Office of Missouri State Auditor

Nicole Galloway, CPA

State Budget Stress Test

Report No. 2018-007
February 2018

auditor.mo.gov

State Budget Stress Test
Table of Contents

NICOLE GALLOWAY, CPA
Missouri State Auditor

Honorable Eric R. Greitens, Governor
and
Members of the General Assembly
Jefferson City, Missouri

During my term as State Auditor, the office has conducted a series of audits, referred to as the Budget Integrity Series, focused on the integrity of the state budget. Audit report topics included the Hancock Amendment, timeliness of individual income tax refunds, the cost of tax incentives and exemptions, tax credit programs, and public higher education funding and affordability, among others. This report is the culmination of the series, and was compiled using information from those audits, as well as a contracted economic analysis performed by the University of Central Missouri, and other recent comparative studies. This report is intended to present key economic data impacting Missouri's budget, to communicate the impact of current and potential budget conditions on Missouri families, and to identify the impact of various economic stress factors on the budget.

The increased stress on the Missouri budget from an eroding tax base while expenditures increase has resulted in the General Assembly cutting discretionary budget areas such as education and transportation. As a result, Missouri families face an increased burden from higher local education and transportation taxes as well as increased higher education costs. Additionally, the current budget condition has greatly reduced Missouri's ability to manage cash flows and forced the use of contingency funds for temporary cash flow shortages rather than longer-term budgetary support making the state's budget increasingly sensitive to economic downturns.

The state's long-term fiscal health is in the best interests of all taxpayers, and requires careful review and evaluation from policymakers. This report makes information identified during multiple audits available for evaluation and consideration, and discusses the potential impact of economic stress on the Missouri budget. The Missouri legislature and Governor share the responsibility of crafting our state budget. It is my hope that this report helps them better prepare for the difficult decisions regarding the economic challenges facing our state, for the benefit of all Missourians.

Nicole R. Galloway, CPA
State Auditor

The following auditors participated in the preparation of this report:

Director of Audits: Robert E. Showers, CPA, CGAP
Audit Manager: Kelly Davis, M.Acct., CPA, CFE

State Budget Stress Test
Introduction

Background

Missouri is experiencing a continued period of low unemployment and the state's economy and fiscal position ranks above many states in national comparisons; however, the state budget continues to face shortfalls as discussed in the report.

Missouri economic statistics

Missouri ranked eleventh nationally in fiscal health, according to a July 2017 study by the Mercatus Center at George Mason University,[1] and fifteenth in a 2017 State Business Tax Climate Index published by the Tax Foundation.[2] The seasonally adjusted unemployment rate of 3.4 percent for November 2017 is also a historic low and lower than the national average of 4.1 percent. At the same time, Missouri lost just over 20,000 jobs (.7 percent) during the 12 months ended September 2017, according to United States Bureau of Labor Statistics data.[3] This falls behind the national employment trend of positive job growth over that period. According to estimates from the U.S. Bureau of Economic Analysis, Missouri ranked 22nd nationally in gross domestic product (GDP) at $263.4 billion in inflation-adjusted dollars as of the second quarter of 2017.[4] Missouri GDP increased .45 percent during that period while nationally inflation-adjusted gross domestic product increased 2.05 percent over that period.[5]

Missouri budget process

The Governor and the General Assembly determine the state's annual fiscal year budget.[6] The state budget is comprised of approximately equal parts federal funds for specified purposes, state constitutionally-dedicated revenue, and general revenue.

By October 1 of each year, state offices and agencies submit budget requests for the following fiscal year[7] to the Office of Administration Division of Budget and Planning and the General Assembly. Traditionally, the Governor and Senate and House of Representatives (House) Appropriation Chairs

[1] Mercatus Center, George Mason University, Ranking the States by Fiscal Condition 2017 Edition, July 2017, <https://www.mercatus.org/statefiscalrankings>, accessed January 16, 2018.

[2] Tax Foundation, 2017 State Business Tax Climate Index, <https://taxfoundation.org/2017-state-business-tax-climate-index>, accessed January 16, 2018.

[3] United States Bureau of Labor Statistics, Local Area Unemployment Statistics, <https://data.bls.gov/timeseries/LASST290000000000006>, accessed January 23, 2018.

[4] Second quarter 2017 data is the most recent data available from the United States Department of Commerce Bureau of Economic Analysis.

[5] Unites State Department of Commerce; Bureau of Economic Analysis, Real GDP by state (millions of chained 2009 dollars), <https://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdn=1#reqid=70&step=10&isuri=1&7003=900&7035=-1&7004=naics&7005=1&7006=xx&7036=-1&7001=5900&7002=5&7090=70&7007=2017,2016,2015&7093=levels>, accessed January 4, 2018.

[6] Sections 33.210 - 33.290, RSMo. outline the state budget process.

[7] Missouri's fiscal year runs from July 1 through June 30 of the following year.

determine a consensus revenue estimate, to approximate the amount of funds available for the state budget.[8] The Governor must submit an executive budget to the General Assembly within 30 days after the legislative session convenes, with copies available to the public.

While both legislative chambers may conduct committee hearings contemporaneously, the 13 budget bills originate in the House. After approval by the House, the bills go to the Senate. The Senate, typically, adopts its own substitute bills and conference committees meet in late April or early May to reconcile the bills. The deadline for final legislative approval is one week before the end of the legislative session. Truly Agreed To and Finally Passed bills are sent to the Governor, who may sign a bill, veto it in its entirety, or more typically, line-item veto specific appropriations. The legislature may override any veto by a two-thirds majority vote, which may occur during the legislative session (depending on the date of the bill's passage) or in the September veto session.

Scope and Methodology

This report compiles recent applicable findings from State Auditor's Office (SAO) reports related to the Missouri budget and key economic data impacting the Missouri budget. Our methodology included reviewing recent legislation, national and state economic data, comparative state budget information, other "stress test" analyses conducted, and analyzing key budget data.

The SAO also contracted with the University of Central Missouri (UCM) to analyze General Revenue Fund historic inflow and outflow data and model the impact of various factors on the Missouri budget. The UCM economists prepared a report[9] and applicable information from that report is included in this report. In addition, the economists developed various modeling tools that are available on the SAO website and were used in the stress test analysis.

[8] State law does not require a consensus revenue estimate, and in 2014, the Governor and legislature could not agree on one for fiscal year 2015.
[9] Acevedo, Christopher D, Cravioveanu, Mihaela O., and Crooker, John R.; University of Central Missouri, *Missouri Budget Integrity*, November 26, 2017.

1. Missouri's Financial Position and Recession Preparedness

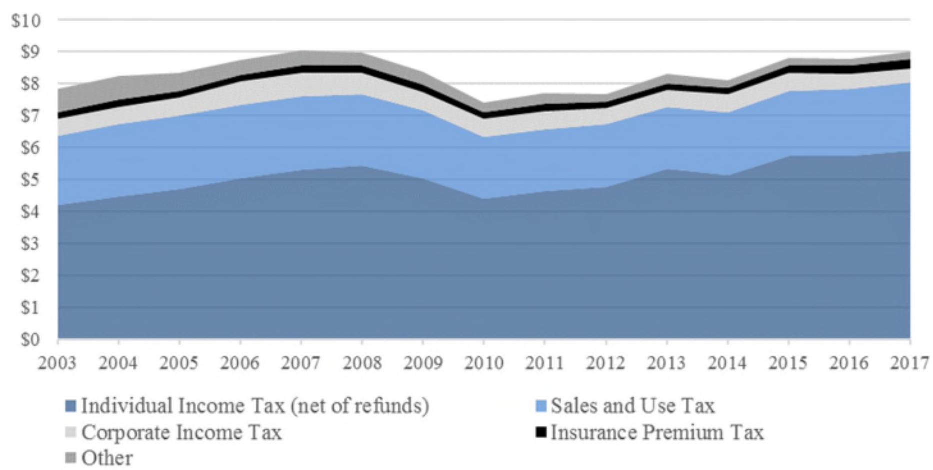
State taxes remain low compared to other states, as does economic performance. Significant downward pressure on the state tax base and state revenues in combination with increased mandatory expenditures in Medicaid has resulted in reductions in discretionary state budget items that significantly impact Missouri families. In addition, the state is without sufficient contingency funds to address budget shortfalls in the event of an economic downturn. Action is needed to ensure the state can fulfill its obligations to its citizens and ensure the state has adequate contingency funds available to avoid drastic budget cuts in the event of a recession.

1.1 State taxes are low and have shown slow growth

Historical federal data[10] shows that, with a tax collections-to-gross domestic product (GDP) ratio of .04, Missouri was among the lowest taxed states in the nation from fiscal year 1999 to 2015. Over that period, federal data also shows Missouri had the 3rd lowest rate of tax growth (-0.1 percent), and only two states (Michigan and Louisiana) had a worse real economic growth rate than Missouri (.7 percent).

As shown in Figure 1, when adjusted for inflation, state General Revenue (GR) Fund revenues have just begun to return to pre-2007 recession levels. Adjusted GR Fund revenues have experienced average annual revenue growth of 1.14 percent from 2003 to 2017.

Figure 1: General Revenue Fund revenues, by source, fiscal years 2003 - 2017, adjusted for inflation



Source: SAO and UCM analysis of Economic and Policy Analysis Research Center (EPARC), University of Missouri, and SAM II data. Inflation factors from UCM economists analysis of Consumer Price Index (CPI) data from <https://fred.stlouisfed.org/series/CPIAUCSL>.

Reductions to income tax

Recent audits have included information on legislative reductions to corporate and individual income tax revenue. Most notably, the audit of state

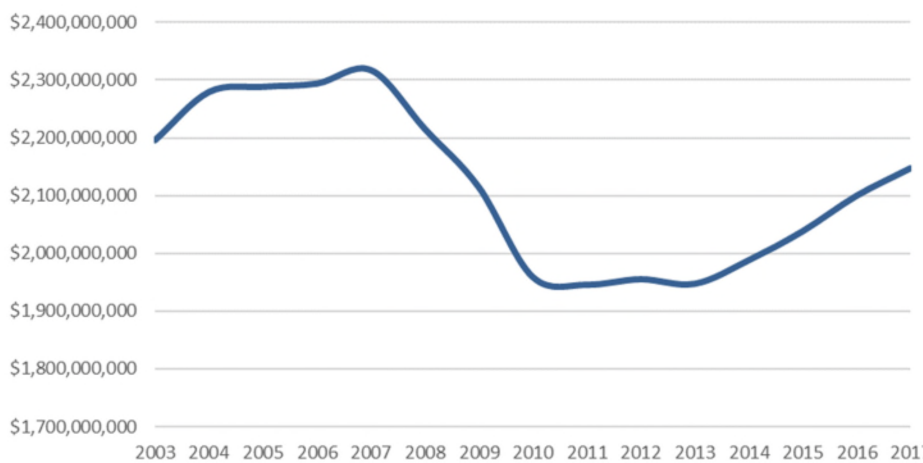
[10] Acevedo, Christopher D, Cravioveanu, Mihaela O., and Crooker, John R.; University of Central Missouri, *Missouri Budget Integrity*; November 26, 2017.

incentives and exemptions[11] cited the implementation of Senate Bill (SB) 19 (2015) to reduce corporate income taxes in recent years that has reduced corporate income tax revenue by approximately $177 million in 2016 and 2017. In addition, SB 509 (2014) will result in individual income tax rate reductions that are estimated to reduce individual income tax revenue by as much as $621 million annually when fully implemented by 2022. Also, Missouri continues to be the only state currently offering a withholding tax discount for timely payment of withholding taxes. This discount costs the state approximately $29 million in revenue in fiscal year 2017.

Sales tax revenues have declined

Sales and use tax revenues over the past 15 years have declined by an average of .11 percent per year when adjusted for inflation. See Figure 2 for GR Fund sales and use tax collections, adjusted for inflation. This data is consistent with audit findings presented in a recent audit of tax incentives and exemptions that found the General Assembly has taken various actions, including passing additional sales tax exemptions, to place downward pressure on the state's sales tax base and reduce state revenues. The audit found new exemptions have been added without adequate tracking to determine their impact.

Figure 2: Sales and use tax collections fiscal years 2003 - 2017, adjusted for inflation



Source: SAO analysis of EPARC and Department of Revenue data. Inflation factors from UCM economists analysis of CPI data from <https://fred.stlouisfed.org/series/CPIAUCSL>.

The General Assembly has also not taken action to reduce or eliminate the 2 percent discount businesses receive for timely payment of sales tax to the state. As discussed in the audit of tax incentives and exemptions, the state's sales tax discount is the second most generous such discount in the country and costs the state approximately $60 million per year. By continuing to erode the sales tax base, the state has become increasingly reliant on individual

[11] SAO, *Cost of Tax Incentives and Exemptions*, report number 2017-113, issued October 2017.

income tax revenue for general revenue funding, making the state's tax base more sensitive to economic fluctuations. For example, in 2003 individual income taxes made up 53 percent of GR Fund revenues, but in 2017 they made up approximately 65 percent of these revenues. See the Supplemental Information section for more detail.

Tax credit redemption trends

A recent audit of tax credit programs[12] shows that tax credit redemptions continue to increase and have exceeded $500 million every fiscal year since 2009. In addition, the state has approximately $3 billion in tax credits authorized and unredeemed that will reduce revenues for years into the future. The varying carryforward provisions of the state's tax credit programs result in significant volatility in tax credit redemptions from year to year, and cause uncertainty in the budget process.

Recent decisions to not authorize current year Low Income Housing Tax Credits will reduce the state's long-term obligations, but will have little to no short-term impact on state revenues.

Federal tax bill will reduce revenues

Recent studies have evaluated the potential impact of the federal tax changes enacted in December 2017. Due to Missouri's tax code being coupled with the federal tax code, these changes will impact state tax revenues. The state tax calculation uses the federal tax deduction claimed by a taxpayer when determining state taxes owed. The federal tax bill changes, which primarily become effective January 1, 2018, will increase the standard deduction, while also eliminating personal exemptions, and also reduce some itemized deductions. An analysis performed by the Economic Policy Center and Research Center (EPARC) at the University of Missouri estimated the net impact of this federal legislation to Missouri's GR fund would be to reduce revenue by $58 million per year. Other analyses have estimated the impact at over $500 million per year.

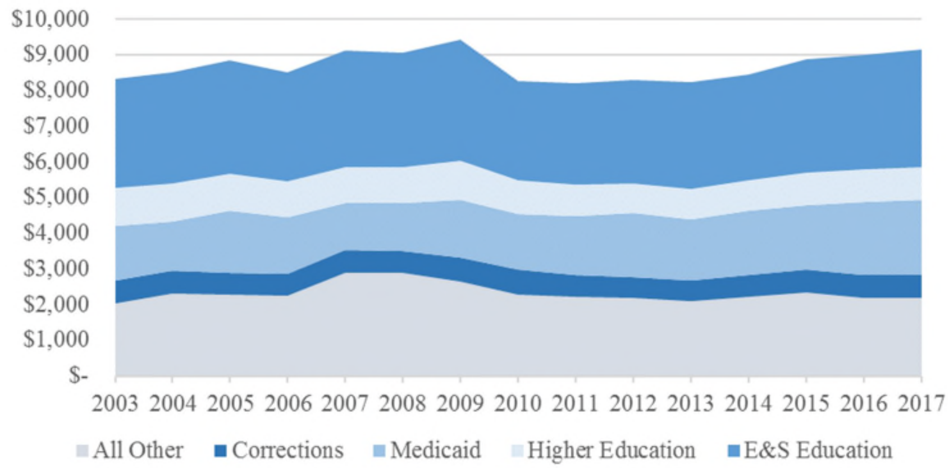
Avoiding a reduction in state revenues due to changes in the federal tax law would require legislative action by the General Assembly.

1.2 Expenditures

State expenditures continue to rise as the state faces downward pressure on revenue. Additionally, some mandatory expenditure items increasingly comprise a larger portion of the GR Fund budget forcing the General Assembly to make cuts in other areas. Figure 3 shows the composition of GR Fund expenditures since 2003. Overall, expenditures have increased since 2010, but are still below pre-recessionary levels, when adjusted for inflation. In 2003, Medicaid expenditures comprised 19 percent of GR Fund expenditures and 23 percent in 2016 while higher education expenditures fell from 13 percent of GR Fund expenditures to 10 percent.

[12] SAO, *Tax Credit Programs*, report number 2017-51, issued June 2017.

Figure 3: Composition of General Fund Expenditures by Function (adjusted for inflation), in millions, fiscal years 2003-2017

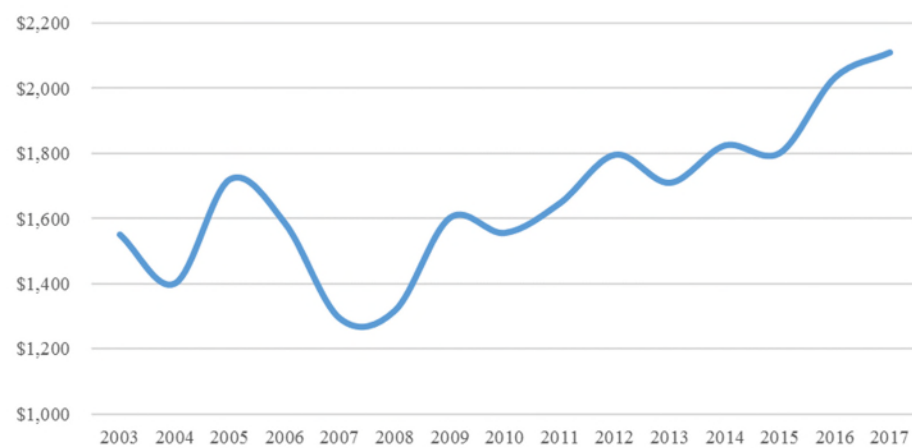


Source: National Association of State Budget Officers, State Expenditure Reports, 2003-2016, <https://www.nasbo.org/reports-data/state-expenditure-report/state-expenditure-archives>, accessed December 20, 2017 and January 22, 2018. The 2017 expenditure data is estimated. Inflation factors from UCM economists analysis of CPI data from <https://fred.stlouisfed.org/series/CPIAUCSL>.

Medicaid

Mandatory Medicaid spending continues to increase and comprise a larger percentage of the overall budget. Figure 4 shows GR Fund Medicaid expenditures, adjusted for inflation, since 2003.

Figure 4: Medicaid General Revenue Fund expenditures (adjusted for inflation), in millions, fiscal years 2003 to 2017



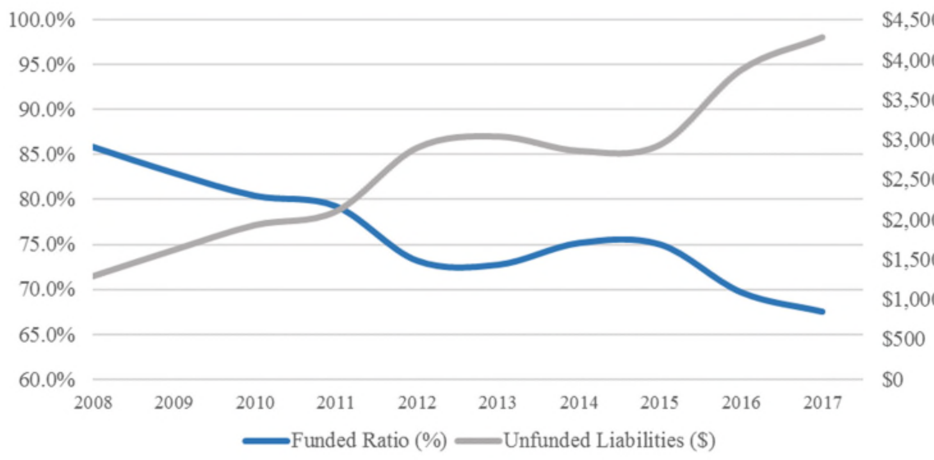
Source: National Association of State Budget Officers, State Expenditure Reports, 2003-2017, <https://www.nasbo.org/reports-data/state-expenditure-report/state-expenditure-archives>, accessed December 20, 2017 and January 22, 2018. The 2017 expenditure data is estimated. Inflation factors from UCM economists analysis of CPI data from <https://fred.stlouisfed.org/series/CPIAUCSL>.

While the majority of Medicaid costs are reimbursed by the federal government (approximately an average of 62 percent[13]), Missouri is required to contribute a portion of the costs to maintain federal funding. The Centers for Medicare and Medicaid, Office of the Actuary projects the annual average growth rate of Medicaid expenditures from 2016 to 2025 to be 5.7 percent nationally, a faster rate than the projected average annual GDP growth of 4.8 percent.[14] Additionally, because Medicaid[15] eligibility is based on income and was not expanded as part of the Affordable Care Act, Medicaid spending will be increasingly sensitive to any future economic downturn.

Pension liabilities continue to grow

Unfunded pension liabilities continue to grow in the state's primary pension fund and now exceed $4.2 billion. Unfunded pension liabilities in the Missouri State Employees' Retirement System (MOSERS) have increased an average of 13 percent per year since 2010, and have grown by 232 percent from pre-recession levels in 2008 to 2017. Over that time the funded ratio for the MOSERS fund has gone from 86 percent to 67 percent. Figure 5 shows the MOSERS unfunded liability and the funded ratio from fiscal year 2008 to 2017.

Figure 5: Unfunded MOSERS fund liabilities, in millions, and funded ratio, fiscal year 2008 to 2017



Source: MOSERS actuarial valuation reports, 2010 to 2017.

13 Average percentage of federal expenditures for Medicaid from 2007 to 2016 from National Association of State Budget Officers, State Expenditure Reports, 2003-2016, <https://www.nasbo.org/reports-data/state-expenditure-report/state-expenditure-archives>, accessed December 20, 2017.

14 National Association of State Budget Officers, *The Fiscal Survey of States*, Spring 2017, p. 69, <https://higherlogicdownload.s3.amazonaws.com/NASBO/9d2d2db1-c943-4f1b-b750-0fca152d64c2/UploadedImages/Fiscal%20Survey/NASBO%20Spring%202017%20Fiscal%20Survey%20(S).pdf>, accessed January 16, 2018.

15 Missouri's Medicaid program eligibility is based on income and determined as a percentage of the federal poverty level. Missouri's program covers the disabled/blind, elderly, custodial parents, children, and pregnant women.

Legislative changes in 2011 required new state employees to contribute to the pension plan. Despite this change, pension fund assets have not kept pace with actuarial liabilities, resulting in the increase in unfunded liabilities.

1.3 Insufficient contingency funding

Missouri's Budget Reserve Fund (BRF), which acts as the state's "rainy day fund," does not maintain sufficient reserves to insulate the state budget during an economic downturn. According to a 2017 stress test report from Moody Analytics,[16] Missouri ranks 42nd in the nation in terms of preparedness for a moderate economic downturn. According to data presented in the report, Missouri requires a BRF fund balance of approximately $900 million just to be considered 'somewhat prepared' for a moderate recession. In contrast, the balance of the BRF at June 30, 2017 was $591 million.

According to the Moody report, the Missouri economy is particularly sensitive to economic downturns, resulting in larger revenue reductions and larger Medicaid expenditure increases in the event of a recession. In terms of combined fiscal shock, the report ranks Missouri as the 6th most sensitive state to a moderate recession. This increased sensitivity can be attributed, in part, to the state becoming more reliant on income taxes, and less reliant on sales taxes, for general revenue. The lack of Medicaid expansion, while keeping state spending for the program lower, also makes state Medicaid spending more sensitive to economic downturns. According to the report, the fewer individuals covered by the state's Medicaid program under normal conditions means a sharper increase in enrollments during economic downturns.

Increased borrowing from the Budget Reserve Fund

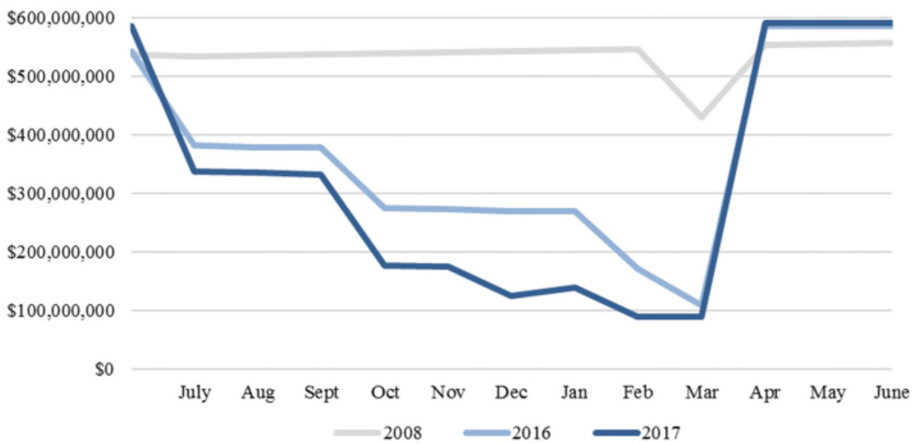
The audit of timeliness of income tax refunds[17] documented the state's increased borrowing from the BRF to cover cash flow issues, including the ability to make timely tax refunds, in the GR Fund throughout the fiscal year. There are no constitutional restrictions on how much of the fund can be used for cash flow needs. As a result, borrowing from the BRF has continually increased since the last recession, including borrowing $500 million from the fund in fiscal year 2017. While the GR Fund repaid these borrowed funds by May 16, 2017, as required by the Missouri Constitution, the BRF is increasingly being relied upon to fund normal operations of the state and would, therefore, not be available for budget stabilization should the need arise.

Figure 6 shows a comparison of the fund balance, by month, in the BRF in fiscal year 2008 (pre-recession) and fiscal year 2016 and 2017. While the

[16] Moody Analytics, *Stress Testing States*, <https://www.economy.com/getlocal?q=91a42834-85af-4773-b408-5da811028c00&app=eccafile>, accessed January 9, 2017.
[17] SAO, *Timeliness of Income Tax Refund Issuance*, report number 2018-001, issued January 2018.

BRF balance never dropped below $400 million during fiscal year 2008, the fund balance dropped below $400 million for 9 months during each of fiscal year 2016 and 2017. In fiscal year 2017 the fund balance dropped below $200 million for 6 months, and reached a low balance of $100 million.

Figure 6: Budget Reserve Fund balance, by month, fiscal year 2008, 2016, and 2017



Source: SAM II data

Budget Reserve Fund restrictions

Constitutional provisions[18] regarding the BRF limit the balance of the fund to 7.5 percent of general revenue collections. Based on this restriction, the balance of the BRF at June 30, 2017, would have been limited to approximately $660 million (7.5 percent of the $8.79 billion net general revenue collections in fiscal year 2016). The actual fund balance was $591 million. Both amounts are well below the preparedness balance suggested by the Moody Analytics report (approximately $900 million). With legislative approval the balance of the fund can accumulate to as high as 10 percent of general revenue collections. In fiscal year 2017 that limit would have been $879 million. Therefore, even if the BRF balance was at its constitutional maximum it would still be short of the estimated balance needed to be considered prepared.

Additional restrictions exist for using the BRF for budget stabilization purposes. To be used for this purpose the legislature must approve such a use by a 2/3 vote. Such an approval can make timely access to contingency funds difficult. According to the Moody's Analytics report, having clear rules for when reserve funds can be used and for what purpose can help avoid indecision by policymakers when funds are needed, and help avoid the need

[18] At the end of any fiscal year any Budget Reserve Fund balance exceeding 7.5 percent of the general revenue collections must be transferred to the GR Fund as required by the Missouri Constitution, unless the legislature directly appropriates a higher amount in the Budget Reserve Fund (except the balance in the fund at year-end cannot exceed 10 percent of general revenue collections).

for more drastic budget decisions when contingency funds exist to help avoid such decisions.

Hancock Amendment limitations

Article X, Sections 16 through 24, of the Missouri Constitution, commonly referred to as the Hancock Amendment, places restrictions on the amount of personal income used to fund state government, and the amount by which fees and taxes can be increased. Specifically Section 18(e) requires voter approval before taxes or fees can be increased by the General Assembly beyond a certain annual limit. As discussed in the review of compliance with Hancock Amendment requirements,[19] based upon the calculation provided by the state's Office of Administration, the relevant annual revenue limit for fiscal year 2017 was $101.5 million.

The limitations placed on the legislature by the Hancock Amendment do not allow legislators and policymakers the flexibility to reverse cuts to revenue that may exceed expectations. Once laws are passed to reduce revenue, in the form of tax rate reductions, sales tax exemptions, or otherwise, revenues cannot be increased above the Section 18(e) threshold via legislative changes without a public vote. Due to such a strict limitation, legislators and policymakers must ensure the fiscal impacts of proposed legislation is estimated accurately, are not understated, and taxpayers are getting the promised return on investment.

1.4 Missouri families face an increased burden

Missouri families are increasingly impacted by state budget decisions, including reduced funding for education, as well as many taxes being shifted to the local level, including property taxes for education and special taxing district sales taxes for development. In the case of higher education, reductions in state funding leads to increased costs being directly passed on to students and families in the form of higher tuition and fees. Other legislative decisions, such as maintaining low unemployment benefits, also negatively impact Missouri families.

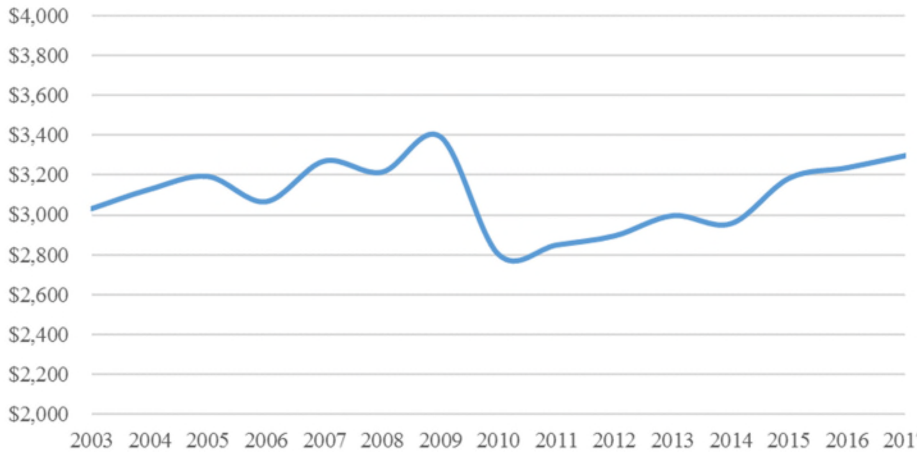
Elementary and secondary education funding

State funding for elementary and secondary education (ESE) was reduced significantly in 2010 as a result of the recession. As shown in Figure 7, spending on ESE has increased steadily since the recession, but is still lower than pre-recession levels when adjusted for inflation. Overall, expenditures for ESE have increased by an average of .79 percent per year from 2003 to 2017, when adjusted for inflation. As reported in the Missouri School Data Reporting audit,[20] Missouri ranked 29th nationally in spending per student for the 2013-2014 school year and the $11,293 average per student is 8.4 percent below the national average of $12,335.

---

[19] SAO, *Administration Review of Article X, Sections 16 Through 24, Constitution of Missouri Year Ended June 30, 2016*, report number 2017-033, issued May 2017.
[20] SAO, *Missouri School Data Reporting*, report number 2017-146, issued December 2017.

Figure 7: ESE expenditures (adjusted for inflation), in millions, fiscal year 2003 to 2017



Source: National Association of State Budget Officers, State Expenditure Reports, 2003-2017, <https://www.nasbo.org/reports-data/state-expenditure-report/state-expenditure-archives>, accessed December 20, 2017 and January 22, 2018. The 2017 expenditure data is estimated. Inflation factors from UCM economists analysis of CPI data from <https://fred.stlouisfed.org/series/CPIAUCSL>.

As a result of minimal growth in state funding for ESE, school districts are increasingly dependent on local funding. In fiscal years 2015 and 2016, Missouri had the 4th highest percentage of ESE funding from local sources in the country, and was ranked 48th in ESE funding from state sources according to the National Education Association (NEA).[21] Per an October 2017 Missouri Department of Elementary and Secondary Education report,[22] the number of schools with over 50 percent of revenue coming from local sources increased between fiscal years 2006 and 2016 to 170 of the 517 (33 percent) school districts. Overall, 350 of the 517 school districts (68 percent) had an increase in the percentage of local funding between fiscal years 2006 and 2016. As school districts face reduced state revenues and become more dependent on local tax revenues, districts may be forced to request increased property tax levies, increasing the burden to families, or cut key educational programs. Increased reliance on local property taxes will also lead to increased inequality between school districts in the state.

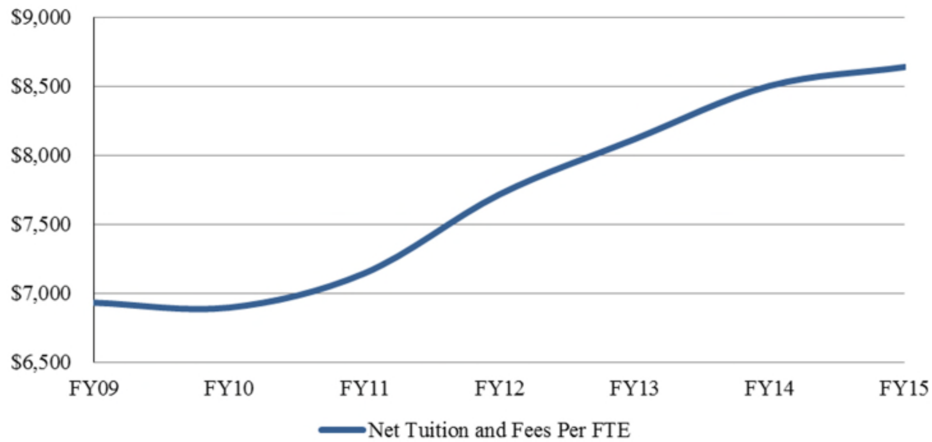
Higher education funding

The recent audit evaluating funding and affordability of public higher education[23] reported that when compared to other states, Missouri ranked

[21] NEA Rankings and Estimates, Rankings of the States 2016 and Estimates of School Statistics 2017, <http://www.nea.org/assets/docs/2017_Rankings_and_Estimates_Report-FINAL-SECURED.pdf>, accessed November 13, 2017, pp. 63-64.
[22] Missouri State Board of Education, "Report on School District Revenue Percentages," <https://dese.mo.gov/sites/default/files/SchRevPer10-17.pdf>, accessed November 13, 2017.
[23] SAO, *Public Higher Education and Affordability*, report number 2016-071, issued August 2016.

43rd in the nation in state funding for higher education per $1,000 in personal income and state appropriations provided to 4-year public institutions decreased. Average state appropriations per full-time equivalent (FTE) student declined from $7,778 per student in fiscal year 2009 to $6,332 per student in fiscal year 2015. Higher education institutions have responded by increasing tuition and supplemental fees as a way to generate additional revenue. As shown in Figure 8, this increases the amount paid by Missouri families and places a further burden on those families sending children to public institutions.

Figure 8: Net tuition and fees per FTE student, in dollars, fiscal year 2009 to 2015



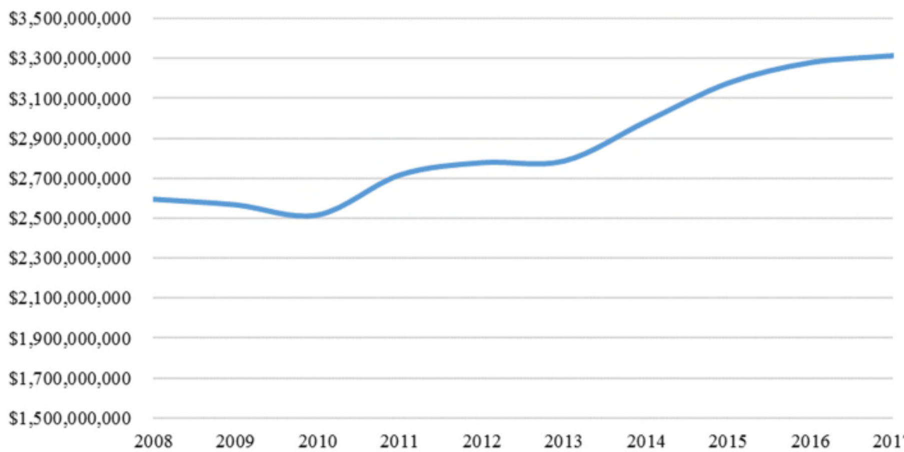
Source: Prepared by the SAO using the Integrated Post-Secondary Education Data System tuition data and enrollment information from the Missouri Department of Higher Education.

Local sales and use taxes continue to increase

Figure 9 shows sales taxes at the local level have shown continued growth over pre-recession levels. While there are many reasons local governments are increasing the use of local sales taxes, a recent audit of Transportation Development Districts[24] and the ongoing audit of Community Improvement Districts have shown the increase is, in part, due to an increase in special taxing districts. Such taxes typically go toward financing development projects rather than the general needs of the public. Increased sales taxes at the local level do not impact state revenues, but represent an additional cost to Missouri families.

[24] SAO, *Transportation Development Districts*, report number 2017-020, issued April 2017.

Figure 9: Local sales tax collections, adjusted for inflation, fiscal years 2008 to 2017



Source: DOR data, Inflation factors from UCM economists analysis of CPI data from <https://fred.stlouisfed.org/series/CPIAUCSL>.

Unemployment insurance benefits

Missouri's unemployment insurance laws make the state's benefits among the lowest in the nation. State unemployment trust funds are funded with taxes collected from employers in the state and unemployment benefits are paid to eligible workers who are unemployed through no fault of their own. The maximum unemployment insurance benefit duration period in Missouri is 20 weeks. Only two states have a benefit duration period shorter (Florida and North Carolina), and 44 states and the District of Columbia have durations of 26 weeks or more. Missouri's maximum weekly benefit amount of $320 is the 6th lowest in the country, and is at least 30 percent lower than the national average.[25]

According to the United States Department of Labor, unemployment insurance helps prevent families from falling into poverty and provides economic stimulus, particularly in times of recession. Providing such minimal unemployment insurance assistance places an additional burden on Missouri families and places additional pressure on the state budget during times of recession due to reduced consumer spending by unemployed individuals during those periods and a heavier reliance on social service programs.

Conclusion

Missouri has historically been a low tax state. Despite the low tax rate and a long-standing reputation for being business friendly, the state has also historically been a slow growth state. While Missouri has experienced a period of record low unemployment and job growth since the 2008 recession,

[25] Unemployment benefits comparison by state, <https://fileunemployment.org/unemployment-benefits-comparison-by-state>, accessed January 23, 2018, and updated through independent verification of various state labor websites.

when adjusted for inflation, state revenues are roughly equal to pre-recession periods, General Revenue Fund expenditures are below pre-recession levels, state expenditures for elementary and secondary education as well as higher education are down and below national averages, and cash flow balances do not always allow for timely payment of income tax refunds. In addition, the burden of funding roads and elementary and secondary education has been shifting to the local level, and costs of higher education have been passed on to students. During good economic times, when reserve funds should be replenished, the state is instead in a position of needing to borrow from reserve funds for normal operations. The use of BRF monies throughout the year to cover cash flow shortages will result in such funds not being available for budget stabilization when a recessionary economic period hits. Not having sufficient budget reserve funds available for budget stabilization will necessitate drastic budget cuts when the economy can least afford them, and will be in areas that directly impact Missouri families.

2. Stress Test

Missouri, as well as the nation, is experiencing an extended period of positive economic growth following the 2008 recession, with current record low unemployment levels. Despite these positive economic conditions, the state's financial condition has not shown significant improvement. According to the National Bureau of Economic Research, the United States economy began a period of economic expansion in June 2009, which puts the current period of economic expansion at 103 months. The previous 5 economic expansions since 1980 averaged 60.4 months, with a median expansion period of 74 months, and the longest expansion period being 121 months. Periods of economic retraction are inevitable, and the near-term likelihood of such a period increases with every month of expansion. With this in mind, it is in the best interest of the state and its taxpayers that policymakers plan ahead for downturns in the economy.

In an effort to examine the condition of the Missouri economy and state budget, as well as to determine the impact of an economic downturn on the state budget, the State Auditor's Office contracted with economists from the University of Central Missouri (UCM) to analyze these issues. In addition, we asked the economists to develop an economic forecasting model to assess the impacts of economic stress on the state budget. A report[26] prepared by the economists summarizes the analysis performed and the methodology of the forecasting model. The developed stress test model allows users to apply various stresses on the state economy to estimate the impact on the state budget. The contracted report and interactive tool are available at

[26] Acevedo, Christopher D, Cravioveanu, Mihaela O., and Crooker, John R.; University of Central Missouri, *Missouri Budget Integrity*; November 26, 2017.

www.auditor.mo.gov. The model is based on trends in historical data and uses updated data from www.fred.stlouisfed.org to project the results produced.

2.1 Unemployment change

The unadjusted online stress test model[27] projects unemployment to increase to approximately 9 percent (2009 recession levels) in fiscal year 2021. Such an increase in unemployment levels is projected to result in GR Fund revenues of $8.8 billion in fiscal year 2021, a $600 million shortfall from the fiscal year 2018 GR Fund budget of $9.4 billion.

These estimates do not take into account the tax rate reduction impacts of SB 509 (2014) or recent federal tax law changes. These revenue cuts would be in addition to the stress test model reductions above. When combined, the GR Fund is potentially facing a revenue reduction of $1 billion from the fiscal year 2018 budget level in the event of such a recession. Such a significant reduction in revenues would necessitate an equivalent amount of spending cuts. Based on spending cuts made during the previous recession, the majority of budget cuts will be felt in higher education and elementary and secondary education.

As discussed on page 10, existing contingency funds are not sufficient to avoid or soften the budget cuts necessary to balance the budget in the event of a recession. In addition, if budget reserve funds continue to be used to cover cash flow shortages for operational expenses, the amount of contingency funds available for budget reserve, or "rainy day" purposes in the event of a recession will be minimal. As also discussed previously, various conditions make Missouri's budget more sensitive to recessionary periods, including an increased reliance on individual income taxes for revenue, and a lack of Medicaid expansion making Medicaid expenses more volatile. Action is necessary by the General Assembly and the Governor to address the issues of budget volatility, and improvements to the state's contingency fund would also help protect the state budget from recessionary periods.

2.2 Employment trends and impact of increased employment

Creating jobs, thereby increasing employment, has commonly been promoted as necessary to improve the state budget, and cited as a reason to justify income tax cuts. While adding jobs will always increase state revenues, it is important to analyze the potential fiscal impact of doing so, and put any potential employment growth into historical context.

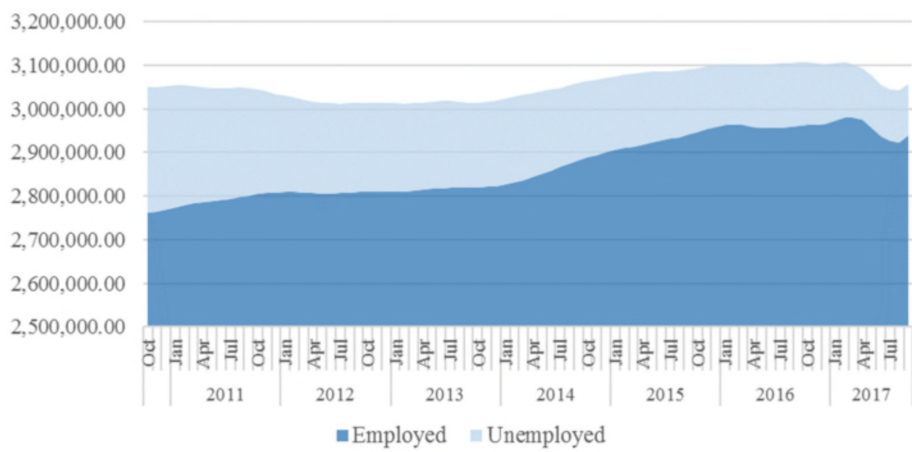
According to data from the United States Bureau of Labor Statistics, there were an average of 2,952,310 people employed in Missouri during fiscal year 2016. Using fiscal year 2016 data, the state collected approximately $2,973 per worker in GR Fund revenue for the year. Based on this average, the state

[27] Projected based on no change to the employment, unemployment rate, real wage, and productivity variables in the online model.

would have to create approximately 168,000 jobs[28] paying the state average wage to generate $500 million in GR Fund revenue. For historical context, a net of 177,853 jobs were added to the Missouri economy from October 2010 to September 2017; a period which has seen record positive job growth. See Figure 10 for changes in Missouri's employment and unemployment levels over this timeframe. In addition, Missouri's total employment level has decreased approximately 33,000 jobs during 2017,[29] including 2 consecutive months where the state lost approximately 18,000 jobs per month. This decline in employment was also accompanied by a decline in the state's overall workforce.[30] Also, as of September 2017, there were approximately 116,000 unemployed workers in the state's workforce. See Figure 10 for historic employment levels.

Therefore, to achieve significant improvement to the state budget through added jobs, not only must new jobs be created, but the state workforce must add workers qualified to fill jobs that pay the state average wage.

Figure 10: Number of individuals employed and unemployed, October 2010 to September 2017



Source: United States Bureau of Labor Statistics data, <https://data.bls.gov/timeseries/LASST290000000000006>, accessed January 23, 2018.

2.3 Wage trends and impact of increased wages

Wages in Missouri have not kept pace with inflation. According to the UCM analysis, while total wages in Missouri have increased in recent years, they are roughly 2 percent below pre-recession levels, and are currently equivalent to wages from 1999, when adjusted for inflation (see Figure 11). On a per hour basis, wages are currently $24.68 per hour, down from a high of approximately $25 in 2016. The UCM economic stress test tool allows users

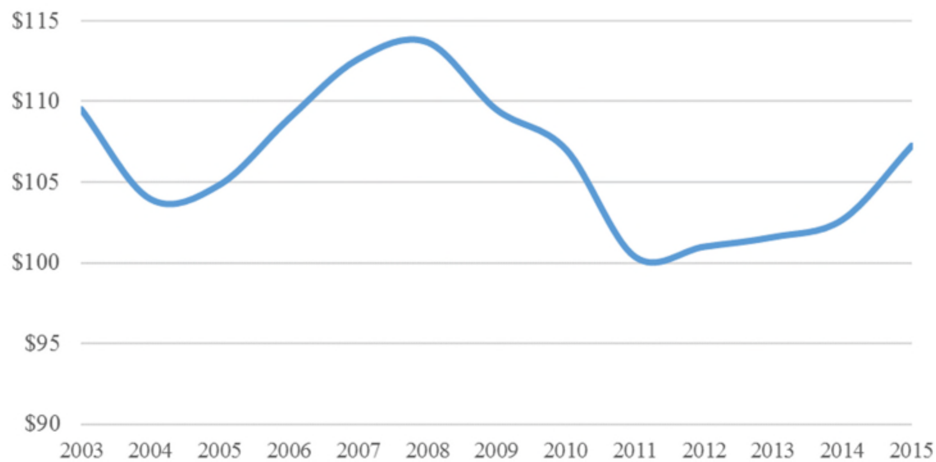
[28] $500,000,000/$2,973 = 168,180 jobs

[29] United States Bureau of Labor Statistics data through September 2017, <https://data.bls.gov/timeseries/LASST290000000000006>, accessed January 23, 2018.

[30] Overall workforce is the combination of employed individuals and unemployed individuals actively looking for work.

to estimate the impact of increasing wages. According to the tool, a $1 increase to wages to $25.68, which is higher than hourly wages have ever been in Missouri and would be considered a significant increase, would result in an increase in net GR Fund revenues of approximately $300 million. This analysis tells us an increase in wages produces positive economic impact, as would be expected, however, the impact of a significant increase in wages does not produce significant enough GR Fund revenues to overcome current budget shortfalls.

Figure 11: Missouri wages, adjusted for inflation, fiscal years 2003 to 2015, in billions



Source: Acevedo, Christopher D, Cravioveanu, Mihaela O., and Crooker, John R.; University of Central Missouri, *Missouri Budget Integrity*; November 26, 2017, page 28, Figure 18.

2.4 Impacts of reduced income tax rates

The UCM economic analysis evaluated the potential impacts of a reduction in Missouri's top individual income tax rate from 6.0 percent to 5.9 percent; a reduction which takes place in 2018 as a result of SB 509 (2014).[31] According to that analysis, a .1 percent reduction in the state income tax rate produces an increase in the state's economic activity of .6 percent. However, the additional economic activity is not sufficient to generate enough additional revenue to the state to make up for the corresponding loss in revenue created by the rate reduction. While the UCM report does not include specific dollar estimates, the result is a net reduction in state revenues. According to fiscal note estimates of the bill's impact, revenue reductions could exceed $600 million annually when fully implemented. According to the UCM analysis, based on Missouri's current and historic tax rate structure, no level of income tax rate reductions will result in a net increase in revenues to the GR Fund.

[31] The bill allows for the reduction of the top individual income tax rate by .1 percent annually if certain economic thresholds are met until the rate reaches 5.5 percent.

Conclusion

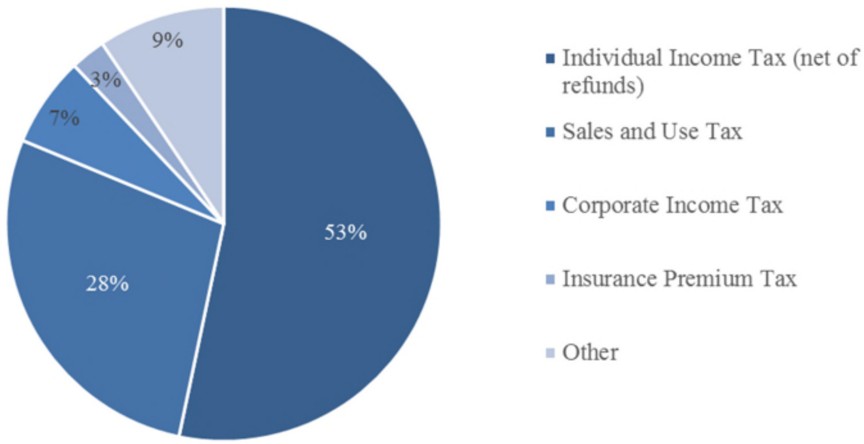
The information presented in this report shows that Missouri's budget is not adequately prepared for an economic downturn. Increased reliance on individual income tax revenue has made the budget more sensitive to economic downturns, and inadequate contingency funds will not allow for a sufficient cushion to prevent drastic budget cuts that will impact Missouri families. Recent legislation reducing tax rates for individuals and corporations were enacted with expectations of increased employment and wages. However, moderate increases in the labor force since the recession, and recent declines in the labor force and employment, are signs that significant gains in employment can't be relied on to rescue the state budget. Similarly, wages in Missouri have historically lagged behind inflation and have not recovered from pre-recession levels. While improving wages to Missouri workers is necessary and will provide positive revenue to the state, any increases in wages cannot be relied on to provide the revenue needed to avoid significant budget cuts. Cuts to income tax rates already in law will not provide enough economic activity to overcome the significant revenue decreases expected, leaving the state with no option but to cut services, and reduce funding to areas that have already seen their funding reduced since the recession, such as elementary and secondary education and higher education.

State Budget Stress Test
Supplemental Information

The following information is supplemental to the report, and is presented for informational purposes only.

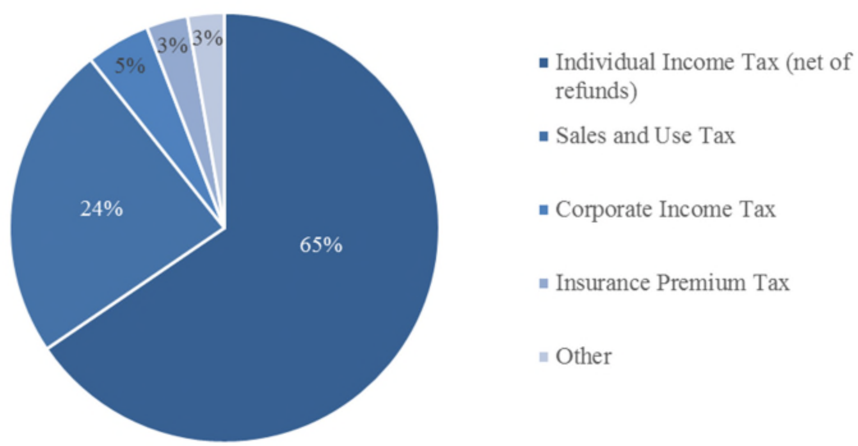
Figures A and B show the distribution of General Revenue (GR) Fund revenues for fiscal years 2003 and 2017. This information is presented to show the changes to the diversification of GR Fund revenues over time. Note the increase in the dependence on individual income tax revenue.

Figure A: General Revenue Fund revenue distribution, fiscal year 2003



Source: SAO and UCM analysis of Economic and Policy Analysis Research Center (EPARC), University of Missouri, and SAM II data. Inflation factors from UCM economists analysis of CPI data from <https://fred.stlouisfed.org/series/CPIAUCSL>.

Figure B: General Revenue Fund revenue distribution, fiscal year 2017



Source: SAO and UCM analysis of Economic and Policy Analysis Research Center (EPARC), University of Missouri, and SAM II data. Inflation factors from UCM economists analysis of CPI data from <https://fred.stlouisfed.org/series/CPIAUCSL>.

The following table shows GR Fund revenues, adjusted for inflation, from fiscal year 2003 to 2017. These numbers support Figure 1 on page 5 of the report, as well as Figures A and B on the previous page.

General Revenue Fund revenues, by source, fiscal year 2003 to 2017, adjusted for inflation

Fiscal Year	Individual Income Tax (net of refunds)	Sales and Use Tax	Corporate Income Tax	Insurance Premium Tax	Other	Total	Percent Change
2003	$ 4,186,108,297	2,195,881,703	526,220,787	204,997,324	740,748,988	7,853,957,099	
2004	4,468,697,715	2,278,786,263	538,050,130	207,214,273	738,321,498	8,231,069,880	4.80%
2005	4,708,434,551	2,287,665,185	588,848,651	205,646,815	550,726,571	8,341,321,772	1.34%
2006	5,045,709,181	2,293,254,043	724,793,766	226,639,395	469,976,709	8,760,373,095	5.02%
2007	5,287,678,380	2,316,344,189	739,395,099	233,159,484	454,352,455	9,030,929,606	3.09%
2008	5,443,957,069	2,215,004,507	688,466,593	235,166,402	399,161,636	8,981,756,206	-0.54%
2009	5,049,113,810	2,114,657,039	593,628,231	228,967,469	384,589,062	8,370,955,610	-6.80%
2010	4,395,358,439	1,959,891,842	549,689,893	212,772,348	298,996,584	7,416,709,106	-11.40%
2011	4,624,052,211	1,946,507,728	578,502,616	227,135,945	348,197,396	7,724,395,896	4.15%
2012	4,771,774,266	1,956,025,870	525,402,642	200,541,375	217,581,964	7,671,326,117	-0.69%
2013	5,334,048,641	1,948,157,274	540,418,124	196,594,887	289,489,860	8,308,708,786	8.31%
2014	5,132,634,496	1,988,571,148	546,823,023	204,933,484	222,360,141	8,095,322,292	-2.57%
2015	5,744,029,568	2,038,596,538	566,365,487	242,450,708	235,523,801	8,826,966,103	9.04%
2016	5,753,650,142	2,099,701,967	468,287,165	247,271,010	208,937,790	8,777,848,074	-0.56%
2017	$ 5,904,707,426	2,147,141,091	435,097,753	280,410,231	248,885,466	9,016,241,966	2.72%

Source: SAO and UCM analysis of Economic and Policy Analysis Research Center (EPARC), University of Missouri (EPARC) and SAM II data. Inflation factors from UCM economists analysis of CPI data from <https://fred.stlouisfed.org/series/CPIAUCSL>.