revenue growth declined markedly in FY 2016, especially in the second half of the fiscal year. Slow growth has continued so far in FY 2017, but nonauto sales tax revenue is expected to increase by 4.0% in FY 2018, and 4.2% in FY 2019. These forecasts for FY 2018 and FY 2019 assume the continuation of the existing tax base, though Ohio's sales tax on MHICs was found to not conform to federal rules.

Personal Income Tax

GRF Revenues from the Personal Income Tax
(in millions)



	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$9,507.8	\$8,064.9	\$8,506.7	\$7,799.3	\$7,993.4	\$8,383.1	\$8,795.5
Growth	12.7%	-15.2%	5.5%	-8.3%	2.5%	4.9%	4.9%

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 \$125,000 of a taxpayer's business income currently exempted from tax by a deduction,¹⁰ 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 2017 and the forecasts for FY 2018 and FY 2019 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

¹⁰ The \$125,000 threshold is for married taxpayers filing separately. Single taxpayers and joint filers may deduct up to the first \$250,000 of business income.

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), 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, 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.

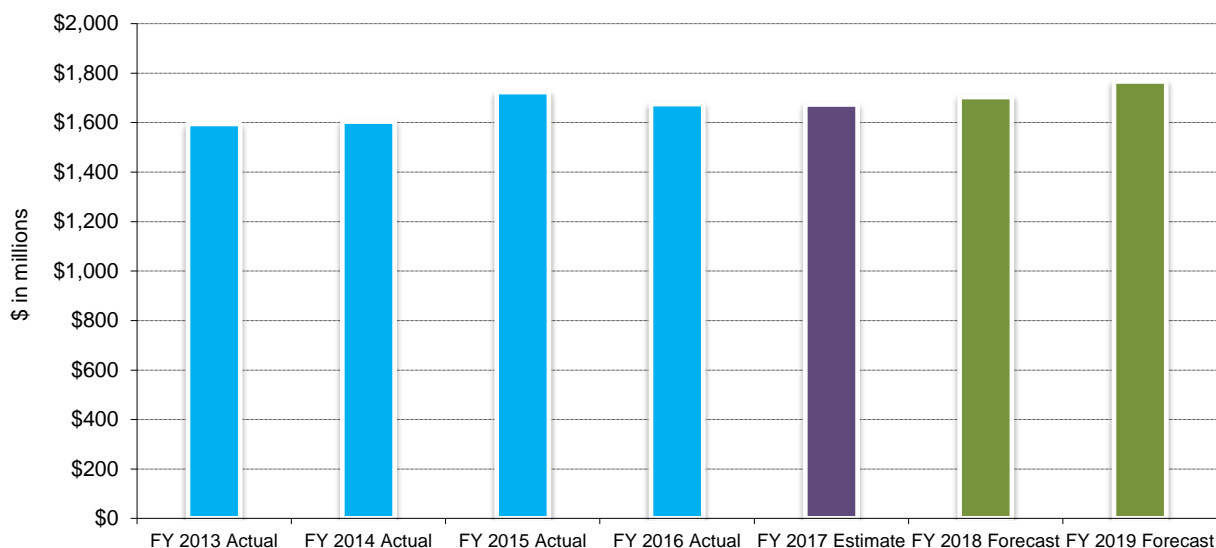
Because of the many changes made in recent years to laws governing the personal income tax, forecasting future revenue has become more challenging than in years past. The deduction for business income presents particular challenges, as the most recent year for which IRS data are available showing breakdowns of FAGI by type of income are for TY 2014. In the forecast, various modifications are made to model-generated revenue estimates, including adjustments for estimated revenue gains and losses from income-based limits on claiming the \$20 personal exemption credit; from elimination of personal exemption double dipping; from the earned income tax credit; from enhanced personal exemption amounts; and from tax credits for rehabilitating historical buildings and the motion picture tax credit.

Through December, FY 2017 GRF revenues from the personal income tax were 4.4% below estimate and 5.1% below revenues in the first six months of FY 2016. Gross collections were 3.1% below estimate and 3.6% lower than FY 2016 year-to-date levels. Refunds were 17.1% above estimate and 17.6% above FY 2016 levels. Most refunds are sent out during February through April.

The FY 2017 estimate for GRF revenues from the personal income tax is \$7,993.4 million, a 2.5% increase from FY 2016 revenues. Revenues were held down in FY 2016 by a further reduction in the tax rate and by the adoption, starting in TY 2015, of a top tax rate for income from a trade or business of 3% of that income. The deduction of 75% of up to \$250,000 of business income was continued in TY 2015 and increased to 100% in TY 2016 and thereafter. GRF revenues under current law are projected to rise by 4.9% in both FY 2018 and FY 2019. Income tax rates were reduced 21% between TY 2004 and TY 2011 by H.B. 66 of the 126th General Assembly, as modified by 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.

Commercial Activity Tax

All-Funds Revenues from the Commercial Activity Tax
(in millions)



	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
All Funds Revenue	\$1,594.4	\$1,604.0	\$1,723.2	\$1,674.7	\$1,673.1	\$1,703.2	\$1,766.2
Growth	-3.6%	0.6%	7.4%	-2.8%	-0.1%	1.8%	3.7%
GRF Share	\$790.0	\$794.2	\$854.0	\$1,255.3	\$1,254.8	\$1,277.4	\$1,324.7

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. The earlier years in the chart correspond to

years that the GRF received 50% of CAT revenue, but in FY 2016 the GRF share was increased to 75% due to a provision of H.B. 64 of the 131st General Assembly.¹¹

The poor performance of the tax in FY 2013 was due to larger than expected refunds from tax credits, but also a one-time large decrease in revenue from a change in the application of the \$1 million exclusion from taxable gross receipts enacted by H.B. 508 (129th General Assembly). In FY 2014, CAT receipts available for the state general operating budget were reduced by a decision of the Ohio Supreme Court,¹² and the exclusion of revenue from motor fuel sales restrained growth in CAT receipts; and, starting in FY 2014, all-funds CAT revenues were adjusted to exclude gross receipts from motor fuel sales. Revenue grew substantially in FY 2015, due in part to an increase in the minimum tax under a provision of H.B. 59 of the 130th General Assembly, but fell in FY 2016 due to a decline in taxable gross receipts and unanticipated increases in tax credits.

CAT net collections are expected to be flat or slightly negative in FY 2017, and actual revenue from the tax would depend on the amount of tax credits claimed in the second half of the fiscal year.¹³ Through December, FY 2017 CAT revenue grew 1.0% compared with the corresponding months of FY 2016, due to fewer refunds, though gross collections were lower, compared to the corresponding period in FY 2016. Growth of taxable receipts is expected to resume in FYs 2018-2019. The CAT forecast is primarily based on the rate of change to Ohio's Industrial Production and Gross State Product, with some adjustments for estimates of tax credits applied against the tax.

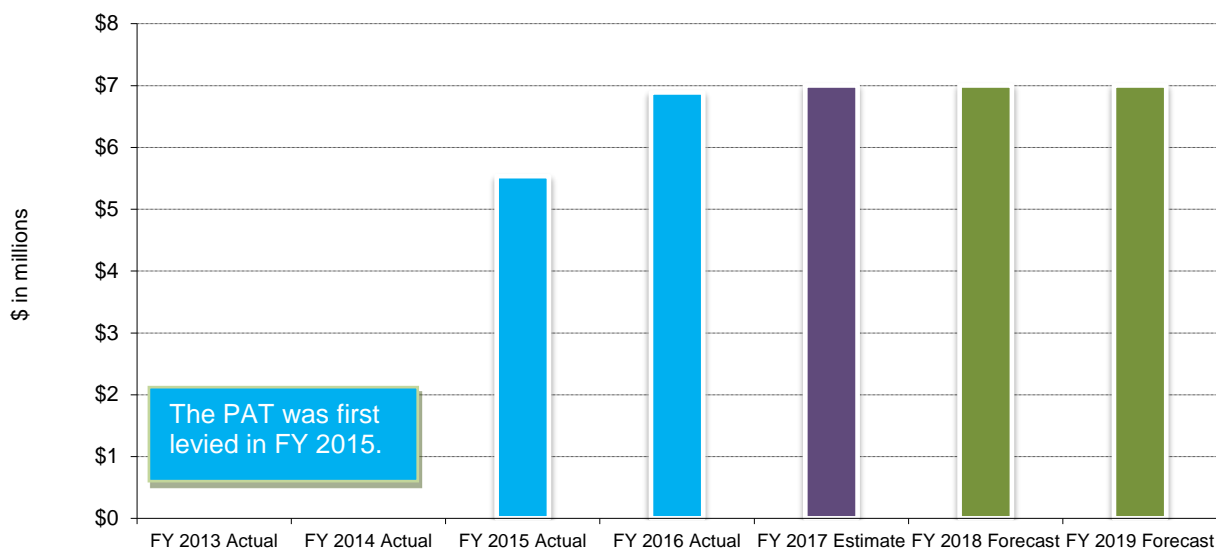
¹¹ Throughout the period shown, other revenues from the CAT were split between the School District Tangible Property Tax Replacement Fund and the Local Government Tangible Property Tax Replacement Fund for reimbursement purposes.

¹² 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 is unconstitutional. The court precluded allocations of those revenues after the date of the decision. To address the use of motor fuel-related CAT taxes, the General Assembly enacted the Petroleum Activity Tax.

¹³ Tax refunds have been uneven in the last few years. Refunds were \$143.4 million in FY 2014, \$98.2 million in FY 2015, and \$137.2 million in FY 2016. Through December, FY 2017 refunds were about 30% below refunds in the corresponding period in FY 2016.

Petroleum Activity Tax

GRF Revenues from the Petroleum Activity Tax
(in millions)



	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$0	\$0	\$5.5	\$6.9	\$7.0	\$7.0	\$7.0
Growth	NA	NA	NA	25.5%	1.6%	0.0%	0.0%

On December 7, 2012, the Supreme Court of Ohio ruled that imposing the commercial activity tax (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 General Assembly established the petroleum activity tax (PAT) as a replacement for the CAT on motor fuel in H.B. 59 of the 130th General Assembly.

The PAT, which started on July 1, 2014, 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. As used in the new law, 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

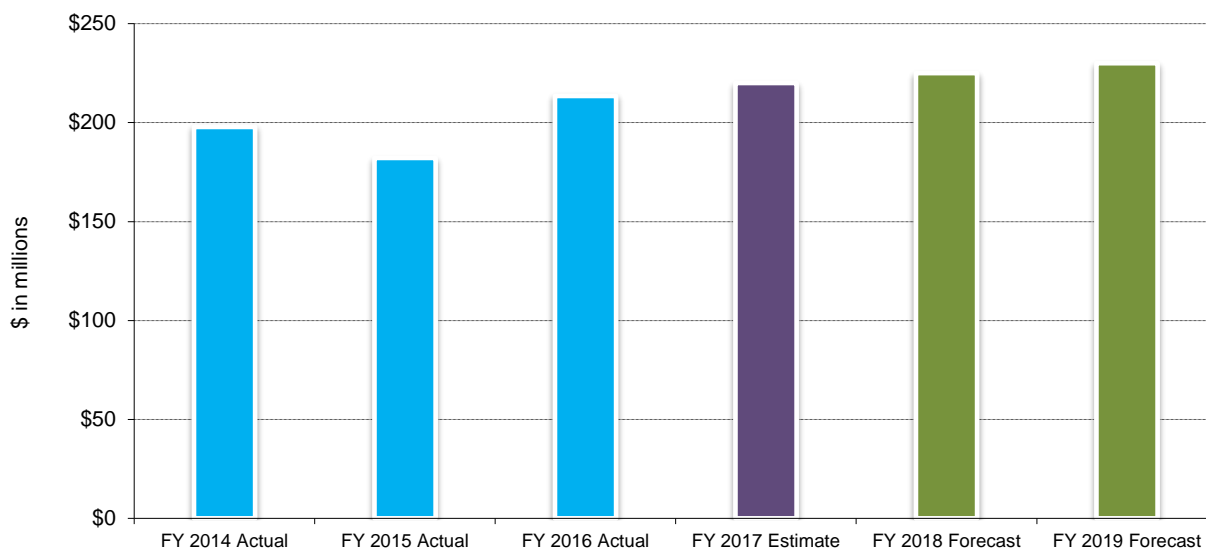
to the Petroleum Activity Tax Public Highways Fund to be used for public highway purposes. Any revenue from sales of motor fuel not used to propel vehicles on public highways would be transferred to the GRF.

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. FY 2017 revenue is assumed to be essentially equal to FY 2016 revenue, 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.

Financial Institutions Tax

GRF Revenues from the Financial Institutions Tax
(in millions)



	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$197.8	\$182.1	\$213.5	\$220.0	\$225.0	\$230.0
Growth	NA	-7.9%	17.2%	3.1%	2.3%	2.2%

The financial institutions tax (FIT) is a tax on banks and other types of financial institutions. The FIT was first levied in tax year (TY) 2014.¹⁴ 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 unearned employee stock ownership plan shares. Taxpayers operating in multiple states are required to apportion total equity capital in proportion to gross receipts situated 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.

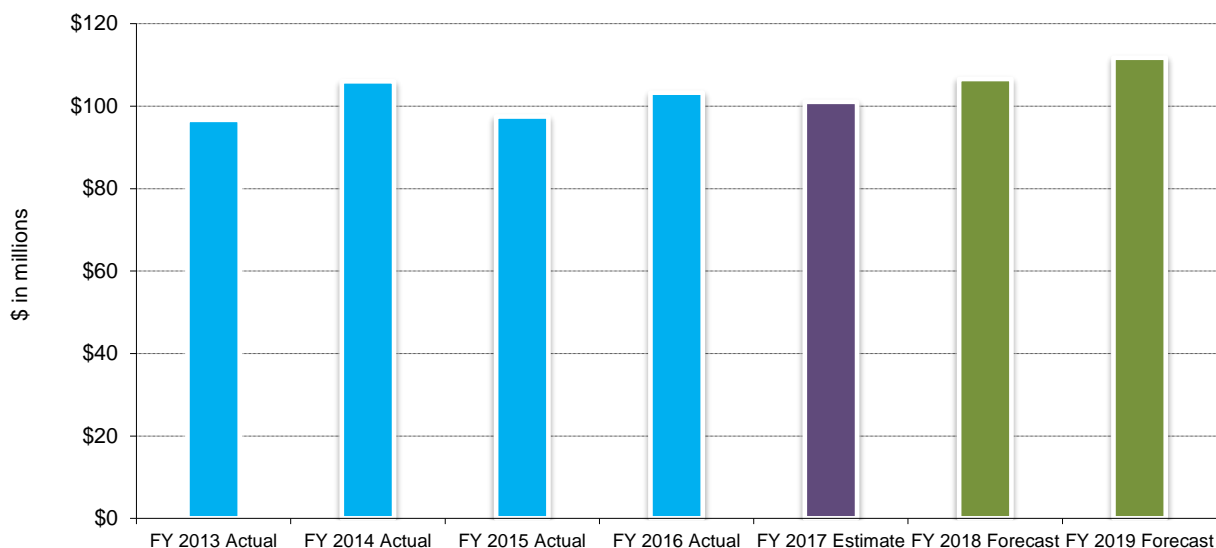
¹⁴ The FIT was created by H.B. 510 of the 129th General Assembly as a replacement for the corporate franchise tax (CFT) and the dealers in intangibles tax (DIT) (which were both eliminated at the end of 2013).

H.B. 384 of the 131st General Assembly exempted small business investment companies (SBICs) from the FIT. The exemption applied both prospectively and retrospectively back to January 1, 2014 (the date that the FIT was first levied).¹⁵ H.B. 340 of the 131st General Assembly eliminated the regulatory assessments imposed on certain financial institutions by the Department of Commerce's Division of Financial Institutions to fund the Division's operations, and repealed the FIT credit allowed to those institutions for the payment of those assessments. Through December 2016, \$15.2 million worth of payments from the GRF was debited against the FIT, due to adjustments made by taxpayers in prior years to their TY 2016 report. The FY 2017 estimate was adjusted to reflect the actual performance of the tax. 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.

¹⁵ S.B. 235 of the 131st General Assembly also included the same exemption provision.

Public Utility Excise Tax

GRF Revenues from the Public Utility Excise Tax
(in millions)



	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$96.7	\$106.0	\$97.5	\$103.3	\$101.0	\$106.6	\$111.7
Growth	-15.1%	9.7%	-8.1%	5.9%	-2.1%	5.5%	4.8%

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 account for 95% to 97% of total public utility excise tax revenue. So changes in natural gas prices and consumption are 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 varied somewhat above that level. In FY 2016, revenue from this tax was \$103.3 million. The fall in tax revenue was mostly a result of lower tax payments by natural gas companies. Commodity market prices for natural gas fell in the 2007-2009 recession and have since fluctuated around the lower levels

reached then. Increased supplies of natural gas from expansion of "fracking" (fracturing of rock formations to free trapped natural gas and crude oil), as well as the drop in crude oil prices in 2014 and 2015, likely account for much of the recent downward pressure on natural gas prices.

Fiscal year-to-date public utility excise tax revenues through December were 7.9% lower than in the year-earlier period. 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 2017 are projected to be 2.1% lower than last year, and to rise 5.5% in FY 2018 and 4.8% in FY 2019 with rising natural gas volumes and prices. The estimate of public utility excise tax revenue for FY 2017 is based on year-to-date tax receipts from natural gas companies through December and on a model of these tax receipts. Forecasts for tax receipts from natural gas companies in FY 2018 and FY 2019 are also from this model. Public utility excise tax receipts from companies other than natural gas utilities are assumed unchanged at FY 2016 levels.

The model relates natural gas tax receipts to Ohio natural gas consumption by residential, commercial, industrial, and electric power customers, and to the percent of customers participating in the Choice Program, with a further adjustment for the quarterly pattern of receipts. The forecast of natural gas prices paid by end users and of consumption volumes is from the U.S. Energy Information Administration (EIA) and is based on that agency's projection for the East North Central states. The Choice Program allows gas utility customers to purchase their natural gas from companies other than the utility that delivers the gas. These purchases are subject to the sales and use tax, not the public utility excise tax.

Kilowatt-Hour Tax

GRF Revenues from the Kilowatt-Hour Tax
(in millions)



	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$307.2	\$306.3	\$292.3	\$338.0	\$344.7	\$345.0	\$338.3
Growth	4.2%	-0.3%	-4.6%	15.6%	2.0%	0.1%	-1.9%

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.¹⁶ Beginning in FY 2016, all revenues from this tax are distributed to the GRF. This accounts for the significant GRF revenue increase that year. 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.

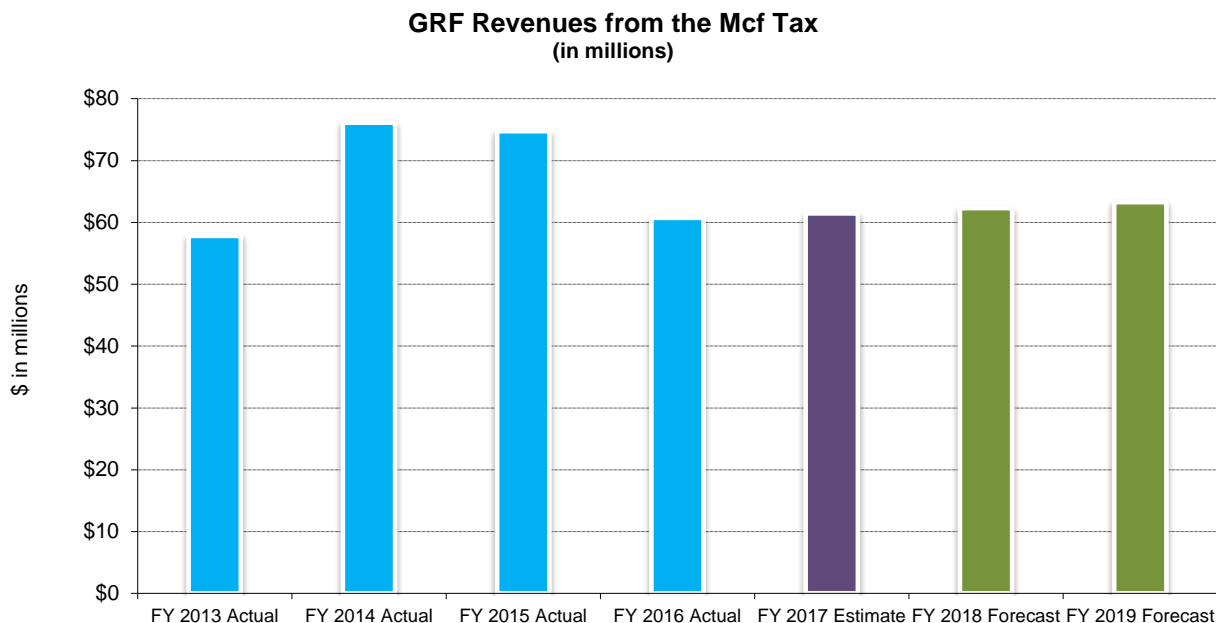
¹⁶ Prior to FY 2012, the GRF received 63%, and the property tax replacement funds shared the other 37%.

Revenue to all funds from the tax has declined in recent years due to declining electricity consumption by various types of end-user (i.e., residential, commercial, and industrial). Revenue to all funds from the tax is estimated to increase slightly in FY 2018 and remain essentially unchanged from that level in FY 2019. The forecasted decrease in GRF revenue in FY 2019 is due to an increase in the amount allocated to the PLF and debited against this tax.

The forecast of kWh tax revenues was generated in two steps. First, the volume of electricity used by each type of end-user in Ohio was estimated based on trend of retail sales of electricity in the East North Central region as forecasted by the Energy Information Administration in the January 2017 edition of its publication *Annual Energy Outlook*. Then, the estimated tax revenue was calculated by multiplying the marginal tax rates by the estimated volume of electricity used for each type of end-user.¹⁷

¹⁷ In performing the second step, it was assumed that the highest marginal tax rate (\$0.00465 per kWh) applied to residential users, the second-highest rate applied to commercial users, and the lowest rate applied to industrial users. Although the correspondence between the electricity usage by these end-user categories and the usage categories represented in the structure of the tax is thought to be close, this is an approximation as the categories are not likely to align perfectly.

Natural Gas Consumption (Mcf) Tax



	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$57.8	\$76.1	\$74.7	\$60.7	\$61.4	\$62.3	\$63.3
Growth	-4.0%	31.7%	-1.8%	-18.7%	1.2%	1.4%	1.5%

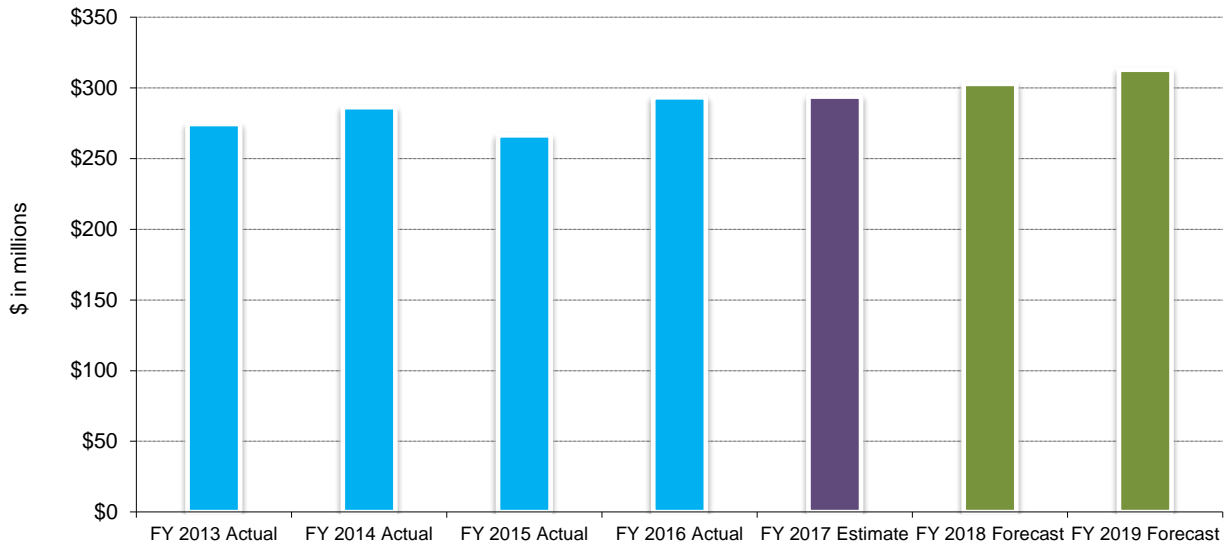
The natural gas consumption tax (also referred to as the natural gas distribution tax or Mcf tax) is levied on natural gas distribution companies, based on natural gas distributed through the meters of end users in Ohio. The base for the tax is the volume of natural gas measured in Mcf (1,000 cubic feet). The tax rate depends on the volume distributed to a customer. There are three distinct 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 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. A decline in tax revenues in FY 2016 appears to reflect decreased natural gas use because of a milder winter, as indicated by fewer heating degree days than the year before in Ohio.

FY 2017 revenue through December 2016 was about 1% lower than in the corresponding period in FY 2016. However, only about 27% of annual revenue from this tax is typically received in the first half of the fiscal year. Over half is usually received in the April-June quarter 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 a combination of a rise in anticipated natural gas consumption in the East North Central region based on a prediction by the Energy Information Administration (EIA) in its January 2017 *Annual Energy Outlook*, combined with the lower 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. The projections for FY 2018 and FY 2019 revenues from the natural gas consumption tax reflect a return to the growth rate predicted by the model using the EIA projection.

Foreign Insurance Tax

GRF Revenues from the Foreign Insurance Tax
(in millions)



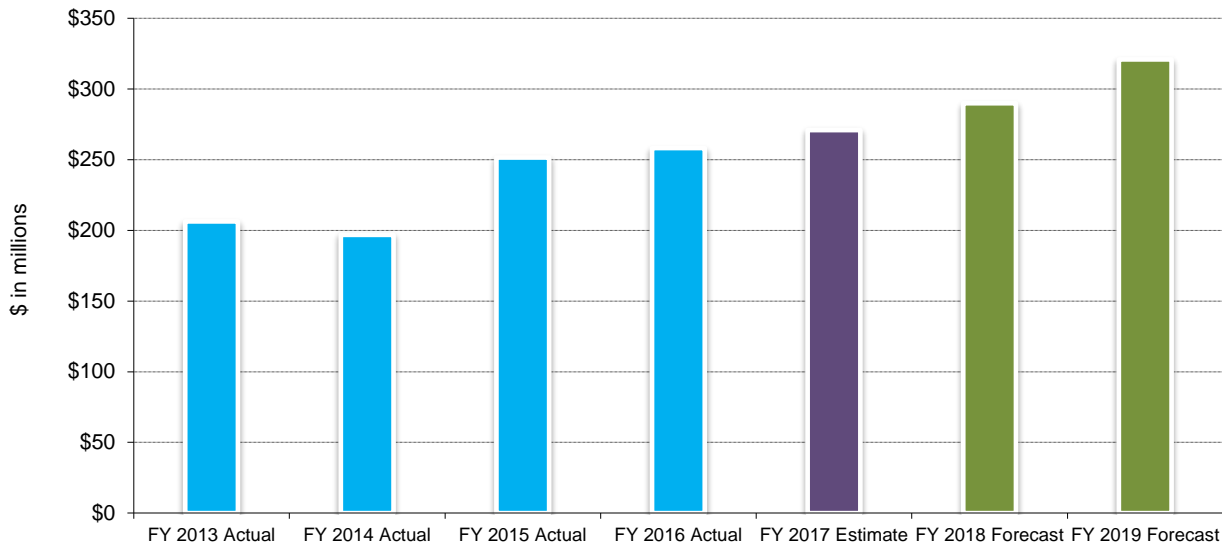
	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$274.6	\$286.5	\$266.6	\$293.5	\$294.0	\$303.0	\$313.0
Growth	3.1%	4.3%	-6.9%	10.1%	0.2%	3.1%	3.3%

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 2016, 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

GRF Revenues from the Domestic Insurance Tax
(in millions)



	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$206.4	\$196.9	\$251.6	\$258.3	\$271.0	\$290.0	\$321.0
Growth	9.1%	-4.6%	27.8%	2.7%	4.9%	7.0%	10.7%

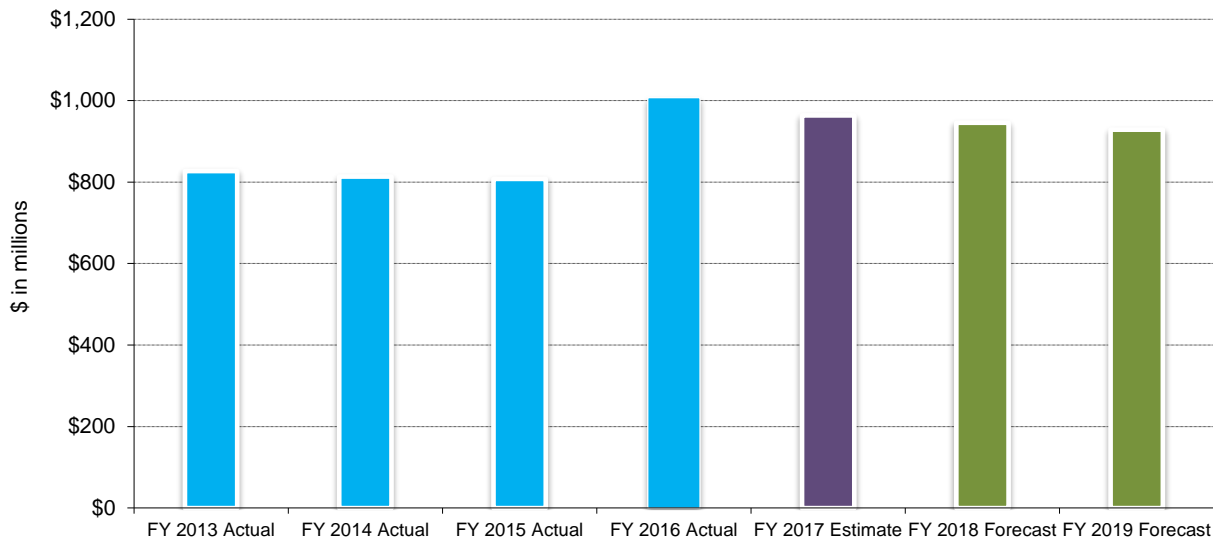
The domestic insurance tax is levied on premiums collected by insurance companies headquartered in Ohio. The tax is generally 1.4% of premiums; the primary exception is domestic insurers that are health insuring corporations (HICs), which pay 1.0% of premiums. This tax structure is the same as the foreign insurance tax structure. About 54% of the tax liability under the tax in FY 2016 was attributable to premiums paid for health insurance. Premiums paid to property and casualty insurers were responsible for about 41% of tax liabilities.

Growth in tax revenue in recent years has been primarily due to growth in revenue attributable to HICs. H.B. 1 of the 128th General Assembly subjected premiums paid to Medicaid HICs to the tax. In combination with increases in Medicaid coverage due to the federal Affordable Care Act, this caused a large revenue increase in FY 2015. FY 2015 growth was also aided by a late payment; a \$6.7 million payment due in FY 2014 was received in July 2014, thereby providing a one-time boost to growth in FY 2015 (the late payment also contributed to the decline in revenue in FY 2014).

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 LSC 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.

Cigarette and Other Tobacco Products Tax

GRF Revenues from the Cigarette and Other Tobacco Products Tax
(in millions)



	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$827.4	\$814.0	\$808.2	\$1,007.6	\$964.0	\$946.0	\$929.0
Growth	-1.9%	-1.6%	-0.7%	24.7%	-4.3%	-1.9%	-1.8%

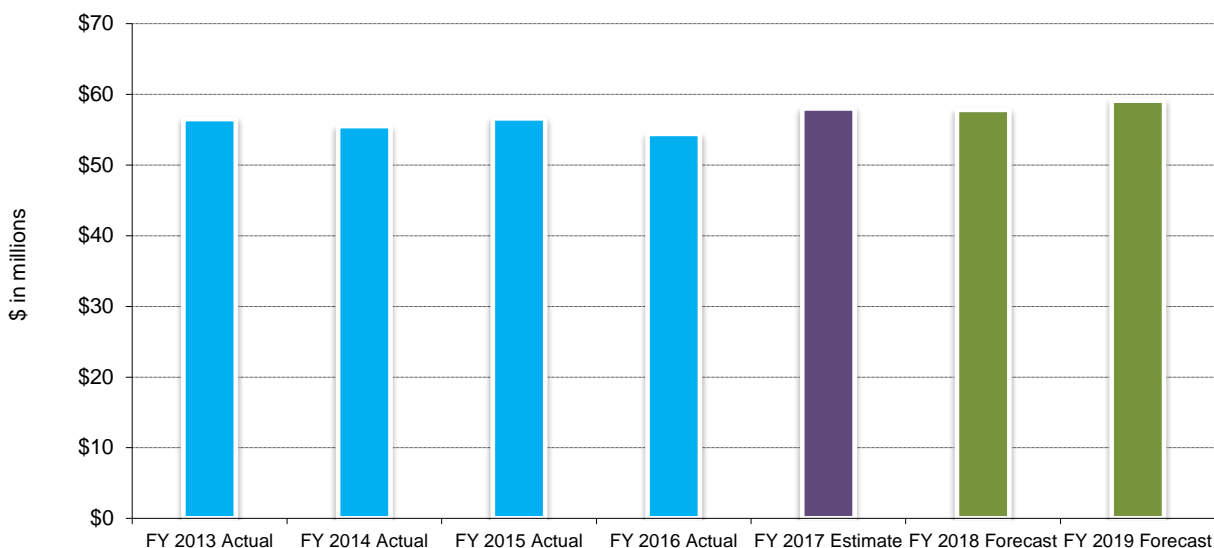
The cigarette and other tobacco products tax is levied on cigarettes, cigars, chewing tobacco, snuff, smoking tobacco, and other tobacco products. Receipts from the sales of cigarettes are about 92% of total receipts. Cigarettes are taxed at a rate of \$1.60 per pack of 20 cigarettes. Other tobacco products (OTP), except for "little cigars,"¹⁸ are taxed at 17% of their wholesale value. Revenue from these taxes generally declines over time; the smaller decline in revenue in FY 2015 was due to strong growth in receipts from the OTP portion of the tax. Revenue grew significantly in FY 2016 after the 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 both the rate increase on cigarette consumption in the fiscal year and the additional revenue from cigarettes in inventory at the time of the rate increase (the latter is known as the "floor tax"). The year-over-year decline in FY 2017 revenue is larger in percentage terms than the trend rate decline because receipts no longer included floor tax collections received in the previous year. Revenue collected from the tax is deposited into the GRF.

¹⁸ 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.

The forecast for the cigarette and other tobacco products tax is based on a regression using cigarette prices and tax rates levied in Ohio and surrounding states as well as 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 tobacco products other than cigarettes 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.

Alcoholic Beverage Tax

GRF Revenue from the Alcoholic Beverage Tax
(in millions)



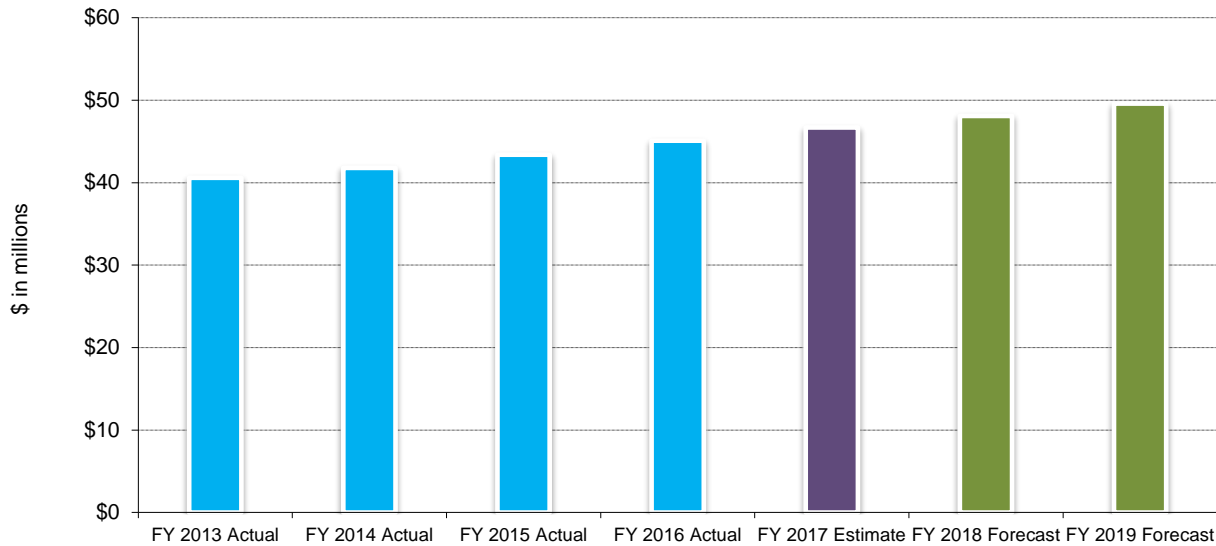
	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$56.5	\$55.5	\$56.6	\$54.4	\$58.0	\$57.8	\$59.1
Growth	-1.9%	-1.7%	1.9%	-3.8%	6.5%	-0.3%	2.2%

The alcoholic beverage tax applies to sales of beer, malt beverages, wine, and mixed alcoholic beverages. The tax is based 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 FY 2016, about 78% of the tax revenue was from the sale of beer and malt beverages while sales of wine and other alcoholic beverages contributed the remaining 22%.

The forecast for the alcoholic beverage tax revenue is based on time series analyses of historical receipts from each of the main components of the tax (beer and malt beverages, and wine and mixed drinks). The large projected increase in FY 2017 is due in part to receipts already collected in the first half of the fiscal year. Wine and mixed drink sales have increased slightly in recent years, while beer sales have declined.

Liquor Gallonage Tax

GRF Revenue from the Liquor Gallonage Tax
(in millions)



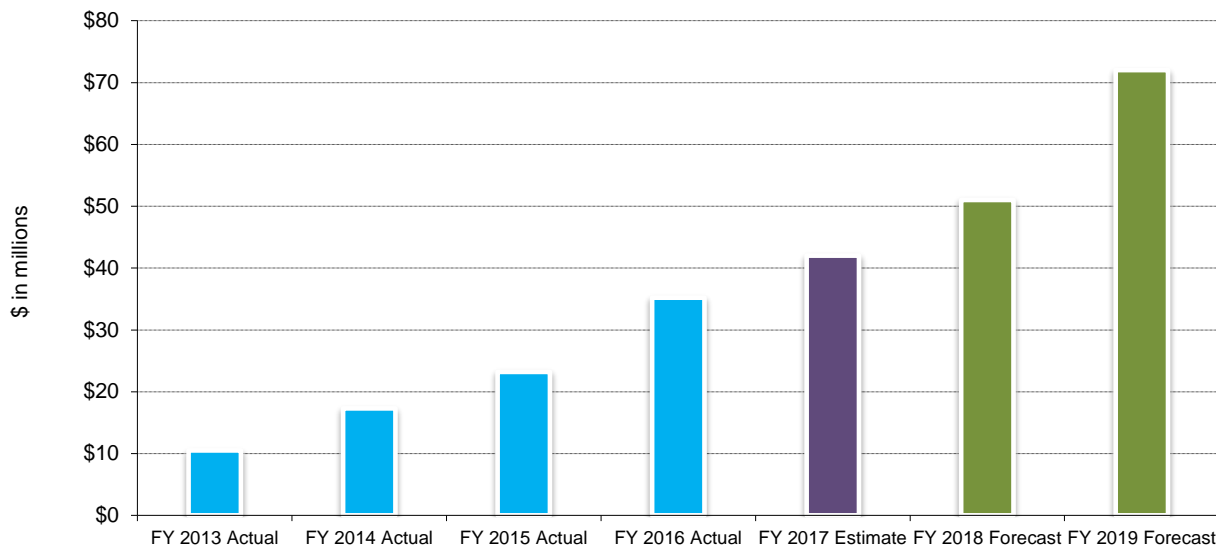
	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$40.6	\$41.8	\$43.4	\$45.1	\$46.7	\$48.1	\$49.6
Growth	3.1%	2.9%	3.7%	4.1%	3.5%	3.0%	3.1%

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.

LSC estimates the liquor gallonage tax will produce \$46.7 million in GRF revenue in FY 2017, \$48.1 million in FY 2018 and \$49.6 million in FY 2019. The forecast of liquor gallonage tax receipts is based on a computer-generated time series model of historical receipts, which have grown each fiscal year since 1998. The tax is volume based and has not changed rates 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 in the second half of FY 2017, and all of FY 2018 and FY 2019.

Earnings on Investments

GRF Revenues from Earnings on Investments
(in millions)



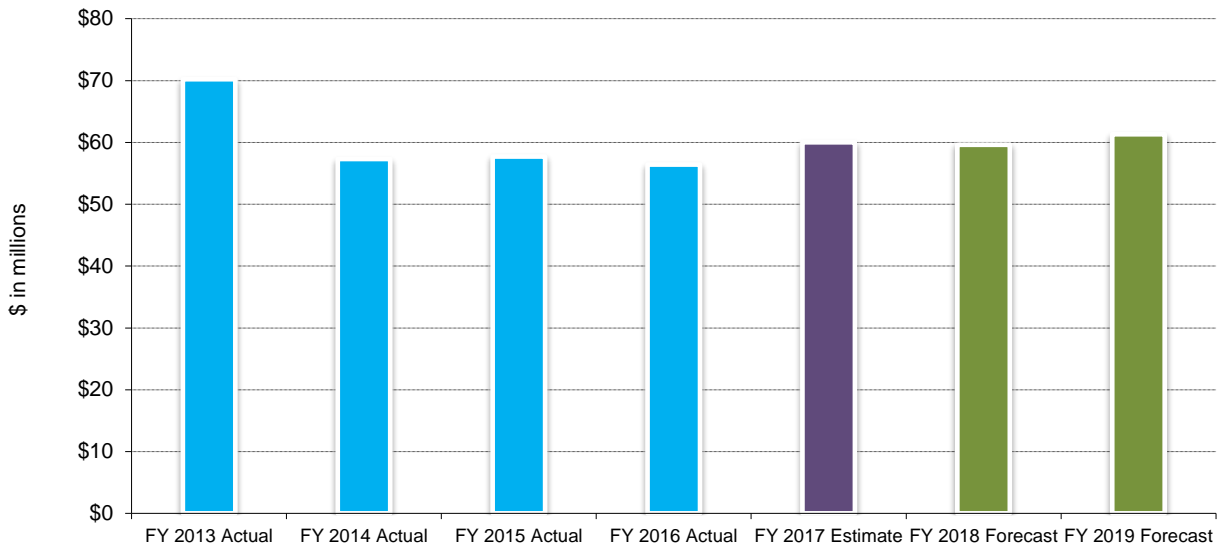
	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$10.5	\$17.3	\$23.2	\$35.2	\$42.0	\$51.0	\$72.0
Growth	94.0%	65.0%	34.1%	51.7%	19.4%	21.4%	41.2%

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 2017, earnings on investments are estimated to increase to \$42.0 million from \$35.2 million in FY 2016 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 2018 and FY 2019, interest rates are expected to rise and estimated fund balances are expected to increase moderately. Baseline earnings on investments for FY 2018 and FY 2019 are estimated at \$51.0 million and \$72.0 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

GRF Revenue from Licenses and Fees
(in millions)



	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Revenue	\$70.2	\$57.3	\$57.7	\$56.4	\$60.0	\$59.6	\$61.3
Growth	7.6%	-18.4%	0.7%	-2.3%	6.4%	-0.7%	2.9%

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.

LSC estimates licenses and fees will produce \$60.0 million in GRF revenue for FY 2017, \$59.6 million in FY 2018, and \$61.3 million in FY 2019. The revenue projections for the second half of FY 2017, and all of FY 2018 and FY 2019 are based on a trend analysis of the largest contributors of license and fee revenue. Revenue from licenses and fees are expected to increase during the period primarily due to growth in surplus lines premium tax revenue, which is by far the largest single source of license and fee revenue. Additionally, higher than expected revenue from various license fees was collected during the first six months of FY 2017, contributing to overall expected growth in FY 2017. The FY 2017 estimate reflects actual revenue yield from licenses and fees through December 2016.

MEDICAID EXPENDITURE FORECAST

Medicaid Forecast Summary

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. The table below summarizes LSC's forecast of Medicaid service expenditures over the next biennium. Estimates of total Medicaid expenditures are \$26.44 billion in FY 2017, increasing by \$1.40 billion (5.3%) to \$27.85 billion in FY 2018 and by another \$0.60 billion (2.2%) to \$28.83 billion in FY 2019. LSC forecasts most caseload-driven service expenditures. There are other Medicaid expenditures that are outside of LSC's forecast. These include Department of Developmental Disabilities (DDD) services, various administrative costs, and services that do not depend on caseloads. In the following table, estimates of these expenditures are listed as "add-ons."

Total Medicaid Expenditures (combined state and federal dollars, dollars in millions)

	FY 2017 Estimate	FY 2018 Projection	FY 2017-FY 2018		FY 2019 Projection	FY 2018-FY 2019	
			Dollar Change	Percent Change		Dollar Change	Percent Change
LSC Forecast	\$19,868	\$21,514	\$1,646	8.3%	\$22,203	\$688	3.2%
Add-ons	\$6,572	\$6,331	-\$242	-3.7%	\$6,242	-\$88	-1.4%
Total	\$26,441	\$27,845	\$1,404	5.3%	\$28,832	\$600	2.2%

Medicaid Forecast by Service Category

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 one of the following major categories: Managed Care Plans, Managed Care for the Affordable Care Act (ACA) Expansion Group (Group VIII), Nursing Facilities, Behavioral Health Services, Hospitals, Prescription Drugs, Aging Waivers, Physicians, Home Care Waivers, and All Other Care. LSC performs a baseline forecast of expenditures for each of these categories. The baseline forecast assumes no changes in policy from current law.

LSC Baseline Medicaid Expenditure Forecasts by Service Category
 (combined state and federal dollars, dollars in millions)

	FY 2017 Estimate	FY 2018 Projection	FY 2017-FY 2018		FY 2019 Projection	FY 2018-FY 2019	
			Dollar Growth	Percent Growth		Dollar Growth	Percent Growth
Managed Care	\$10,060	\$12,074	\$2,014	20.0%	\$13,241	\$1,166	9.7%
Group VIII	\$4,274	\$4,407	\$133	3.1%	\$4,668	\$261	5.9%
Nursing Facilities	\$1,507	\$1,522	\$15	1.0%	\$1,525	\$2	0.2%
Behavioral Health	\$1,129	\$789	-\$341	-30.1%	\$176	-\$613	-77.7%
Hospitals	\$875	\$765	-\$110	-12.6%	\$698	-\$68	-8.8%
Prescription Drugs	\$425	\$400	-\$25	-5.9%	\$400	\$0	0.0%
Aging Waivers	\$293	\$320	\$27	9.2%	\$334	\$14	4.4%
Physicians	\$206	\$183	-\$24	-11.2%	\$171	-\$11	-6.6%
Home Care Waivers	\$125	\$127	\$1	1.6%	\$126	\$0	-0.8%
All Other	\$974	\$928	-\$46	-4.7%	\$864	-\$64	-6.9%
Total Forecast	\$19,868	\$21,514	\$1,646	8.3%	\$22,203	\$688	3.2%

Forecast Components

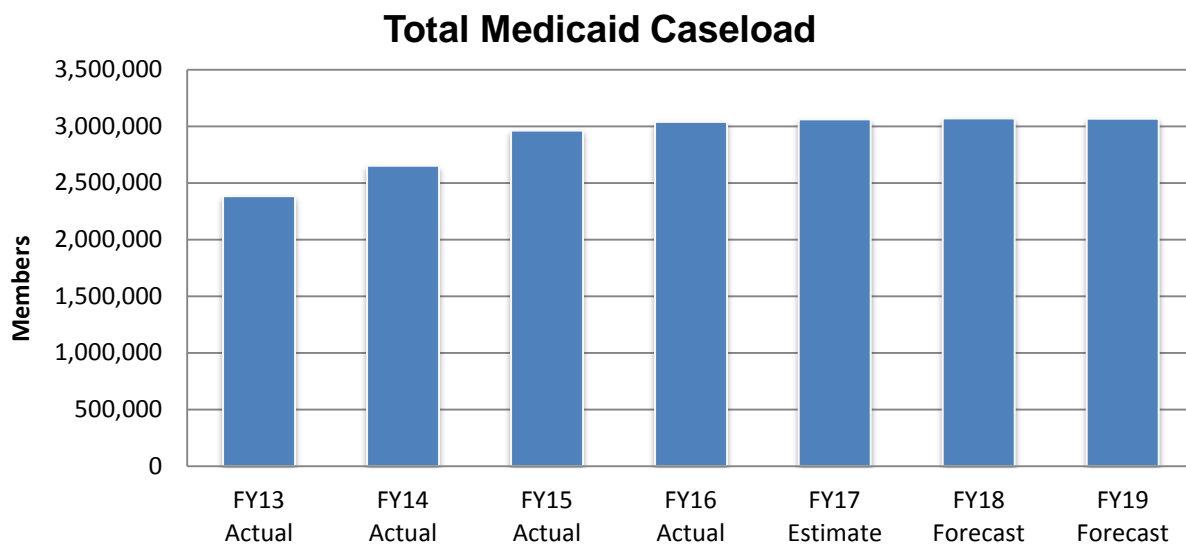
As shown in the equation below, forecasted Medicaid service expenditures are equal to the forecasted number of Medicaid beneficiaries (members) each month – the caseload – multiplied by the forecasted cost per Medicaid beneficiary each month – the per member per month (PMPM) cost. The following discussion presents LSC's baseline forecasts for the components of this equation in more detail.

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

Caseload Forecast Summary

The total number of persons enrolled in Medicaid is expected to rise from an estimated 3.060 million in FY 2017 to 3.071 million in FY 2018, a 0.4% increase, and slightly decrease to 3.066 million in FY 2019, a 0.1% decrease from FY 2018. This forecast is shown in the following chart and table.

Total Medicaid Caseload							
	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
Caseload	2,383,712	2,650,349	2,963,348	3,039,635	3,059,721	3,070,582	3,066,472
Growth	7.6%	11.2%	11.8%	2.6%	0.7%	0.4%	-0.1%



Caseload Forecasted by Eligibility Category

The Medicaid caseload is often presented in two groups: 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 ACA expansion, low-income individuals. 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.

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 LSC's GRF revenue forecasts, economic indicator projections from IHS Economics were used in LSC's forecast of Medicaid caseloads. As reported in the Economic Conditions and Outlook portion of this document, for Ohio, IHS Economics is projecting moderate gross domestic product and personal income growth and a slightly declining unemployment rate through the biennium. Based on these 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 (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 Supplemental Security Income (SSI). Under the old eligibility criteria, the income limit for Medicaid was more stringent than that used for SSI. This policy change will result in an overall increase in Medicaid caseloads, plus a shift of caseload from the CFC category to the ABD category. The Ohio Department of Medicaid (ODM) estimates the net effect by the end of the next biennium will be a decrease in the CFC caseload of about 93,000 and an increase in the ABD caseload of about 118,000, for a total net increase of about 25,000. These estimates were added to LSC's forecast.

The following three charts and associated three tables detail the caseload projections by eligibility category. The first chart and associated table show caseloads under the CFC category. For forecasting, the CFC category is broken down into the traditional covered families and children (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 chart and associated table show caseloads under the ABD category. For forecasting, the ABD category is broken down into children (ABDK), adults (ABDA), and dual eligibles, who are individuals who are eligible for both Medicaid and Medicare (Dual). Finally, the third chart and associated table show caseloads under the other category.

Covered Families and Children

LSC forecasts that the overall CFC caseload will decrease by 56,470, or 2.3%, in FY 2018, and by 5,761, or 0.2%, in FY 2019.

Covered Families and Children Caseloads

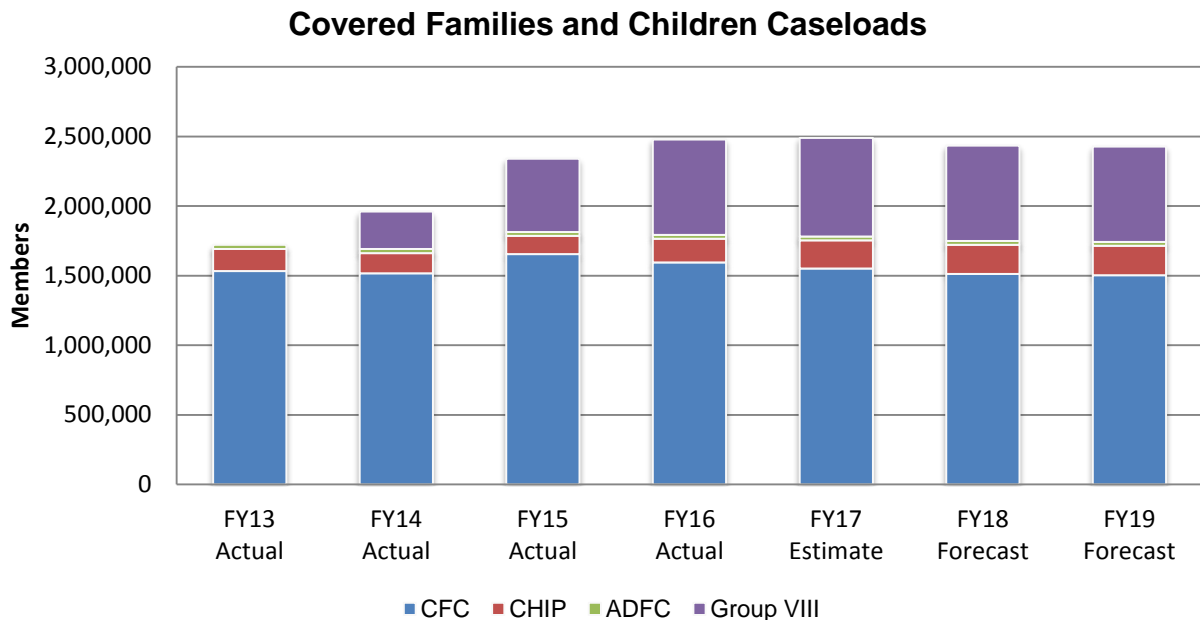
	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
CFC	1,532,771	1,518,461	1,655,003	1,594,599	1,552,670	1,511,887	1,502,859
Growth	3.5%	-0.9%	9.0%	-3.6%	-2.6%	-2.6%	-0.6%
CHIP	160,148	144,586	131,930	171,782	200,883	210,074	211,564
Growth	-1.3%	-9.7%	-8.8%	30.2%	16.9%	4.6%	0.7%
ADFC	28,216	27,933	27,653	27,587	27,294	27,327	27,441
Growth	-1.7%	-1.0%	-1.0%	-0.2%	-1.1%	0.1%	0.4%
Group VIII	--	270,483	525,220	684,829	709,578	684,667	686,330
Growth	--	--	94.2%	30.4%	3.6%	-3.5%	0.2%

CFC: Traditional Covered Families and Children

CHIP: Children's Health Insurance Program

ADFC: Adopted and Foster Care Children

Group VIII: Individuals who became eligible for Medicaid under ACA



Aged, Blind, and Disabled

LSC forecasts that the overall ABD caseload will increase by 58,329, or 14.0%, in FY 2018, and will increase by 1,064, or 0.2%, in FY 2019. The Medicaid caseload for ABD

Kids and Adults has been declining since November 2013, but the shift in caseloads because of the change in the eligibility determinations counteracts this trend.

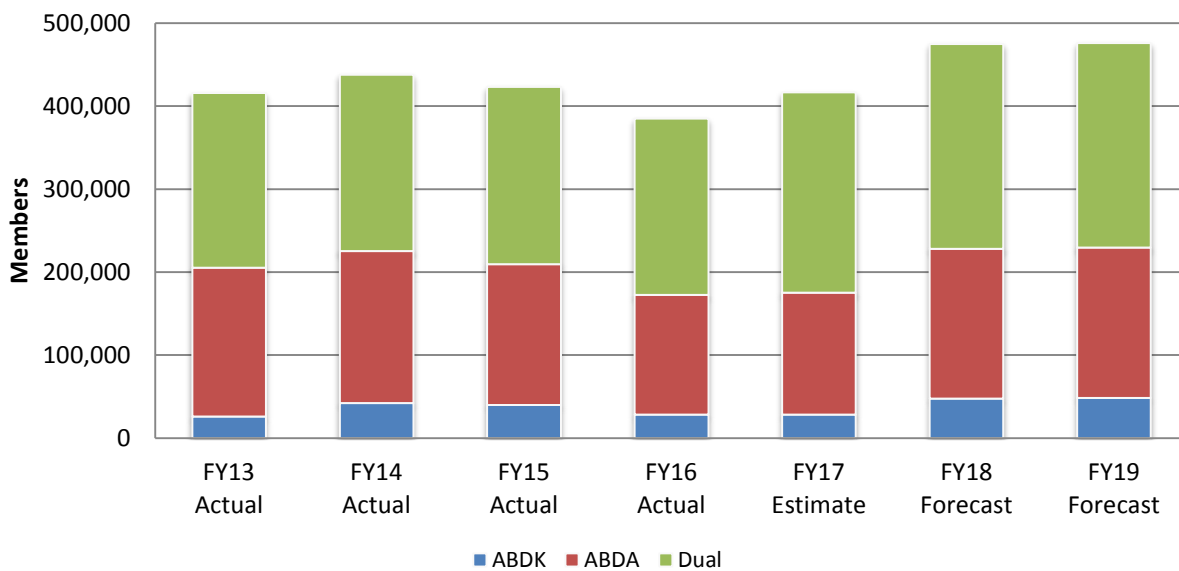
Aged, Blind, and Disabled Caseloads							
	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
ABDK	26,004	42,443	40,118	28,588	28,553	47,820	48,621
Growth	-30.6%	63.2%	-5.5%	-28.7%	-0.1%	67.5%	1.7%
ABDA	179,295	182,991	169,601	143,928	146,694	180,514	181,099
Growth	-0.1%	2.1%	-7.3%	-15.1%	1.9%	23.1%	0.3%
Dual	210,479	212,581	213,525	212,545	241,369	246,610	246,289
Growth	1.3%	1.0%	0.4%	-0.5%	13.6%	2.2%	-0.1%

ABDK: Aged, Blind, Disabled Children

ABDA: Aged, Blind, Disabled Adults

Dual: Eligible for both Medicaid and Medicare

Aged, Blind, and Disabled Caseloads



Other

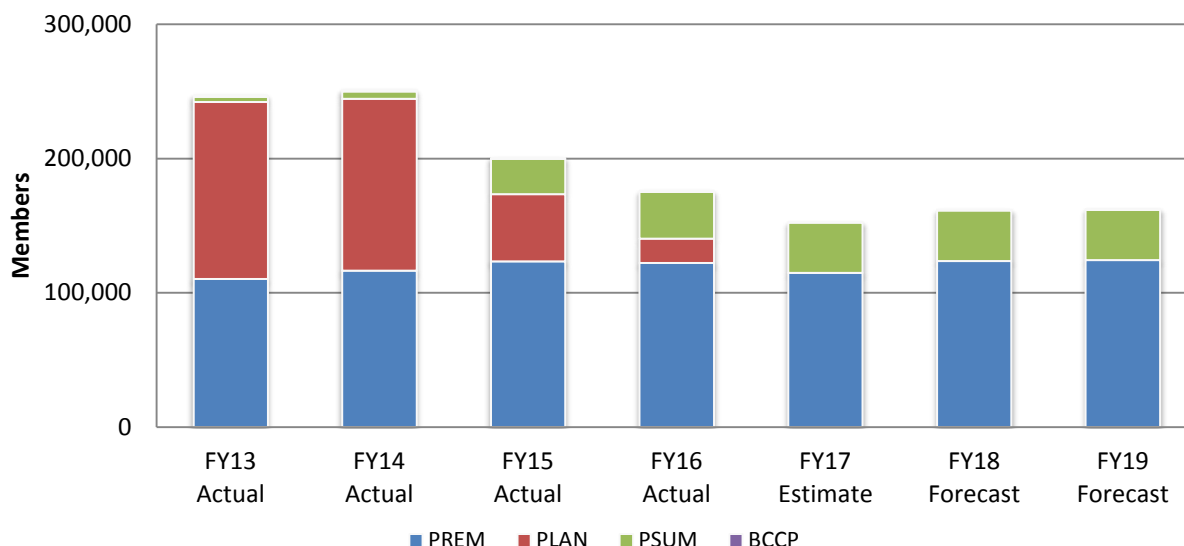
The other category includes four main types of programs. Medicare premium assistance (PREM) helps certain qualified Medicare beneficiaries to pay their Medicare premiums. Family Planning was a limited-benefit Medicaid program that provided services for the prevention of or delay of pregnancy and for the diagnosis and treatment of sexually transmitted infections. It was eliminated beginning January 1, 2016. The Breast and Cervical Cancer Project (BCCP) provides full Medicaid coverage to certain women

diagnosed with breast or cervical cancer, including pre-cancerous conditions. Finally, the presumptive eligibility (PSUM) group includes those who receive immediate health care services through Medicaid if they are presumed to be eligible.

Other Caseloads							
	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
PREM	110,275	116,404	123,506	122,258	114,831	123,702	124,310
Growth	4.7%	5.6%	6.1%	-1.0%	-6.1%	7.7%	0.5%
PLAN	131,883	128,145	49,989	18,058	--	--	--
Growth	560.8%	-2.8%	-61.0%	-63.9%	-100.0%	--	--
PSUM	3,804	5,477	26,047	34,859	37,351	37,528	37,535
Growth	25.0%	44.0%	375.6%	33.8%	7.2%	0.5%	0.0%
BCCP	838	845	758	602	499	453	425
Growth	12.9%	0.9%	-10.3%	-20.6%	-17.2%	-9.2%	-6.2%

PREM: Medicare premium assistance
 PLAN: Family Planning Program
 PSUM: Presumptive eligibility
 BCCP: Breast and Cervical Cancer Project

Caseloads - Other



Caseload by Service Delivery System

A key distinction made in forecasting Medicaid expenditures is between fee-for-service (FFS) and managed care service delivery systems. Traditionally, 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 (MCP). 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.

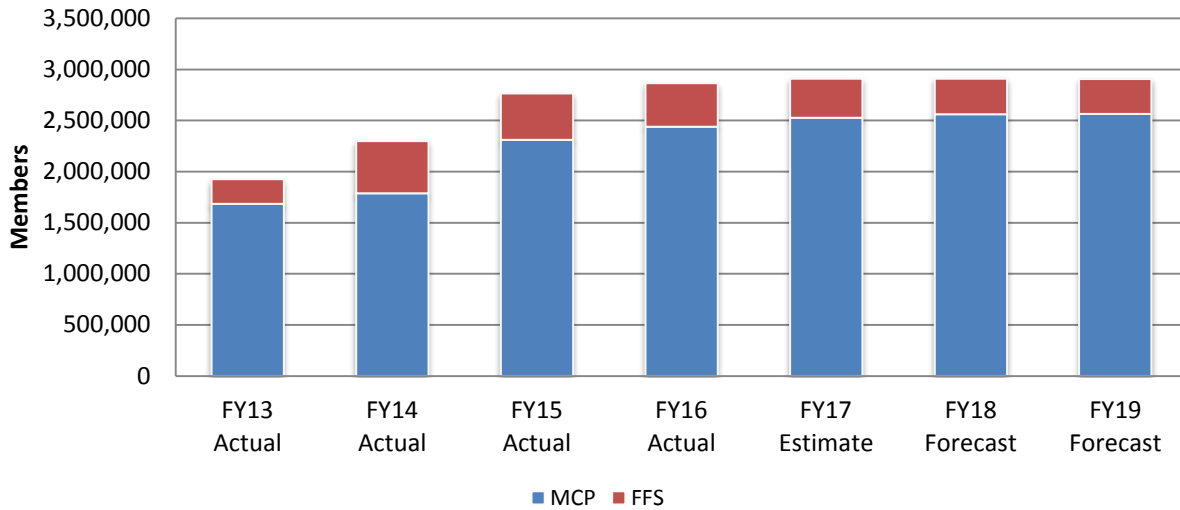
In forecasting Medicaid expenditures, the costs of recipients enrolled in MCPs are generally treated separately from the FFS categories. Managed care has grown in the last several years, which has dramatically shifted expenditures from the FFS categories to the managed care categories. The structure 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 receive services through the Bureau of Children with Medical Handicaps (BCMh) 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 BCCP populations are required to enroll in managed care. Managed care will also become mandatory for all adopted and foster care children before the end of FY 2017.

Additionally, LSC's managed care forecast includes a change in a delivery system from FFS to MCP for behavioral health services. Beginning some time in FY 2018, ODM plans to restructure all Medicaid-reimbursed behavioral health services under some form of managed care in order to improve care coordination and overall outcomes for people with mental health and addiction services needs. The following charts and tables show forecasted caseloads for the two delivery systems. The first chart and table include both the CFC and ABD populations and the second and third show CFC and ABD populations separately.

Total ABD and CFC: Managed Care vs. Fee-for-Service							
	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
MCP	1,682,406	1,786,145	2,311,061	2,438,791	2,526,211	2,559,684	2,564,533
Growth	2.3%	6.2%	29.4%	5.5%	3.6%	1.3%	0.2%
FFS	244,027	512,532	451,987	425,066	381,566	349,668	340,095
Growth	-45.2%	110.0%	-11.8%	-6.0%	-10.2%	-8.4%	-2.7%

MCP: Managed Care
FFS: Fee-for-Service

Total ABD and CFC: Managed Care vs. Fee-for-Service



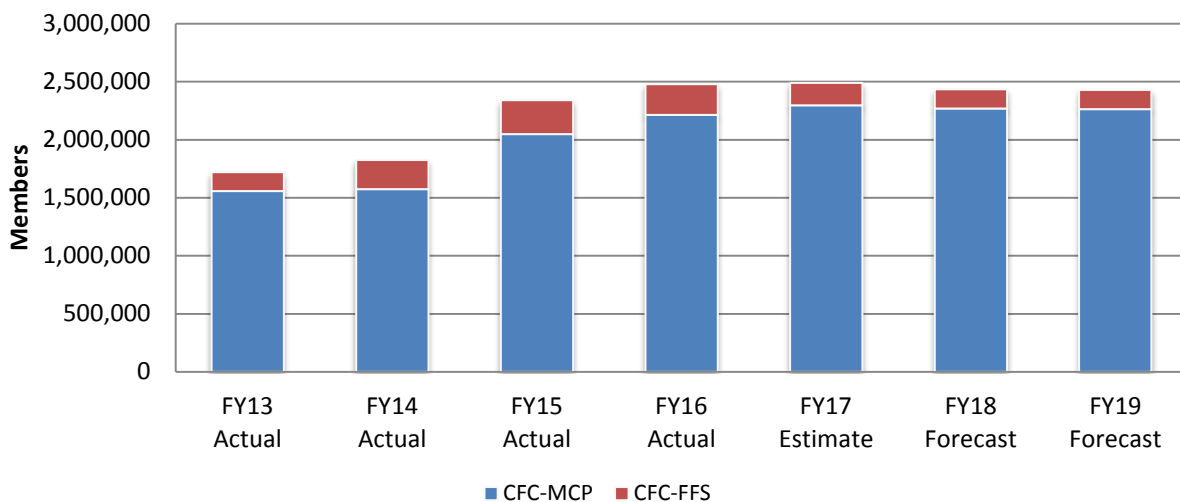
CFC: Managed Care vs. Fee-for-Service

	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
CFC-MCP	1,558,818	1,573,032	2,047,330	2,212,413	2,297,530	2,268,535	2,263,401
Growth	2.6%	0.9%	30.2%	8.1%	3.8%	-1.3%	-0.2%
CFC-FFS	162,317	253,189	292,475	266,384	192,895	165,420	164,793
Growth	11.7%	56.0%	15.5%	-8.9%	-27.6%	-14.2%	-0.4%

CFC-MCP: Covered Families & Children on Managed Care Plans

CFC-FFS: Covered Families & Children in Fee-for-Service

Covered Families & Children Managed Care vs. Fee-for-Service

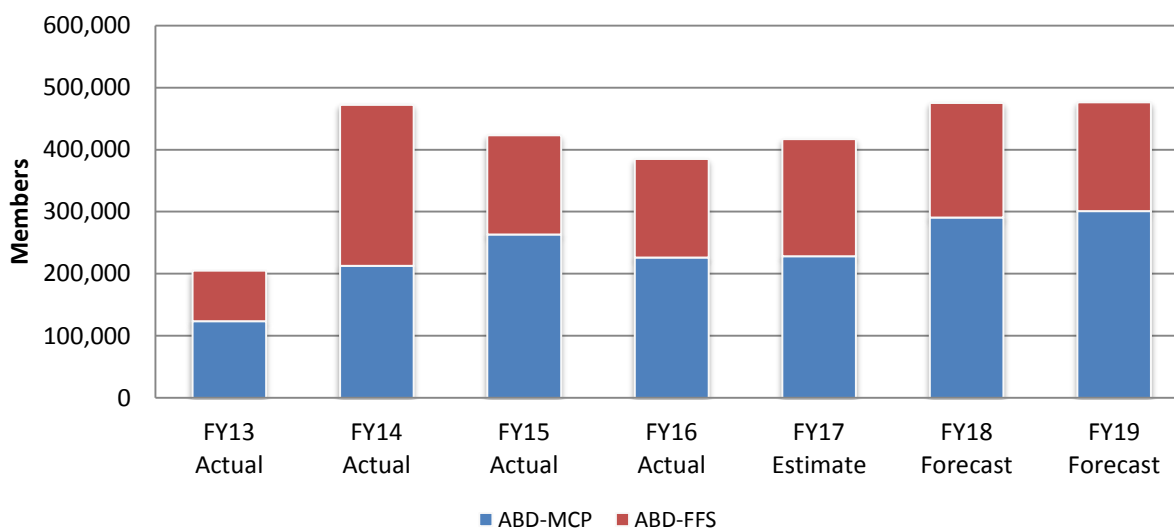


ABD: Managed Care vs. Fee-for-Service							
	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate	FY 2018 Forecast	FY 2019 Forecast
ABD-MCP	123,588	178,673	263,731	226,379	228,203	290,696	300,707
Growth	1.1%	44.6%	47.6%	-14.2%	0.8%	27.4%	3.4%
ABD-FFS	292,189	259,342	159,512	158,682	188,412	184,249	175,302
Growth	221.1%	-11.2%	-38.5%	-0.5%	18.7%	-2.2%	-4.9%

ABD-MCP: Aged, Blind, & Disabled on Managed Care Plans

ABD-FFS: Aged, Blind, & Disabled in Fee-for-Service

Aged, Blind, and Disabled Managed Care vs. Fee-for-Service



Per Member Per Month Cost

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 over 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 per member per month 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.

Managed Care

LSC's forecast assumes annual capitation rate growth of 5.5% in FY 2018 and 4.6% in FY 2019 for ABD and CFC. In addition, the forecast assumes growth of 6.4% in FY 2018 and 5.0% in FY 2019 for Group VIII. These growth rates were calculated by Milliman, the state's contracted actuarial firm. Generally, the MCP capitation rates are set at the beginning of each calendar year. For 2017, the statewide capitation rate is \$964 for ABD Kids, \$1,491 for ABD Adults, \$255 for CFC, and \$560 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 FY 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 FY 2017. The average per diem was about \$172 for FY 2016. LSC's baseline forecast assumes \$193 average per diem for FY 2017 through FY 2019.

Hospital Services

In July of 2013, ODM enacted updated payment policies for inpatient hospital services. In July 2015, ODM initiated the final year of a three-year stop loss/stop gain period intended to ease hospitals' transition to the new payment system. Effective July 2016, the stop loss/stop gain ended and inpatient hospital services will be paid in the coming biennium at the rates calculated under the updated payment policies.

A 5% temporary rate increase beginning on October 1, 2009, for outpatient hospital services for all but children's hospitals ended effective January 1, 2016. On this date, ODM also began to require hospitals to include any outpatient charges that occur 72 hours before or after an inpatient stay to be included on the inpatient claim. Prior to this change, hospitals were required to include only those outpatient charges which occur 24 hours before or after an inpatient visit.

Aging Waiver

Beginning January 1, 2017, reimbursement rates for certain Pre-Admission Screening System Providing Options & Resources Today (PASSPORT) waiver services increased for agency and nonagency providers. Additionally, effective January 1, 2017, the PASSPORT personal care service rate became a statewide rate. Rates are no longer to be set regionally.

Final Adjustments

In addition to the adjustments to caseloads and PMPM costs as described above, ODM provided estimates for a number of adjustments to the baseline due to policy changes under current law that are not fully reflected in the historical data. These are described below and are included in the add-ons in the total expenditure table.

Behavioral Health

H.B. 64 of the 131st General Assembly allowed a restructuring of all Medicaid-reimbursed behavioral health services under some form of managed care in order to improve care coordination and overall outcomes for people receiving mental health and addiction services. The behavioral health redesign is composed of various initiatives with different implementation dates. 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 \$2,199, 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. The redesign will cost approximately \$37.5 million each year of the biennium.

Electronic Visit Verification System

H.B. 64 required ODM to implement an Electronic Visit Verification (EVV) system for home health providers to validate service delivery to eligible individuals by authorized service providers. An EVV system reduces fraudulent activity by using technologic solutions, including telephony, GPS tracking, and biometrics, to authenticate the presence of service and by allowing the recipient of care to confirm that they are receiving care at the time of service delivery. Beginning November 1, 2017, an EVV system will be in place. ODM estimates that the state will save \$16 million in FY 2018 and \$24 million in FY 2019 by using an EVV system.

Comprehensive Primary Care

Starting in 2017, a portion of the managed care population will be enrolled in the Ohio Comprehensive Primary Care (CPC) Program. CPC is a team-based care delivery model led by a primary care practice that comprehensively manages a patient's health needs. Practices that participate in CPC will receive a PMPM payment to support activities required by the program as well as a shared savings payment to reward practices for achieving total cost of care savings. ODM estimates making payments of approximately \$6 million each quarter under CPC.

Nursing Facility Alternative Purchasing Model

Effective February 1, 2017, ODM will implement an alternative payment system for ventilator-dependent nursing home patients to increase access to care for those individuals by reimbursing nursing facility providers for the higher costs associated with caring for these individuals. ODM anticipates paying about \$40 million a year in FY 2018 and FY 2019 for these higher reimbursements.

Drug Pricing

Effective April 1, 2017, ODM will change the professional dispensing fee for pharmacies from the current \$10.80 to a tiered fee ranging from \$8.30 to \$13.64. The tiers are based on the number of prescriptions filled by a pharmacy annually so that small and rural pharmacies will not be penalized. ODM estimates that Medicaid costs will decrease by \$10.2 million each year in FY 2018 and FY 2019 due to this fee change.

340B

The 340B program allows certain providers to obtain rebates to lower the cost of the drugs they dispense. Effective April 1, 2017, ODM will implement a policy that will pay 340B providers at their 340B discounted rate. This policy will save approximately \$40 million annually, with most of the savings coming from lower payments for drugs provided in hospital outpatient departments and clinics.

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 the poor. State agencies administer Medicaid subject to oversight by the Centers for Medicare and Medicaid Services (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 2016 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.

2016 Federal Poverty Guidelines

Family Size	Poverty Guideline
1	\$11,880
2	\$16,020
3	\$20,160
4	\$24,300
5	\$28,440
6	\$32,580
7	\$36,730
8	\$40,890

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 138% 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, 2017, 32 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.

Current Medicaid Eligibility in Ohio

The Medicaid/SCHIP Program in Ohio currently provides health care coverage to (1) uninsured children up to age 19 in families with income up to 206% 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) families with income up to 90% FPG and a child younger than age 19, and (5) adults age 19 to 64 with income up to 133% FPG, and (6) individuals who are age 65 and older, or are legally blind, or are determined disabled by the Social Security Administration with income up to 75% FPG. 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

¹⁹ Under the ACA, Medicaid eligibility was expanded to 133% FPG, plus 5% income disregard. Thus, it is effectively 138% FPG.

both Medicare and Medicaid). The Medicaid Program supplements dual eligibles' Medicare benefits by providing coverage for services such as long-term care and by providing assistance with Medicare premiums, copayments, and deductibles to certain low-income seniors.

Assumptions and Methodology

Baseline Forecasting

The LSC Medicaid expenditure and enrollment projections shown in this analysis are "baseline" or based on current law; that is, they are consistent with current legislation and administrative policy. This analysis does not forecast 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 the Ohio Department of Medicaid (ODM) and added to the LSC baseline forecast; LSC economists did not forecast the add-ons.

Assumptions and Data

Projections of Medicaid 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 LSC 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 expenditures for the FY 2018-FY 2019 biennium, LSC economists used both trend analysis and regression analysis.²⁰ 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 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 United States, the Midwest region, and Ohio. For example, the United States 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 LSC 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, LSC 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. LSC also considers historical patterns, along with economic and policy expectations when determining the best model and producing the final forecasts.

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

Due to the delayed submissions of claims by providers and delays in processing payments, claims are not always paid in the same month in which services are provided to Medicaid eligibles. In fact, it is generally the case that providers may not be completely reimbursed for all of the services they provide to Medicaid eligibles until over a year following the date of service. Thus, it is necessary to make a distinction between the date of service and the date of payment. Because disbursements for Medicaid reflect the payment of claims and not the provision of services, it is essential to incorporate the appropriate payment lags when estimating Medicaid spending.

²⁰ To perform these analyses, LSC 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.

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 2016, Medicaid expenditures represent approximately 51% of total GRF expenditures (including both state and federal shares) and 24% when only the state share of the GRF is considered. The forecasts are LSC's best estimate of what Medicaid 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.