**GOVERNOR'S OFFICE OF MANAGEMENT AND BUDGET**

**Revenue Volatility Report**

## EXECUTIVE SUMMARY

Understanding and correctly interpreting long-term tax revenue trends is a valuable and useful tool for properly managing the state's budget during the inevitable ups and downs of the economic cycle. Policymakers should contemplate revenue volatility when setting Utah's tax policy.

### Volatility of Major Revenue Sources

The State of Utah's two major revenue sources are the individual income tax and the state sales and use tax. The individual income tax ($3 billion in FY 2016), which is the primary revenue source for the Education Fund ($3.5 billion), tends to be more volatile than the sales and use tax ($2.3 billion, including $550 million in earmarks), the primary revenue source for the General Fund ($2.3 billion). Of the state's other tax revenue sources, corporate taxes and the severance tax tend to be more volatile, while excise taxes on gasoline, cigarettes and tobacco, multichannel audio and video services, and insurance premiums tend to be more stable.

### Rainy Day Funds

Budget reserve accounts (or "rainy day funds") exist to provide flexibility in dealing with a revenue decline. As of FY 2014 year-end transfers, the combined balances of the two main budget reserve accounts is $431 million, slightly more than the peak combined balances prior to the Great Recession. These amounts correspond to 8.0% of *total* General Fund and Education Fund appropriations for FY 2014 and 8.3% of *ongoing* General Fund and Education Fund appropriations for FY 2014.

### Tools for Managing the State Budget

The state has many tools for managing the budget, not just the two formal budget reserve accounts. These tools include the structure of the revenue system itself, the revenue estimating process, the revenue monitoring process, one-time solutions (including not only budget reserve accounts ($431 million), but other accounts such as the Medicaid Growth Reduction and Budget Stabilization Account ($17 million), Disaster Recovery Account ($20 million), Permanent State Fund ($160 million, note that high vote threshold suggests use only in extreme situations), nonlapsing balances ($315 million at FY 2014 year-end, some used by Legislature for FY 2015 budget), restricted fund balances, and deferrals), the capital budgeting process, budget stress testing, and budget reprioritization. Budget reserve accounts should be considered in context of these other tools.

The Governor's Office of Management and Budget (GOMB) believes that the current automatic year-end surplus transfer caps of 9% of Education Fund appropriations and 8% of General Fund appropriations are sufficient. Because these automatic transfer caps are percentage-based, the dollar amount of these automatic transfer caps increase over time as appropriations increase, meaning the budget reserve accounts will continue to grow over time as year-end surpluses occur. Because there are real opportunity costs of amassing funds in budget reserves, to the extent policymakers desire to increase budget reserve account levels above these existing statutory percentages, GOMB recommends that these excess deposits be appropriated as part of the annual budget process rather than by automatic year-end surplus transfer or other formula-driven budgeting processes. Moreover, we note that the practice of earmarking revenues reduces year-end deposits of surplus revenue to budget reserve accounts.

## BACKGROUND

### Statutory Requirement

Statute (UCA Section 63J-1-205) requires the Legislative Fiscal Analyst and the Governor's Office and Management and Budget to (a) prepare a revenue volatility report every three years meeting certain conditions, (b) identify the balances in the state's two largest budget reserve accounts (rainy day funds), and (c) make recommendations on automatic transfers to the state's budget reserve accounts. Understanding fluctuations in the state's major revenue sources and the causes of revenue variability can benefit policymakers as they make budget and tax decisions.

Since the last revenue volatility report in 2011, the Legislature increased the automatic year-end surplus transfer caps for the Education Fund Budget Reserve Account from 7% to 9% of Education Fund appropriations and for the General Fund Budget Reserve Account from 6% to 8% of General Fund appropriations.

### Recommendation

The Governor's Office of Management and Budget (GOMB) believes that the current automatic year-end surplus transfer caps of 9% of Education Fund appropriations and 8% of General Fund appropriations are sufficient. Because these automatic transfer caps are percentage-based, the dollar amount of these automatic transfer caps increase over time as appropriations increase, meaning the budget reserve accounts will continue to grow over time as year-end surpluses occur.

Because there are real opportunity costs of amassing funds in budget reserves, to the extent policymakers desire to increase budget reserve account levels above these existing statutory percentages, GOMB recommends that these excess deposits be appropriated as part of the annual budget process rather than by automatic year-end surplus transfer.

This report (a) highlights the volatility existing in the state's major revenue sources, (b) examines the causes of the volatility, (c) examines the state's budget management tools, and (d) explains the recommendation to maintain automatic year-end surplus transfers at the current percentages of appropriations.

## VOLATILITY IN MAJOR REVENUE SOURCES

The individual income tax and state sales and use tax ("sales tax") are the largest state revenue sources. The individual income tax is more volatile than the sales tax. Because of this, the Education Fund, which receives individual income tax revenues, is more volatile than the General Fund, which receives sales tax revenues. Figure 1 below illustrates year-over-year change in General Fund, Education Fund, and the Utah economy as measured by the Federal Reserve's coincident index for Utah. Figure 2 compares sales taxes, individual income taxes, and the Utah economy.

## General Fund Revenues

Economic sources of volatility in General Fund revenues include factors such as population growth, inflation, credit markets, oil and natural gas production, metal prices, insurance prices, alcohol and tobacco product purchases, and changing technologies.

**FIGURE 1**
**Year-over-year Change in General Fund and Education Fund Revenues**

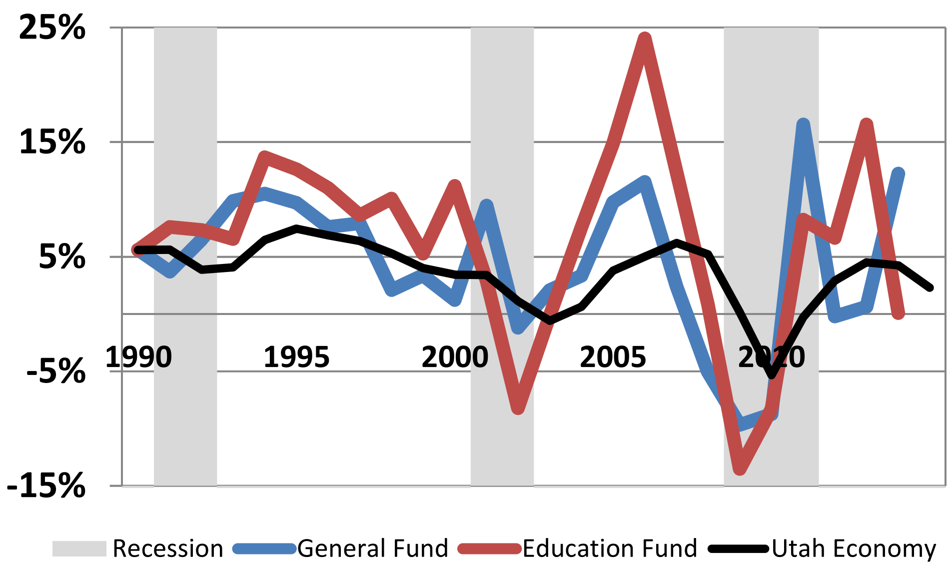



**FIGURE 2**
**Year-over-year Change in Total State Sales Tax and Individual Income Tax Revenues**

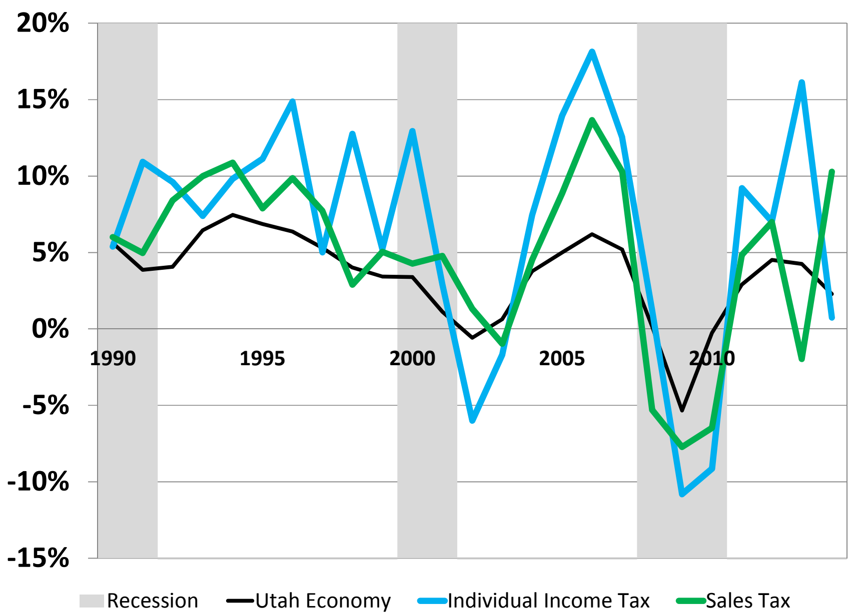
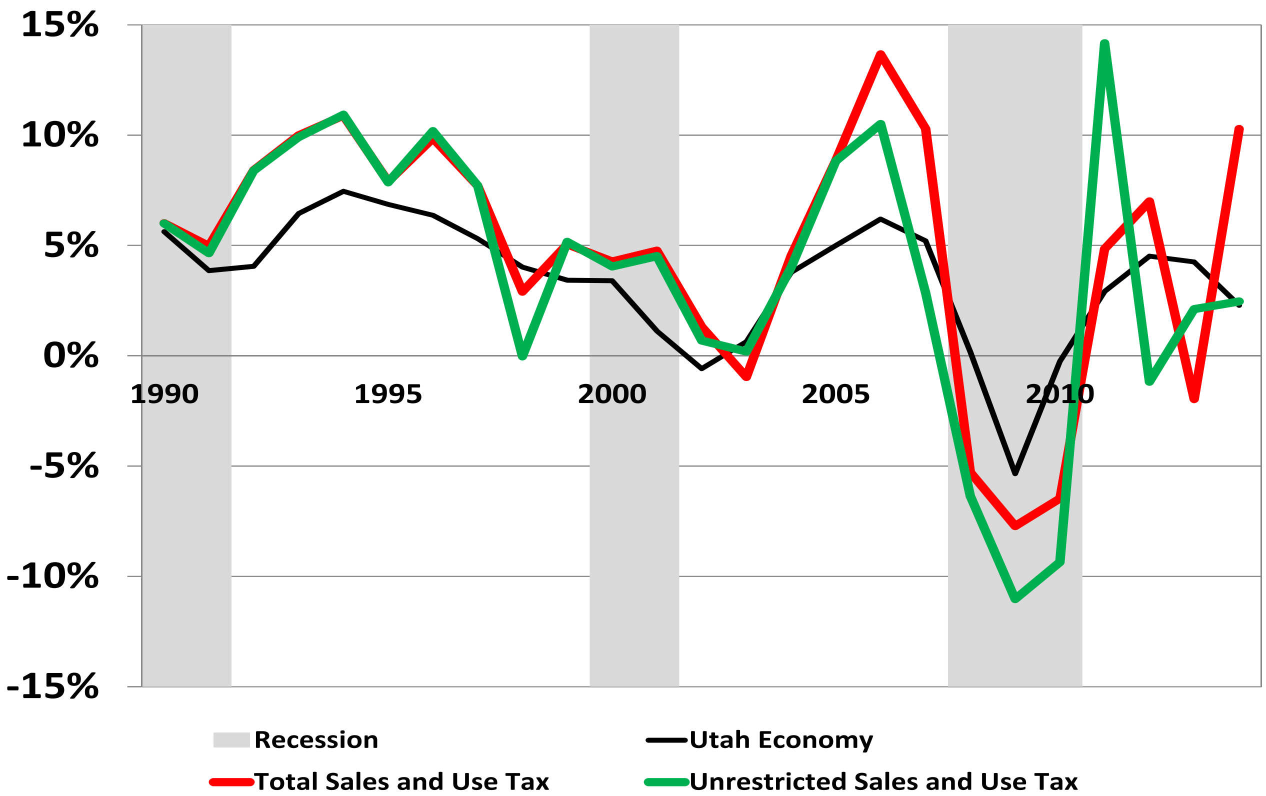


**FIGURE 3**
**Year-over-year Change in Total State Sales Tax and Unrestricted State Sales Tax Revenues**




Since the sales and use tax constitutes such large portion of the General Fund, it merits a more detailed inspection. Figure 3 highlights the impact of earmarking on the portion of sales tax deposited into the General Fund compared to actual sales tax collections.

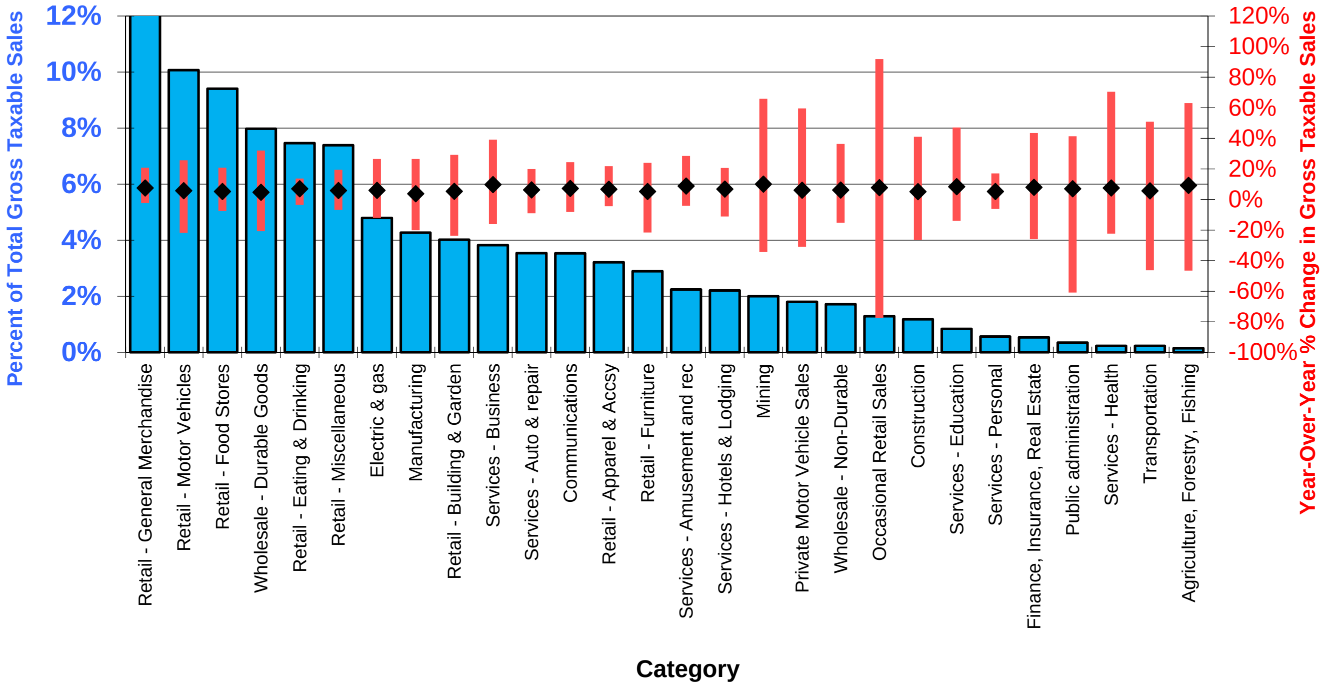
Figure 4 takes a deeper look into the sales tax base categories driving tax revenue from sales and use taxes. The categories that have the largest amount of gross taxable sales are also the categories that are least volatile. Of the largest categories, motor vehicle sales and durable goods experience the most volatility, as consumers tend to put off these purchases during economic downturns.

As Figure 5 illustrates, the severance tax is also a volatile revenue source that varies with the ups and downs of oil, natural gas, and metal markets. Importantly, the impact of this volatility on the state budget will be reduced by the recent constitutional change requiring deposit of a significant portion of severance tax revenues into the state permanent fund rather than the General Fund.

Figure 6 illustrates that gas taxes (Transportation Fund) and cigarette taxes (General Fund) are more stable revenue sources, with volatility coming through tax changes.

## FIGURE 4: Sources of Sales Tax Base Volatility by Major Category

*Range Illustrates Minimum and Maximum for Period*




## FIGURE 5: Year-over-year Change in Severance Tax Revenues

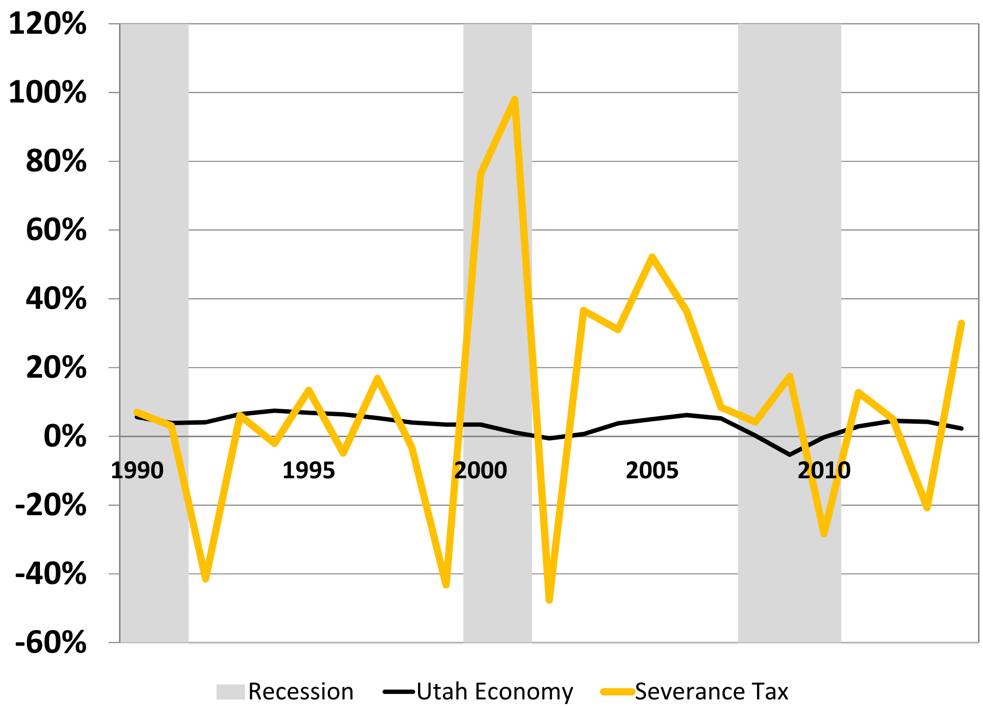
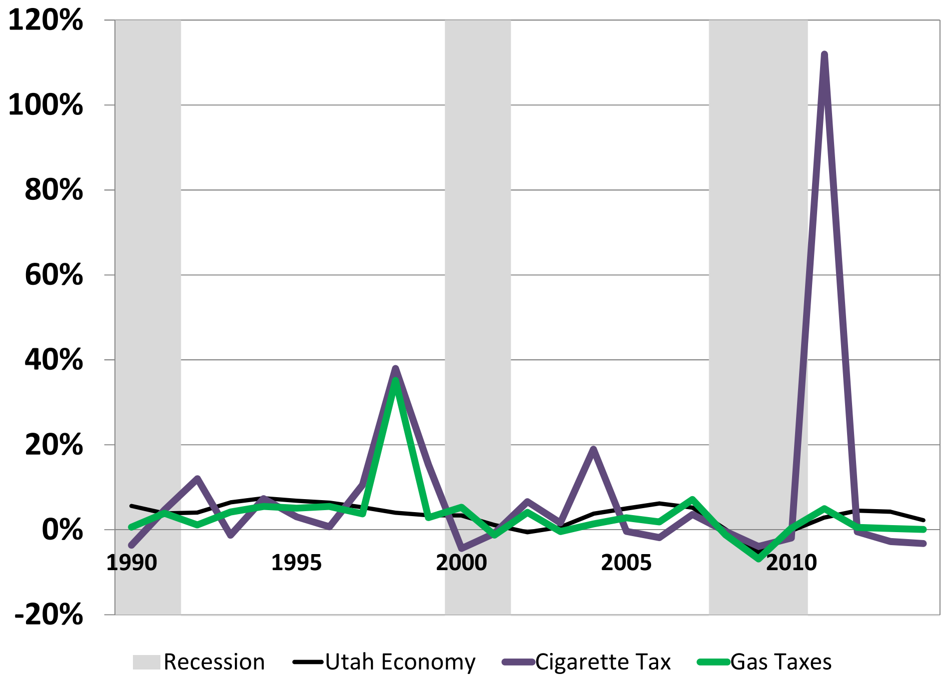


**FIGURE 6: Year-over-year Change in Cigarette and Fuel Tax Revenues**




## Education Fund Revenues

The primary sources of revenue for the Education Fund are the individual income tax and corporate income tax. As Figure 7 illustrates, the corporate income tax is more volatile than the individual income tax. Both revenue sources are more volatile than the economy in general.

Since the individual income tax constitutes such a large portion of the Education Fund, it merits a more detailed inspection. There are nine significant sources of individual income reported on tax returns. By far the largest income source for Utah households is wages. Other important sources of taxable household income are taxable pensions, partnerships, and capital gains. Figure 8 displays the percent total of individual income revenue, the average percent change between fiscal years, and the range experienced over the last 15 years.

Figure 9 displays a box plot showing the growth rate and volatility of the nine sources of individual income over the last 15 years. The three most volatile sources of income, in decreasing order, are capital gains, interest income, and partnerships (which is where business income from most types of pass-through entities such as LLCs and S-corporations appears).

**FIGURE 7**

**Year-over-year Change in Individual Income Tax and Corporate Income Tax Revenues**

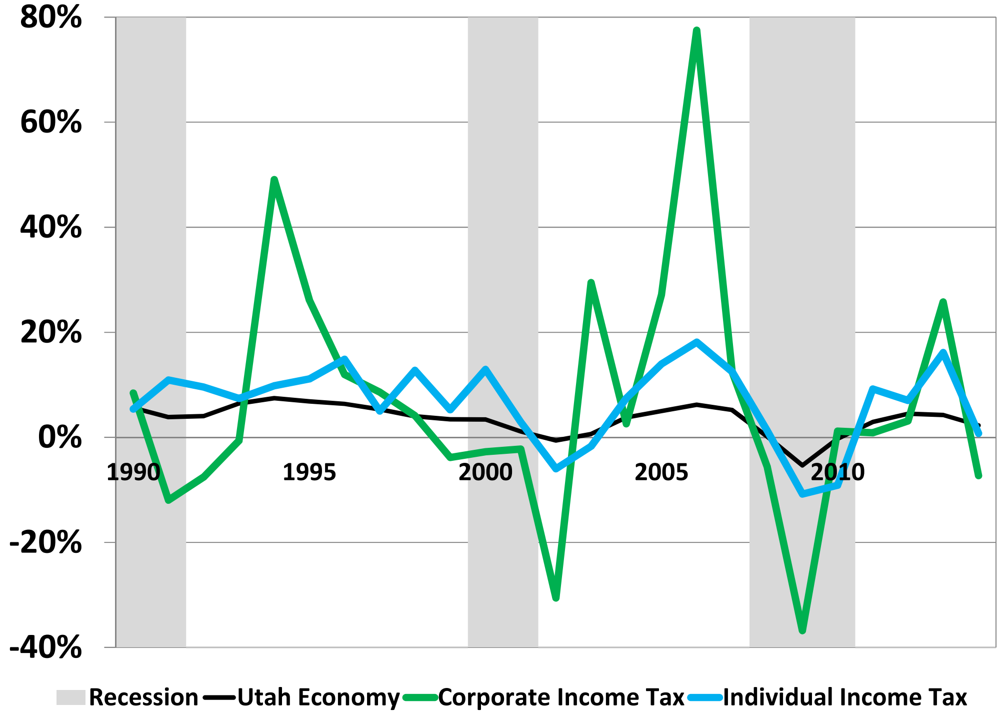



**FIGURE 8**

**Volatility in the Major Sources of Income under the Individual Income Tax**

***Range Illustrates Minimum and Maximum for Period***

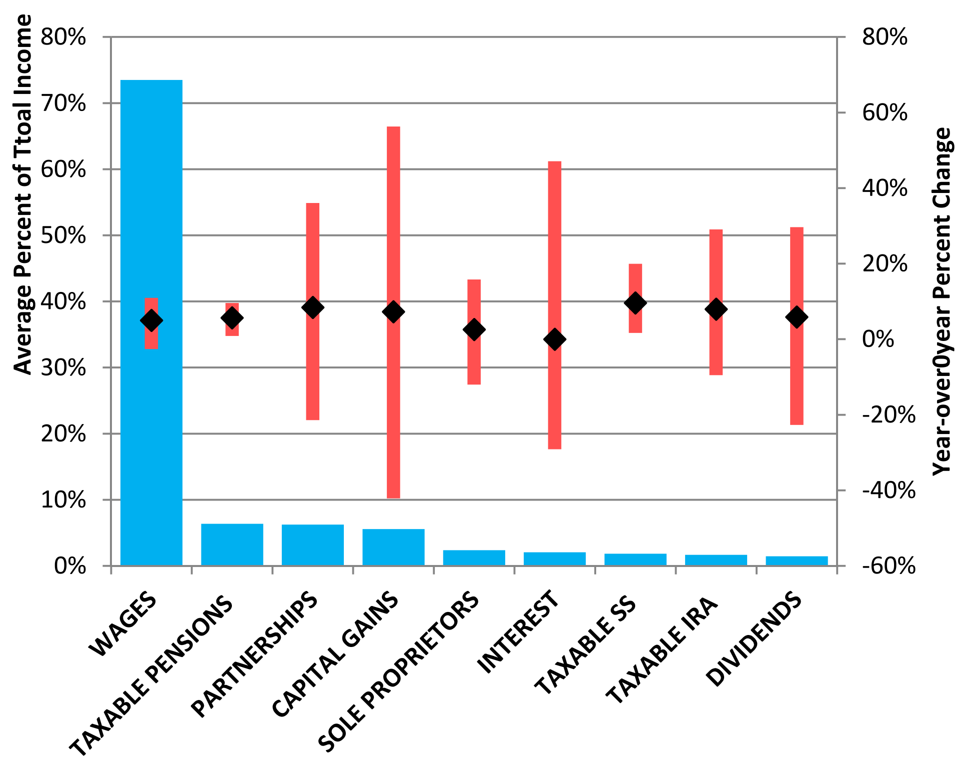
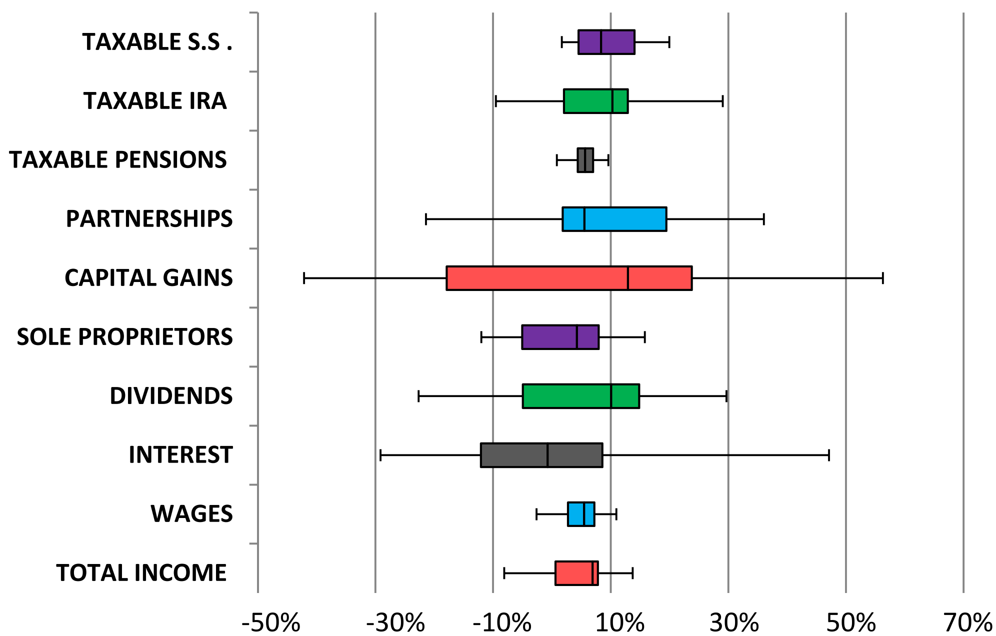


**FIGURE 9: Individual Income Tax Base Volatility**




## Federal Funding

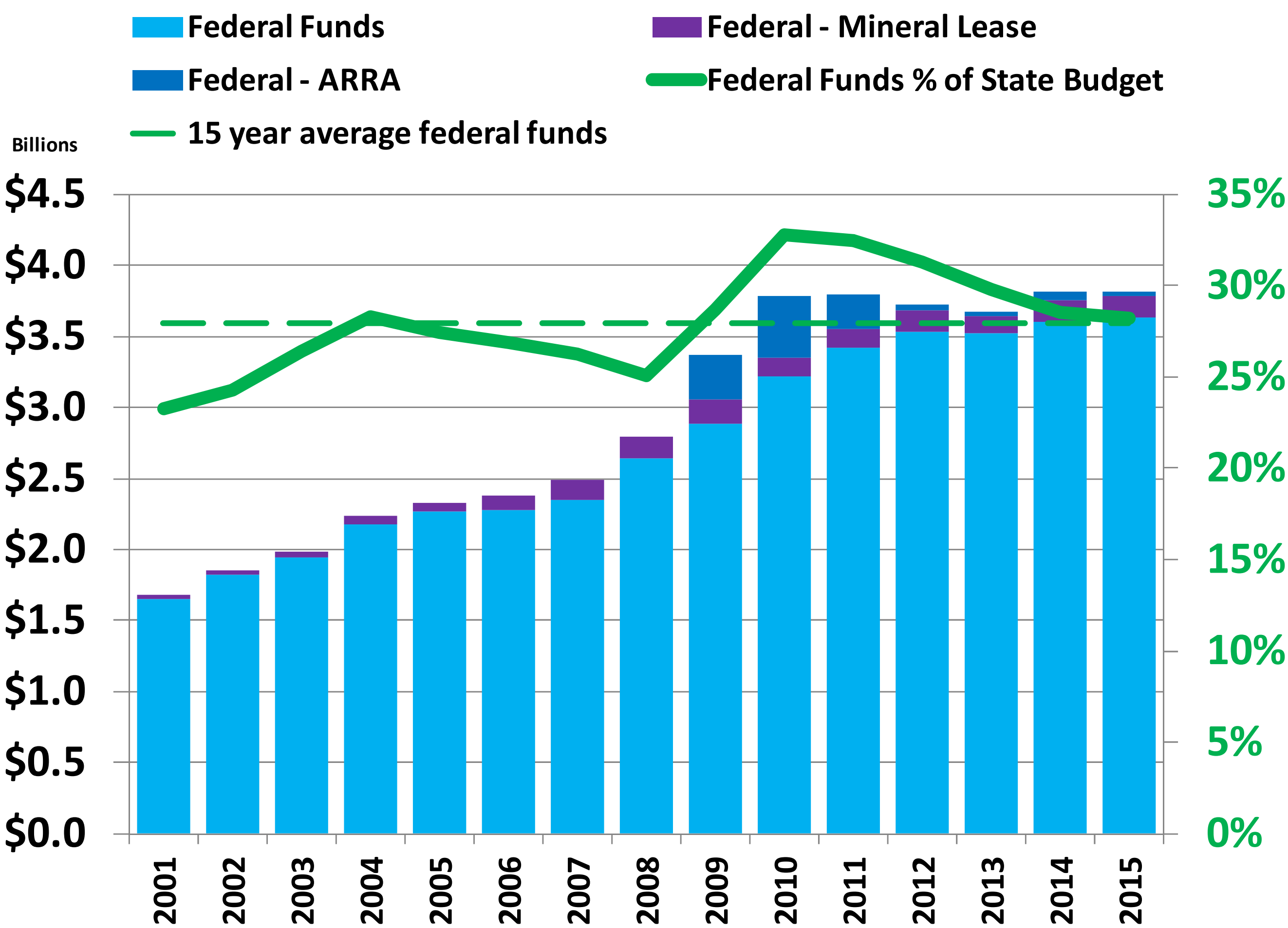
Federal funds are an important aspect of Utah's budget. As Figure 10 illustrates, over the past 15 years, Utah has received an average of 28% total state budget funding from federal resources. This percentage varies with federal and state funding changes. In general, federal funds tend to increase during a recession as more people receive benefits from federal programs and Congress enacts fiscal policy in an attempt to counteract the recession. Conversely, state revenues decline during a recession.

Major programs funded by federal funds are Medicaid ($1.7 billion), transportation ($400 million), workforce services ($600 million), education ($500 million), and human services ($125 million).

It is difficult to estimate changes in federal funding with precision because it is uncertain what actions Congress will take with the federal budget or exactly how entitlement programs will respond with changes in the economy. In addition, many federal funds are awarded on a grant basis, so funding levels are uncertain until grants are awarded. For this reason, the Legislature is involved in reviewing and approving certain new federal funds requests.

If federal funds were to be reduced, federally-funded programs would be proportionately reduced unless the Legislature decided to appropriate state funds to backfill behind the federal programs.

FIGURE 10: Federal Funds in the State Budget




## CAUSES OF REVENUE VOLATILITY

Fluctuation in tax revenues comes from both economic and policy changes.

Much of the volatility in the state's revenues comes from economic volatility. Economics factors that influence state revenues include population growth, inflation, credit markets, changes in consumer preferences, technological change, oil and natural gas production, metal prices, alcohol and tobacco product purchases, and taxpayer compliance. However, the ups and downs of the economy are not the sole source of changes in tax revenue.

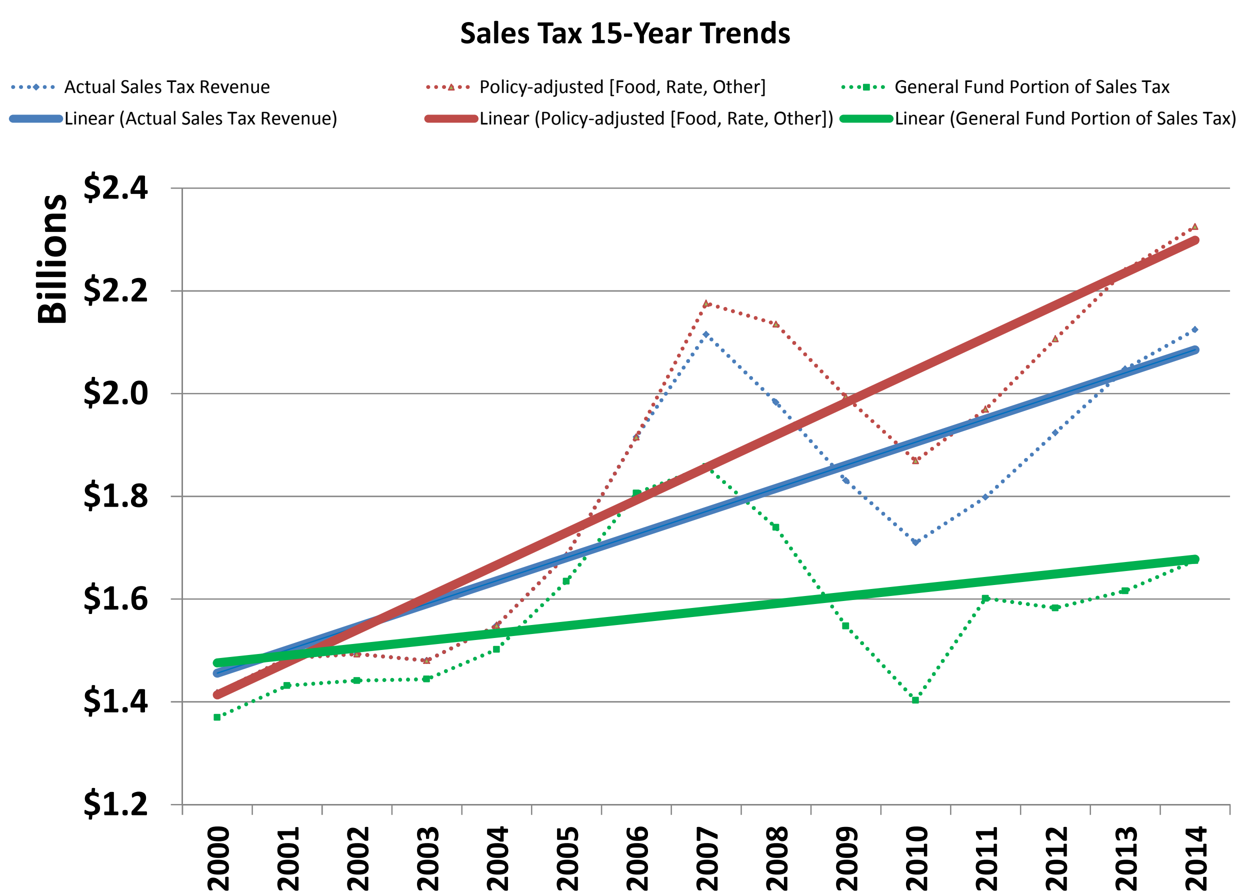
Policy actions by the Legislature can also impact revenue volatility. To truly understand and make sound decisions based on the volatility in the state's revenue sources, it is important to recognize and distinguish between the two causes of revenue volatility.

For example, during the recent Great Recession, a slowing economy significantly reduced state revenues. However, adding to the significant economic factors were intentional policy decisions by the Legislature during the boom years to reduce the state's revenues through income tax reforms, sales tax on food reductions, sales and use tax exemptions, and other tax changes. To get a complete picture of revenue volatility, policymakers should ensure that they consider and understand the impact of their policy decisions on revenue volatility, as well as the revenue impact from changes in the economy.

Similarly, the Legislature has made policy decisions over the past decade to significantly increase its use of sales and use tax earmarks. A volatility study that only examines the General Fund revenue will miss out on key insights related to the actual tax revenue source, which includes not only General Fund revenue, but also earmarked revenue. This practice of earmarking also has the effect of reducing year-end surplus transfers to the General Fund Budget Reserve Account. Unlike General Fund surplus revenues that are subject to transfer, these earmarked revenues bypass that budget reserve account transfer process.

Figure 11 illustrates this issue. The green line shows General Fund sales tax revenue collections, along with a linear trend. The blue line shows actual total sales tax revenues, including both amounts deposited into the General Fund and earmarked amounts. The red line shows tax-change-adjusted revenues. As the major disparity between the lines and associated linear trends illustrates, it is important to analyze and understand what causes volatility in the different revenue sources.

**FIGURE 11: Sales Tax Trends**



## TOOLS FOR MANAGING THE STATE BUDGET

In determining the appropriate size of budget reserve accounts, policymakers should consider all forms of budget “buffering”, not just the budget reserve accounts themselves. That is, the size of budget reserve accounts should be considered in context of other budget management tools. The following list briefly describes several tools used to manage the state budget, in particular during a revenue downturn:

- Structure of the revenue system itself. Policymakers control what is taxed and the rate at which it is taxed. To the extent the state’s revenue portfolio is deemed too volatile for budgeting purposes, one option available to policymakers is to change the state’s tax policy, including the relative weighting of each tax in the state’s revenue portfolio and the breadth of what is taxed under each tax. In addition to controlling taxes, policymakers control fees.
- Revenue estimating process. Revenue estimates take into account many different current economic factors that influence the state’s tax revenue collections. Four separate point revenue estimates are made for each fiscal year. A consensus estimating process tends to result in a more conservative revenue forecast.
- Revenue monitoring. Revenues are closely monitored on a regular basis, including through monthly reports from the Tax Commission and updated range forecasts between official point revenue estimates. This allows the necessary actions to be taken on a timely basis if revenues are not meeting projections.
- One-time solutions. Unallocated year-end surpluses, budget reserve accounts (“rainy day funds”), restricted fund balances, and nonlapsing balances are all potential sources of one-time funding in difficult fiscal circumstances. In addition, one-time options such as a change in the timing of expenditures (deferral) and revenues (acceleration) can provide one-time budget solutions.
- Capital budgeting. Budgeting for capital items such as roads and buildings is another budget management mechanism. The state often funds many capital items with cash. In an economic downturn, capital expenses can be postponed or the state can borrow to fund capital expenses.
- Budget stress testing. Another useful tool that should be explored further is budget stress testing, which examines how different aspects of the budget would respond going forward under different recession scenarios.
- Budget reprioritization. Although clearly a difficult process, economic downturns force reprioritization of state funding so that scarce taxpayer resources are targeted to the highest priority programs. If economic changes create a new long-term economic reality, careful consideration should be given to the point at which the state should adjust ongoing budgets to the new ongoing economic reality.

### Disaggregated Buffers

The state has a sizable number of budget buffers that are disaggregated. When aggregated, these buffers are significant. In addition to other types of management tools, below is a list of budget buffers that currently exist:

- General Fund Budget Reserve Account ($141 million). This is the most flexible of the budget reserve accounts, as General Fund revenues can be used for any legal purpose.
- Education Fund Budget Reserve Account ($290 million). Because individual and corporate income taxes deposited into this account are constitutionally earmarked for public and higher education, this budget reserve account is separately maintained for education funding purposes.
- Medicaid Growth Reduction and Budget Stabilization Account ($17 million). GOMB recommends that the Legislature consider changes to this account to automatically fund any year-end deficits in the Medicaid program, or to deposit these reserves into the General Fund Budget Reserve Account, which can be used to fund Medicaid shortfalls.
- Disaster Recovery Restricted Account ($20 million). Balances in this fund can be used to respond to emergency disaster services for a declared disaster.
- State Permanent Fund ($160 million). Although this fund has a very high vote threshold for use (three fourths of each house of the Legislature and consent of the Governor), this fund represents a potential funding source for extreme situations. Importantly, this permanent fund is expected to receive significant revenue increases over the coming years as a recent change to the Utah Constitution will require that certain severance tax revenue be deposited to the fund beginning in FY 2017. If this provision had been in place during FY 2016, an estimated $50 million would be deposited to the fund for that single year. Thus, to the extent that current severance tax trends continue, the balance in this fund is anticipated to grow significantly in coming years.
- Agency Nonlapsing Balances ($315 million at FY 2014 year-end). Agency nonlapsing balances constitute another budget buffer. Although the Legislature relied on some of these balances as funding sources for the FY 2015 budget, preliminary estimates indicated that nearly $315 million in nonlapsing balances were anticipated to be carried over from FY 2014 to FY 2015.
  (See LFA report at http://le.utah.gov/interim/2014/pdf/00004693.pdf)
- Restricted Account Balances. Although some restricted funds would not be available as funding sources during an economic downturn, some activities funded by the General Fund could be shifted to restricted account sources. See LFA report at http://le.utah.gov/interim/2014/pdf/00004683.pdf for a description of these restricted funds and their balances.

## RAINY DAY FUND RECOMMENDATION

In considering the appropriate level of reserves, policymakers face a delicate balance between maintaining sufficient reserves to appropriately manage an economic downturn and amassing scarce taxpayer resources when significant unmet needs exist. In other words, there is an opportunity cost of accumulating reserves.

GOMB believes that the current automatic year-end surplus transfer caps of 9% of Education Fund appropriations and 8% of General Fund appropriations are sufficient. Because these automatic transfer caps are percentage-based, the dollar amount of these automatic transfer caps increase over time as appropriations increase, meaning the budget reserve accounts will continue to grow over time as year-end surpluses occur.

It is unreasonable to expect the state to maintain reserves to cover any possible contingency. The main question is to what extent policymakers want to mitigate against contingencies and to what extent they are willing to reprioritize budgets during a recession to match available revenues. The Governor's Office of Management and Budget believes that existing rainy day fund levels are sufficient for managing revenue forecast error between legislative sessions, including special sessions that could be called to address fiscal issues. Beyond this forecast error level, in determining the appropriate size of budget reserve accounts, policymakers should contemplate to what degree they believe budget reductions are appropriate and to what degree government programs should be held harmless during economic downturns.

As previously mentioned, policymakers have many options for dealing with budget decisions during an economic downturn. There are those who argue that government should never reduce programs and should only provide ongoing revenues to a government programs if those are permanently sustainable. Others argue that recessions provide opportunity to truly reexamine priorities in a way which is difficult to do when tax revenues are increasing. Ultimately, these are important policy decisions for policymakers to grapple with, not minor technical decisions.