

## Advisory Council Notes On "Rainy Day" Funds

April 22, 2008

The appropriate level for a rainy day fund depends on a variety of factors. Some, such as the volatility of revenue collections, are factors that must be estimated. Others are policy issues. The decisions on policy issues will affect the desired level of the reserve fund.

Various policy issues that have been identified include:

- The level of replacement. Should the fund allow for all planned spending, no growth in spending from the prior biennium, or some specific level of reduction?
- The probability of sufficient funds. Should the fund be based on the worst case or should it be based on some probability distribution of shortfalls, e.g., be set at a level that would cover 75% of recessions?
- Usage of fund. How much of the fund can be used in any year? What are the triggers for using the fund? (Education Stability Fund uses declining employment or revenue 2% below forecast or emergency, plus 3/5 vote).
- Source of revenue. How should the fund be built up, and how should it be replenished after use?

We have collected some information related to the first two policy issues and the trade-offs between size of fund, probability of it being sufficient for any given recession, and the savings rate needed on average to generate these levels of reserve funds. Various sources provide either recommendations or analysis which can be useful in determining what is appropriate for Oregon. Most of the recommendations are determined as a percentage of the government's annual general fund revenue.

The Government Finance Officer Association has taken a position on reserve funds. The following is included in their *Appropriate Level of Unreserved Fund Balance in the General Fund (2002)*

"GFOA recommends, at a minimum, that general-purpose governments, regardless of size, maintain unreserved fund balance in their general fund of no less than five to 15 percent of regular general fund operating revenues, or of no less than one to two months of regular general fund operating expenditures. A government's particular situation may require levels of unreserved fund balance in the general fund significantly in excess of these recommended minimum levels."

In particular, they mention the predictability of revenues and the volatility of expenditures as factors that should be considered when determining adequate reserve fund levels. However, they do not provide recommendations for a timetable to reach the reserve level or to replenish it after use.

In establishing the appropriate level of the reserve fund, we need to consider the shortfalls in times of an economic downturn. Regarding Oregon's specific situation, in a February 29, 2008 memo to Tim Nesbitt, State Economist Tom Potiowsky reports:

"In terms of General Fund revenues, the 2001 recession manifested in a 20.7 percent shortfall in structural revenues relative to the 2001 Close of Session forecast. Excluding interim actions to bolster available resources, actual revenues were \$2.3 billion below the forecast used to produce the 2001-03 budget...structural revenues in 2001-03 were 13.3 percent below 1999-01 levels"

"Structural revenues" refer to revenues that would have been generated without changes in taxes or other revenue sources. This implies that a reserve fund of about 13% would have allowed the State to spend the same amount as the previous biennium while it would have needed a reserve fund of over 20% to address the shortfall relative to budget. The distinction between the shortfall relative to forecast and the shortfall relative to the revenue collected in the previous biennium is important for several reasons. Typically, recessions are not anticipated before the budget is developed. This means that actual budget changes must be made relative to the budgeted amount. On the other hand, recessions may cross budget cycles, so the adjustment may not be all in one budget.

A recent article in the *National Tax Journal* (Vol. LX, No. 4, December 2007: 727-742), "Revenue Cycles and the Distribution of Shortfalls in U.S. States: Implications for an 'Optimal' Rainy Day Fund," provides estimates by state for the size of rainy day funds and the appropriate saving rate. The article provided the following figures for Oregon:

	Average Recession	90% Of All Recessions	Savings Amount 2009-2011
Reserve fund amount needed to maintain constant revenue (no increase in revenue from previous budget year)	5.1% to 6.2%	12.8% to 15.8%	
Saving rate to generate a 50% probability that the reserve fund would be this large	1.5% to 1.8%		\$236,000,000 to \$283,000,000
Saving rate to generate a 75% probability that the reserve fund would be this large	1.9% to 2.3%		\$298,000,000 to \$361,000,000
Reserve fund amount need to maintain average growth in spending	9.3% to 11.7%	23.3% to 29%	
Saving rate to generate a 50% probability that the reserve fund would be this large	2.8% to 3.6%		\$440,000,000 to \$565,000,000
Saving rate to generate a 75% probability that the reserve fund would be this large	3.4% to 4.3%		\$534,000,000 to \$675,000,000

The savings rates mentioned are average savings rates during periods of expansion that would generate enough money for the reserve fund to be the indicated size at the start of a recession. Hence the 1.5% to 1.8% rate would be expected to generate a fund equal to 5.1% to 6.2% of annual state general fund revenue for the beginning of 50% of recessions. The savings amounts for 2009-2011 are based on the percentages in the "average recession" column applied to the March 2008 forecast of \$15.7 billion for the total general fund revenue for the biennium. Note that the reserve fund amounts are percentages of annual budgets while the savings amount refers to the biennial revenue forecast. Also, the revenue allocated to the Educational Stability Fund may be considered as part of the required savings amounts.

Referring back to Tom Potiowsky's numbers, the constant revenue fund would be expected to cover the 13.3% reduction in actual revenue, while the "maintain average growth" fund would more equate to the 20.7% reduction relative to the forecast. It appears that this article may underestimate the volatility of revenue in Oregon since the amounts listed under "90% of recessions" would not have been sufficient for the revenue shortfalls in 2001-2003.

There are many other sources with other recommendations regarding the appropriate size of the reserve fund, but this is the only information found on savings rates to reach these levels of reserves. This also focuses on saving a specific percentage of each budget while some may prefer to increase the level of savings when revenue growth is large relative to the level of savings when revenue growth is lower.

Other issues to be considered include the source of replenishment funds. A variety of possibilities were discussed. Among them were:

- The current method of allocating one-percent of the biennial general fund if the ending balance is sufficient.
- Use corporate income tax kicker amounts
- Use personal income tax kicker amounts
- Share of capital gains revenue
- State interest earnings not otherwise earmarked
- Corporate minimum

According to the numbers presented above, the one percent allocation would be insufficient to generate an adequate reserve fund on its own. However, it should be considered in combination with the Education Stability Fund. Use of kicker revenue has the advantage of setting aside more money when revenue growth is unexpectedly large, but it may not be adequate to achieve the desired levels.

Policy decisions also need to be made as to how the funds will be used, and whether the current triggering mechanisms are appropriate. For example, should the Educational Stability Fund be used before the Rainy Day Fund since it has a stable source of replacement revenue? Is the limitation of using no more than 2/3 of the Rainy Day Fund in any biennium appropriate?