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Above-Trend Revenue Growth and Rainy Day Fund Deposit Rules

This research memo is in response to a request we received from the Office of the Legislative Fiscal Analyst (LFA) in late 2013 to review the practices used in other states to estimate above trend revenue growth. Our State Budget Policy research has examined state policies governing rainy day funds, with particular attention to mechanisms that connect rainy day fund deposits to revenue trends. Drawing from that research, this memo presents our analysis of four state approaches to managing revenue volatility with deposit mechanisms that consider growth for your consideration.

We present four state policies for your consideration, and have modeled three of these approaches using Census government finance data and Utah's current tax and fund structure to show how Utah's two major reserve fund balances would have performed had these types of deposit mechanisms been in place over the past 20 years. For each state practice we describe the deposit mechanism in each state's current law, apply the approach to Utah's tax revenue data from Census, and present a scenario of how Utah's fund balances would have grown under each scenario. We then provide an analysis of the strengths and weaknesses of each deposit mechanism as well as recommendations for how each policy could be improved.

VIRGINIA

Virginia's Revenue Stabilization Fund receives mandatory deposits when revenues are above trend, though state leaders can also make additional discretionary deposits to the fund. The fund was developed to account for recurring and nonrecurring revenues. Each year, Virginia makes mandatory deposits based on growth in certified General Fund tax revenues–which include corporate income, personal income, and sales taxes. The Commonwealth takes the difference between the annual percentage increase in the certified tax revenues for the most recently ended fiscal year and the average annual percentage increase in the certified tax revenues (collected in the previous six fiscal years). Then, 50 percent of the above average revenue is set aside. As a formula:

Deposit $\geq$ 0.5 x [(certified tax revenues) x (fiscal year's % increase - average increase over six years)]

In practice, if there was an average of 4 percent over the past 6 years, and revenues from those three taxes (CIT, PIT, and Sales) came in at 6 percent higher than the previous year, half of that difference (0.5 X 2% =1% of certified taxes) gets deposited into the fund. In addition, discretionary deposits may be made by appropriation at any time as long as they do not push the fund above its maximum size.

Virginia's Revenue Stabilization Fund was created through an amendment to the Virginia Constitution in 1992 after a study was conducted by Virginia's Joint Legislative Audit and Review Commission (JLARC). The study findings were presented to the Subcommittee on the

Executive Budget Process.[i] The Revenue Stabilization Fund is "intended to offer a financial cushion in the event of an unexpected downturn in the economy."[ii]

The intent of the formula was to allow for the maximum fund size to grow over the years to keep pace with inflation and the state's economic growth. It is based on the subcommittee's belief that "it is fiscally prudent for the state to promote the accumulation of a revenue reserve during times of above-average growth in the tax base and revenue collections, since such growth is unsustainable over the long term"[iii] By depositing a fifty percent portion of above-average revenue growth into the fund, the intention was to avoid extraordinary increases in state revenues becoming an automatic part of the state's expenditure base; therefore, preventing the state from becoming overly dependent on revenue growth that is one-time, unexpected, and/or unsustainable over the long term.

STRENGTHS

- The six-year moving average approach provides a reasonable proxy for revenue volatility over the course of an economic cycle.
- The deposits are a mandatory part of Virginia's budgetary process.
- Historically, Virginia has had a well-funded rainy day fund compared to other states. Prior to the recession, in 2006, Virginia had $2.4 billion in reserve funds, which alone would have funded their operations for 58.5 days. The 50-state median at that same time was 43.1 days.

WEAKNESSES

- The policy is structured with a 2-year time lag which means that in some years with strong revenue growth, deposits are not made. Conversely, as revenue growth begins to slow, deposits continue. In FY 2005 and FY 2006 annual revenue growth exceeded 10 percent, but the Virginia policy does not generate a required deposit in those years. In FY 2008 and FY 2009, as revenue slows and the declines, deposits are required.
- Recent history shows that a period of significant revenue decline, such as FY 2009 and FY 2010, can lead to large deposits as revenue recovers.
- The six-year moving average could yield unusual results during atypical business cycles.

POTENTIAL POLICY IMPROVEMENTS

- The timing of the deposits can be adjusted by using estimated instead of actual data to determine the amount of the rainy day fund deposit. For example, a regular deposit could be budgeted based on comparing estimated revenue growth for the current year to the six-year trend. The difference in growth rates could then be applied to actual revenue from the prior year.
- Among the policies analyzed, the Virginia policy generated the largest rainy day fund deposits. To address the size of deposits, a maximum annual deposit threshold could be included in the policy.
- The number of years included in the moving average could be assessed based on Utah's own historical experience and periodically re-examined and adjusted.

To consider: is a six-year moving average the appropriate number years for Utah? Virginia allocates 50 percent of the above trend-line determination to the state's rainy day fund, if Utah policymakers are interested in establishing a rainy day fund deposit rule, what percentage of above-trend growth would be appropriate?

Figure 1. Virginia Model Growth Trend Calculation
Based on Utah General Fund Revenues

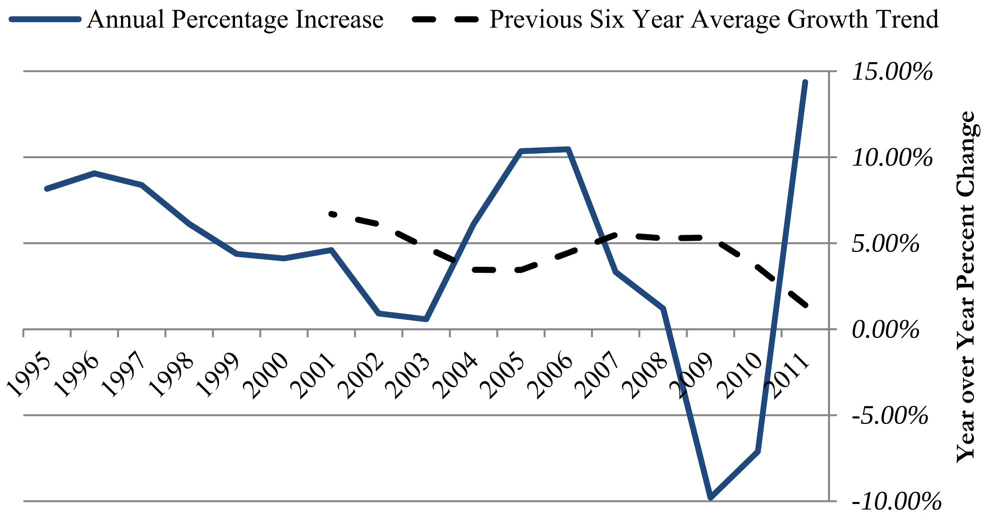
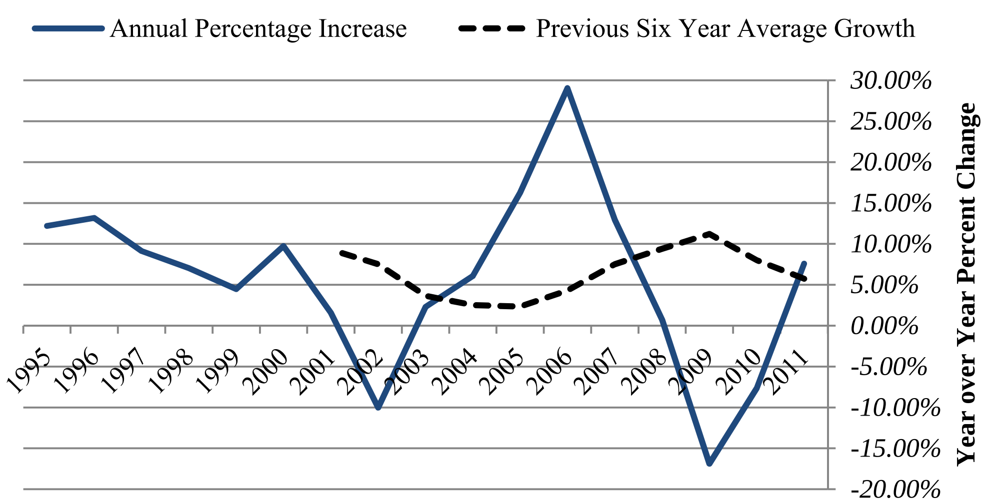


Figure 2. Virginia Model Growth Trend Calculation
Based on Utah Education Fund Revenues



IDAHO

In Idaho, at the end of each fiscal year the state deposits funds from the general fund to their Budget Stabilization Fund if the state controller certifies that the receipts to the general fund exceed receipts from the previous fiscal year by more than 4 percent. If so, the controller transfers all general fund collections *in excess* of 4 percent *up to a maximum* of 1 percent of general fund collections.[iv]

STRENGTHS

- This rule is fairly simple to understand and explain.
- In recent years, Idaho has had a well-funded rainy day fund compared to other states. Prior to the recession in 2006, Idaho had $411 million in reserve funds, which alone would have funded their operations for 67.6 days. The 50-state median at that same time was 43.1 days.

WEAKNESSES

- This rule arbitrarily limits the deposit amount to one percent of revenue per year, even in years of unusually high growth. For example, a year with ten percent growth results in the same deposit (on a percentage basis), as a year with five percent growth.
- There is no empirical rationale for the four percent growth threshold or the one-percent annual cap on deposits, nor is there a mechanism in the law for re-visiting those parameters periodically.

POTENTIAL POLICY IMPROVEMENTS

- If the threshold growth rate was calculated based on historical trends and revisited on regular basis, this approach would better connect rainy day fund deposits to volatility.

To consider: what methodology should Utah use to develop a threshold growth rate that triggers a rainy day fund deposit? Should that growth rate be revisited and revised over time? Idaho allocates one percent of revenue to its rainy day fund when revenue growth exceeds four percent—what percentage of revenue would be appropriate in Utah?

Figure 3. Idaho Model Growth Trend Calculation
Based on Utah General Fund Revenues

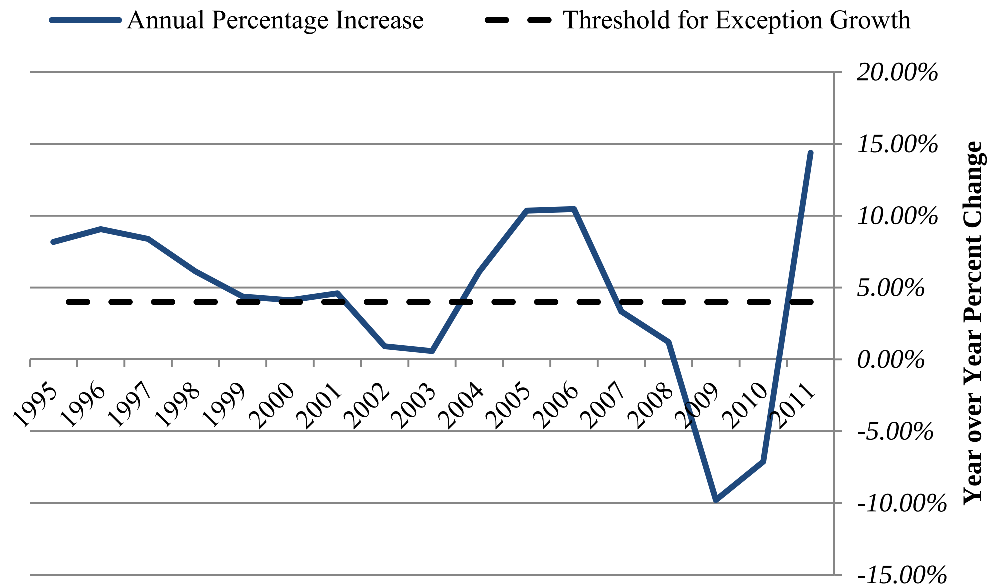
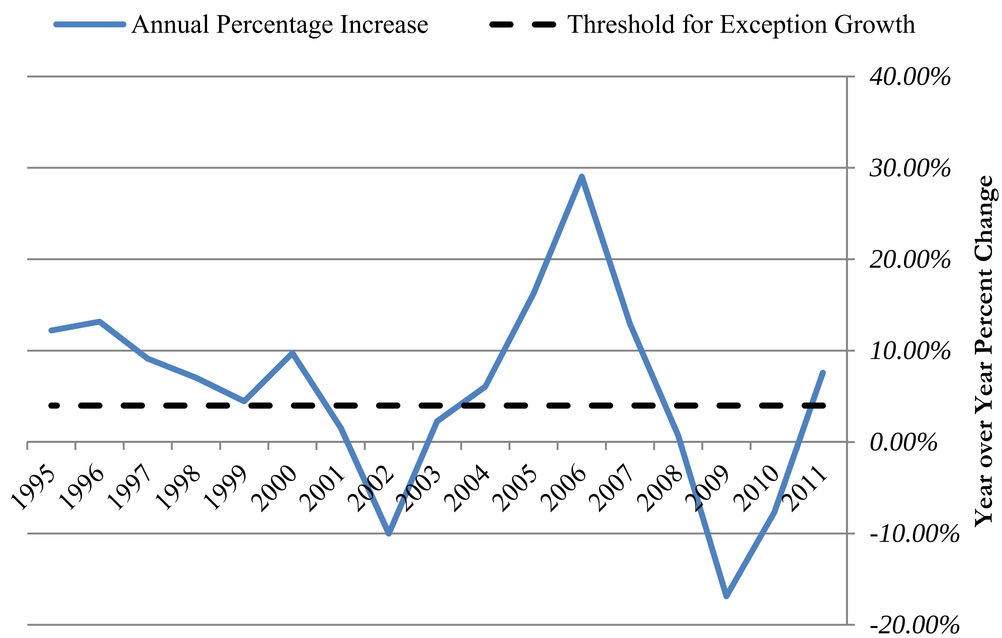


Figure 4. Idaho Model Growth Trend Calculation
Based on Utah Education Fund Revenues



TENNESSEE

In Tennessee the governor includes the amount to be allocated to the state's Reserve for Revenue Fluctuations, the state's rainy day fund, in the annual budget document and general appropriations bill. The deposit is equal to 10 percent of the estimated growth in the state tax revenue allocated to the general fund and the education trust fund. This process continues yearly until the amount in reserves reaches 5 percent of the state tax revenue allocated.

STRENGTHS

- There is no timing lag between the estimated amount of the deposit and the transfer of funds.
- Prior to the recession in 2007, Tennessee had $1.6 billion in reserve funds, which alone would have funded their operations for 57.9 days. The 50-state median at that same time was 43.3 days.

WEAKNESSES

- The Tennessee rule requires a rainy day fund deposit in any year that there is revenue growth, even periods of slow growth.
- Conversely, in years of rapid growth, the state takes a relatively small share off the table compared to other rules—in a year where revenues grow by 10 percent, for example, only 1 percent of revenues are transferred and the other 9 percent can be used for recurring purposes.
- In effect, the threshold for "exceptional" growth is zero, where any revenue growth at all is considered above-trend.

POTENTIAL POLICY IMPROVEMENTS

- Conduct an analysis to determine the appropriate percentage of revenue growth to set aside each year.
- Establish a threshold growth rate required for deposits to occur, so that deposits are not required in periods of slow revenue growth.

To consider: Tennessee allocates 10 percent of annual growth to its rainy day fund. Is 10 percent the appropriate percentage in Utah? Is there a threshold revenue growth that would trigger a rainy day fund deposit (not part of Tennessee law)?

Figure 5. Tennessee Model Growth Trend Calculation

Based on Utah General Fund Revenues

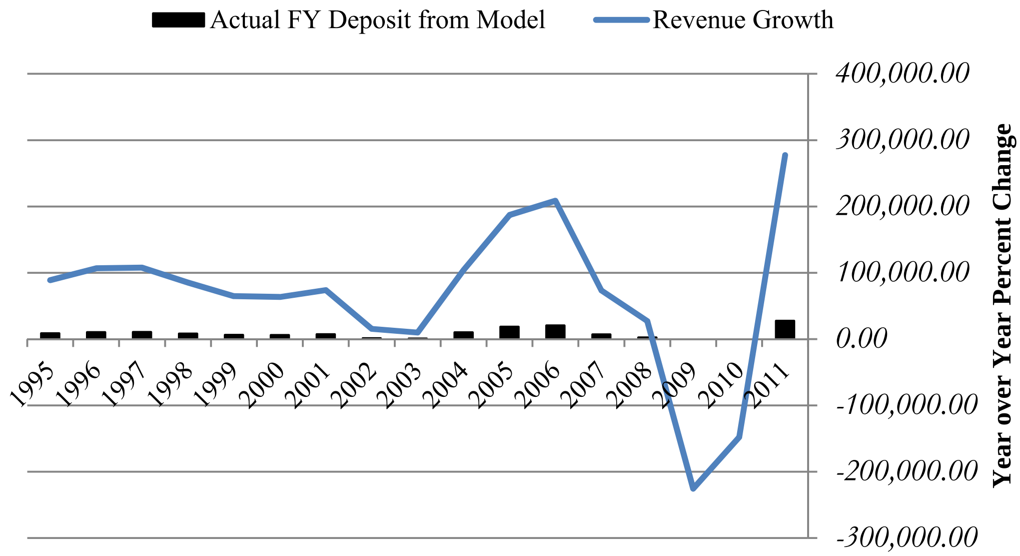
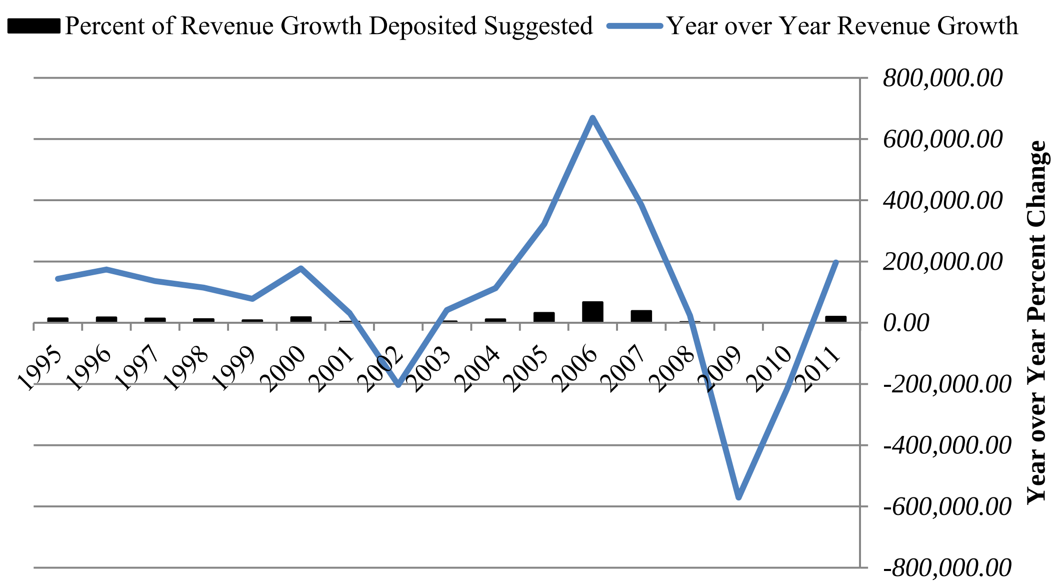


Figure 6. Tennessee Model Growth Trend Calculation

Based on Utah Education Fund Revenues



MASSACHUSETTS

Massachusetts's Commonwealth Stabilization Fund has three main sources of fund deposits: 1) any amounts left as net surplus in budgeted funds at end of fiscal year, 2) inflows from deposits of judgments and settlements in excess of $10 million, and 3) unusually high capital gains tax collections. The two latter components were added in 2010. While the state has a long history of supporting their rainy day fund, these new provisions helped rebuild balances quickly after the downturn. [v]

The rule for depositing capital gains tax revenues may be of particular interest for Utah policymakers interested in identifying above trend revenue growth. Unlike the three states outlined above, Massachusetts specifically examines revenues that they have found to be drivers of fluctuations from year to year. After the executive branch studied past volatility in these tax revenues and found them highly cyclical, the state legislature passed a limit on the use of capital gains taxes above $1 billion in the budget. Anything above this limit is direct to the budget stabilization fund, with a portion passed on to the state retiree benefits trust fund. This determination is made as part of the consensus revenue estimates at the start of the budget year. From year to year, the $1 billion threshold is revised slightly based on growth in the U.S. gross domestic product.

Our general assessment of this approach is that, for states in which capital gains revenue is a significant and volatile contributor to overall revenue collections, this can be an effective deposit rule. This approach can be applied to other volatile revenue sources, such as corporate income tax or severance taxes. A state-specific analysis of the volatility of these sources would be necessary to set the ideal parameters for this policy.

STRENGTHS

- The choice to set aside capital gains tax and legal settlement revenues was based on an analysis of historical state volatility.
- Deposits are committed to early in the budget process, ensuring that saving is a top priority.
- The threshold for defining above average growth in capital gains tax revenues evolves over time.
- Since being implemented, these policies helped the state bring their rainy day fund balance up to the third highest of any state—in absolute terms—by 2012. The policy was also lauded by credit rating agencies.

WEAKNESSES

- A policy like this may not be a viable option for all states if the tax code does not differentiate between capital gains and other types of income or if they do not have a capital gains tax—or another similarly volatile tax.
- Large swings in other revenue streams, to the extent that they occur, would not be addressed directly under this policy. Large end of year surpluses are set aside, which makes this problem somewhat less acute.

POTENTIAL POLICY IMPROVEMENTS

- Recurring, legislated volatility studies—like the reports prepared in Utah—would track whether the capital gains tax is still a primary source of volatility and identify important trends in other revenue sources.
- Because state economic trends can vary from national ones, using a measure of the state economy may be more appropriate for determining growth in the $1 billion limit than U.S. GDP.

To consider: which individual revenue sources are the most volatile, and what is an appropriate threshold above which collections from that source would be deposited in the rainy day fund?

Due to data limitations, we were not able to model the Massachusetts policy for Utah. We could model this approach if provided with historical actual revenue data from capital gains, if available. Should there be interest, we can provide scenarios to inform Utah policy design around what a deposit mechanism pinned to a specific volatile tax source could look like, such as the personal income tax or various severance taxes.

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[i] Report of the Joint Legislative Audit and Revenue Commission on Proposal for a Revenue Stabilization Fund in Virginia, Senate Document No. 24, 1991. http://jlarc.virginia.gov/reports/Rpt127.pdf

[ii] Virginia Division of Legislative Services: DLS Report, Virginia's Revenue Stabilization Fund. Number 1 – July 1999. http://dls.virginia.gov/pubs/report/report1.htm

[iii] Ibid

[iv] Idaho Code § 57-814. http://legislature.idaho.gov/idstat/Title57/T57CH8SECT57-814.htm

[v] Mass. Gen. Laws ch. 29, § 5C and § 5G (2013)