TREASURY CASH ACCOUNT INCOME

Revenue Description

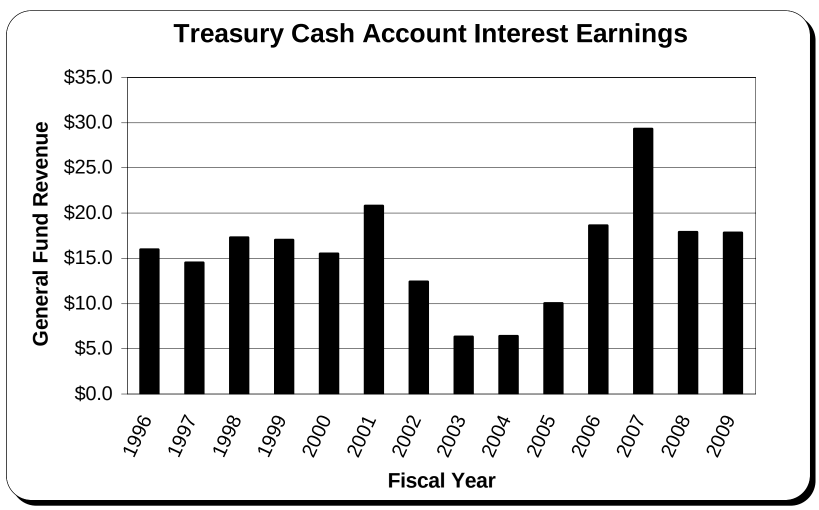
The treasury cash account (TCA) contains general fund cash balances and cash balances from several other funds whose interest earnings are deposited into the general fund. The Board of Investments invests TCA balances and the interest earned is paid into the general fund (17-6-202, MCA). In some years, the state borrows money to maintain a positive balance in the general fund by issuing tax or revenue anticipation notes (TRANS). TRANS are short-term bonds that are repaid in the same fiscal year that they are issued (17-1-201, MCA). Issuing TRANS increases the average balance in the TCA and, therefore, increases the interest earned on the account. However, the state pays interest on the TRANS.

Historical and Projected Revenue

Table 1 shows actual treasury account interest earnings for FY 1996 through FY 2006 and forecast earnings for FY 2007 through FY 2009.

Table 1
Treasury Cash Account Interest Earnings
($ millions)

Fiscal Year	General Fund	Percent Change
A 1996	$15.997	(3.55%)
A 1997	$14.500	(9.36%)
A 1998	$17.277	19.15%
A 1999	$17.041	(1.36%)
A 2000	$15.518	(8.94%)
A 2001	$20.772	33.86%
A 2002	$12.414	(40.23%)
A 2003	$6.366	(48.72%)
A 2004	$6.393	0.42%
A 2005	$10.047	57.15%
A 2006	$18.631	85.45%
F 2007	**$29.292**	**57.22%**
F 2008	**$17.914**	**(38.85%)**
F 2009	**$17.857**	**(0.31%)**



In FY 2003 and FY 2004, short-term interest rates were very low and TCA interest earnings decreased to less than $6.4 million per year. Interest earnings increased to $10.047 million in FY 2005 and $18.631 million in FY 2006 due to increased balances and higher short-term interest rates. TCA interest earnings are forecast to increase to $29.292 million in FY 2007 due to a larger average invested balance. Interest earnings are forecast to decrease to $17.914 million in FY 2008 and to $17.857 million in FY 2009 as the average invested balance decreases.

Forecast Methodology and Projection Calculation

There are three steps to forecast TCA interest earnings. The first step is to project the average annual account balance. The second step is to project the average annual rate of return. The third step is to multiply the average annual balance by the average annual rate of return.

Treasury Cash Account Annual Balance

The balance in the TCA changes over the course of a fiscal year. There are two reasons for this. One is that revenues and expenditures are not equal in most months. General fund expenditures tend to be greater than revenues early in the fiscal year, and less than revenues later in the fiscal year. This causes the TCA balance to fall during the first part of the fiscal year and recover in the last part of the fiscal year. However, not all receipts and expenditures follow regular annual patterns, and the pattern of monthly TCA balances varies from year to year.

The other reason for changes in the balance during a fiscal year is that in some years the state issues TRANS. These are short-term bonds that the state issues and repays during the same fiscal year. They are issued to ensure that the general fund cash balance is positive. When TRANS are issued, the TCA balance increases by the amount of the TRANS issued. The balance decreases by the same amount when they are repaid at the end of the fiscal year.

Table 2 shows average TCA balance since FY 2001. The long-run average fund balance in the TCA through FY 2004 was about $300 million. In FY 2005 the average balance increased to $391 million and in FY 2006 the average balance increased to $514 million. The large increases were primarily caused by large increases in the general fund balance.

Table 2
Treasury Cash Account
Average Balances
($ millions)

Fiscal Year	Average Balance	Change in Fund Balance
A 2001	$334.705	
A 2002	$229.520	($105.186)
A 2003	$260.417	$30.898
A 2004	$299.890	$39.472
A 2005	$390.731	$90.841
A 2006	$514.096	$123.365

Table 3 shows the average TCA balance, the general fund year end balance, and the difference between the balances. The average TCA balance was projected for FY 2007 through FY 2009 using the executive budget recommendations for cash disbursements and ending general fund balance. The general fund ending balance is expected to be $530 million in FY 2007, $270 million in FY 2008, and $269 million in FY 2009.

Table 3
General Fund Balance
and Average TCA Balance
($ millions)

Fiscal Year	Average TCA Balance	Year End General Fund Balance	Difference
A 2004	$299.890	$132.873	$167.017
A 2005	$390.731	$289.675	$101.056
A 2006	$514.096	$406.000	$108.096
F 2007	**$634.576**	**$530.000**	$104.576
F 2008	**$374.576**	**$270.000**	$104.576
F 2009	**$373.576**	**$269.000**	$104.576

The TCA average fund balance is projected by calculating the difference between the general fund balance and the TCA balance for FY 2005 through FY 2006. The average difference of $105 million is then added to the executive budget recommendations for FY 2007 through FY 2009. The average TCA balance is projected to be $635 million in FY 2007, $375 million in FY 2008, and $374 million in FY 2009.

TCA balances are invested in overnight repurchase agreements, the short-term investment pool (STIP), and long-term bonds. Table 4 shows actual and projected invested balances by investment type from FY 2001 through FY 2009.

Table 4
Treasury Cash Account
Average Balance by Investment Type
($ millions)

Fiscal Year	Cash Balance	% Total	STIP Balance	% Total	Long-Term Bond Balance	% Total	Average Balance
A 2001	$18.589	6%	$221.950	66%	$94.166	28%	$334.705
A 2002	$18.510	8%	$175.762	77%	$35.248	15%	$229.520
A 2003	$116.372	45%	$88.357	34%	$55.688	21%	$260.417
A 2004	$68.904	23%	$105.868	35%	$125.118	42%	$299.890
A 2005	$20.116	5%	$164.966	42%	$205.649	53%	$390.731
A 2006	$20.178	4%	$246.311	48%	$247.607	48%	$514.096
F 2007	**$20.178**	**3%**	**$312.939**	**49%**	**$301.459**	**48%**	**$634.576**
F 2008	**$20.178**	**5%**	**$176.453**	**47%**	**$177.944**	**48%**	**$374.576**
F 2009	**$20.178**	**5%**	**$175.928**	**47%**	**$177.469**	**48%**	**$373.576**

The cash balances that are invested in overnight repurchase agreements are forecast to average $20.178 million in FY 2007 through FY 2009. This forecast is the average cash balance in FY 2006. Average cash balances are expected to remain steady because cash does not generally fluctuate with the average fund balance.

The STIP balance is forecast to be average fund balance minus long-term bond balance minus cash balance. This is because any balance remaining after the fund balance is invested in long-term bonds and adequate cash reserves are maintained and invested in STIP. The portion of the TCA balance invested in STIP is projected to be 49% of income in FY 2007 and 47% of income in FY 2008 and FY 2009.

The long-term bond balance is forecast to be 48% of the average fund balance, which is the average percentage of fund balance invested in long-term bonds from FY 2004 through FY 2006.

Treasury Cash Account Rate of Return

The interest rate on cash invested in overnight repurchase agreements is generally the federal funds target rate. Global Insight forecasts the federal funds rate which is used as the cash investment interest rate. The interest rate is projected to increase in FY 2007 to 5.17% and then decrease to around 4.5% in FY 2008 and FY 2009.

The forecast of annual interest rates for STIP is explained in the *Interest Rate Introduction*. The STIP rate is projected to increase in FY 2007 to 5.19% and decrease to about 4.9% in FY 2008 and FY 2009.

Long-term bond interest rate is forecast to be 4.00% in FY 2007, and 4.75% in FY 2008 and FY 2009. The forecast of bond interest rates as based on the average bond coupon rate and discussions with the Board of Investments. The lower yield in FY 2007 is due to expected capital losses from selling securities.

Treasury Cash Account Interest Earnings

Table 5 shows treasury cash account investment income and interest rates for each investment type from FY 2001 through FY 2009. The interest income for each investment type is projected by multiplying the average balance by the rate of return for FY 2007 through FY 2009. Total TCA investment income is determined by adding the income from the three investment types together.

Table 5
Treasury Cash Account
Income and Interest Rate by Investment Type
($ millions)

Fiscal Year	Cash Investment Income	Interest Rate	STIP Income	Interest Rate	Long-Term Bond Income	Interest Rate	Total Income	Total Rate of Return
A 2001	$0.959	5.16%	$13.430	6.05%	$6.410	6.81%	$20.800	6.21%
A 2002	$0.377	2.04%	$5.766	3.28%	$6.298	17.87%	$12.441	5.42%
A 2003	$1.802	1.55%	$1.490	1.69%	$3.132	5.62%	$6.424	2.47%
A 2004	$1.046	1.52%	$0.993	0.94%	$4.408	3.52%	$6.447	2.15%
A 2005	$0.496	2.46%	$3.809	2.31%	$5.794	2.82%	$10.098	2.58%
A 2006	$0.881	4.37%	$10.518	4.27%	$7.293	2.95%	$18.692	3.64%
F 2007	**$1.043**	**5.17%**	**$16.251**	**5.19%**	**$12.058**	**4.00%**	**$29.353**	**4.63%**
F 2008	**$0.915**	**4.54%**	**$8.606**	**4.88%**	**$8.452**	**4.75%**	**$17.974**	**4.80%**
F 2009	**$0.921**	**4.56%**	**$8.567**	**4.87%**	**$8.430**	**4.75%**	**$17.918**	**4.80%**

Total TCA income decreased substantially from FY 2001 to FY 2004 due to interest rate declines and a decline in the average balance invested. Interest rate increases and average balance increases in FY 2005 and FY 2006 caused income to grow to $10 million and $18 million, respectively. The STIP rate and the cash investment interest rates are projected to increase in FY 2007 and fall slightly in FY 2008. The long-term bond rate is also projected to increase, resulting in substantial increases in investment income. In FY 2009 total investment income is projected to decrease due to the decreased average balance.

Net interest earnings equal total income less administrative costs. Administrative costs are projected to continue at the FY 2006 level of $0.061 million in FY 2007 through FY 2009. Table 6 shows total investment income, administrative costs, and net interest earnings from FY 2001 through FY 2009.

Table 6
Treasury Cash Account
Interest Earnings
($ millions)

Fiscal Year	Total Investment Income		Admin Costs		Net Interest Earnings	Percent Change
A 2001	$20.800	+	($0.028)	=	$20.772	
A 2002	$12.441	+	($0.026)	=	$12.414	(40%)
A 2003	$6.424	+	($0.057)	=	$6.366	(49%)
A 2004	$6.447	+	($0.054)	=	$6.393	0%
A 2005	$10.098	+	($0.052)	=	$10.047	57%
F 2006	$18.692	+	($0.061)	=	$18.631	85%
F 2007	**$29.353**	**+**	**($0.061)**	**=**	**$29.292**	**57%**
F 2008	**$17.974**	**+**	**($0.061)**	**=**	**$17.914**	**(39%)**
F 2009	**$17.918**	**+**	**($0.061)**	**=**	**$17.857**	**(0%)**

HJR 2 Variables

Table 7 shows the TCA average fund balance, rate of return, and interest earnings from FY 2001 through FY 2009. TCA interest earnings are forecast to be $29.292 million in FY 2007, 17.914 million in FY 2008, and $17.857 million in FY 2009.

Table 7
TCA Balance and Rate
($ millions)

Fiscal Year	Fund Balance		Fund Rate		Interest Earnings
A 2001	$334.705	X	6.21%	=	$20.772
A 2002	$229.520	X	5.41%	=	$12.414
A 2003	$260.417	X	2.44%	=	$6.366
A 2004	$299.890	X	2.13%	=	$6.393
A 2005	$390.731	X	2.57%	=	$10.047
A 2006	$514.096	X	3.62%	=	$18.631
F 2007	**$634.576**	**X**	**4.62%**	**=**	**$29.292**
F 2008	**$374.576**	**X**	**4.78%**	**=**	**$17.914**
F 2009	**$373.576**	**X**	**4.78%**	**=**	**$17.857**

Data Sources

TCA balances and earnings are from SABHRS and the Board of Investments. STIP rates are from the Board of Investments. The federal funds rate is obtained from the Federal Reserve website: http://www.federalreserve.gov/releases/h15/data.htm.