

## Treasury Cash Account Interest Earnings (17-6-202)

### 1. Model Characteristics

- There are three entities that contribute interest earnings to the treasury cash account (TCA).
  - Interest accrues from balances held in cash, the short-term investment pool (STIP), and in medium-term bonds (maximum maturity of three years).
- Estimates for the quarterly TCA balance are determined by summing together the predicted balances of the above-mentioned investment categories.
- Quarterly rates of return are estimated for each of the three components of the TCA.
  - STIP rates of return are forecasted using a simple linear regression with the federal funds rate as the independent variable, and the predictions are adjusted for model error.
  - The cash rate of return is projected to rise alongside the STIP rate.
  - The rate of return on medium-term bonds is estimated using a simple linear regression with the average rate of return on treasury notes as the independent variable.
- Predicted rates of return are applied to predicted balances for the individual components of the TCA to determine income from each source. Total TCA income is equal to the sum of the income from each investment entity.
- Administrative expenses are subtracted from total TCA income to determine distributable TCA revenue.

### 2. Model Data

- Data for the TCA interest earnings model is obtained primarily from the Montana Board of Investments and IHS Economics.

### 3. Key Variables

- Cash balance, STIP balance, and medium-term bond balance.
- Cash interest rate, STIP interest rate, and medium-term bond interest rate.

### 4. Other Important Points

- STIP and cash rates of return are tied to the federal funds rate and so are subject to federal monetary policy. It is expected that the Federal Reserve is going to raise short-term interest rates sometime in the latter half of CY 2015. If so, the STIP and cash rates of return will begin to rise.
- Interest income from bond holdings will take longer to recover from the economic slowdown than interest earnings from STIP and cash holdings.