Calculating Financing Account Interest

OMB Annual Credit Training
June 28, 2012

What We'll Cover

- Why does a financing account earn and pay interest?

- How do we calculate financing account interest and when do we report it?

- Example calculations using the CSC2

For more information: Circular A-11 Sec. 185.32-185.37, CSC2 User Guide, Treasury Financial Manual

- Under FCRA, we budget for the lifetime present value cost of credit programs is recognized up front, when the costs are incurred. However, transactions with the public are not discounted.

- The financing account earns interest on cash balances and pays interest on debt as a means to "true up" the present value subsidy cost with the obligations of the financing account with the public.
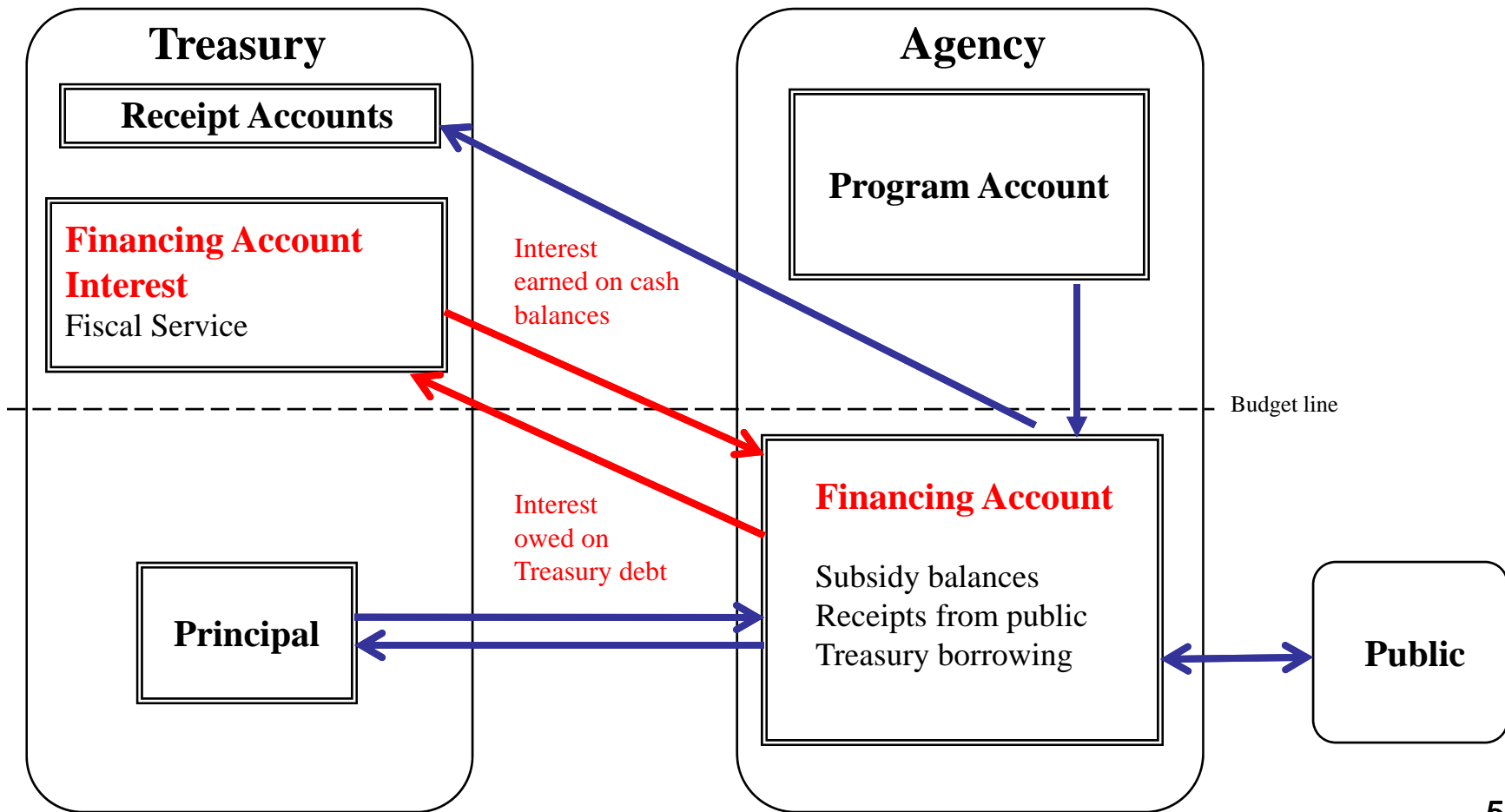
FCRA Subsidy Calculation

Assumptions:					
Principal…………………………………	$1,000				
Borrower's interest rate……………	7.0%				
Loan term (years)………………	5				
Default year………………………	5				
Discount rate………………………	7.0%				
	Year 1	Year 2	Year 3	Year 4	Year 5
Direct loan:					
Loan disbursement………………	$1,000				0
Principal and interest payment…………	-244	-244	-244	-244	0
	756	-244	-244	-244	0
Loan guarantee:					
Default claim payment………………	0	0	0	0	244
Net present value of cash flows:					
Direct loan…………………………	174				
Loan guarantee……………………	174				

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Credit Reform Transactions

Treasury

Receipt Accounts

Financing Account Interest
Fiscal Service

Principal

Agency

Program Account

Financing Account

Subsidy balances
Receipts from public
Treasury borrowing

Public

Interest earned on cash balances

Interest owed on Treasury debt

Budget line

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FAI Calculation and Reporting

- Agencies calculate financing account interest costs and earnings at **year-end**.

- Agencies must use the **CSC2** to calculate financing account interest earned and owed for the latest completed fiscal year.

  - **Interest earned**: Interest earned on cash balances held as uninvested funds with Treasury

  - **Interest owed:** Interest owed on debt held by Treasury.

- Calculations are required to be submitted to Treasury Fiscal Service.

- Financing accounts must earn and pay interest at the same rate used to discount the credit subsidy cash flows for each cohort. This is the **"cohort interest rate."**
    - FY 1992-2000: DWADR (disbursement-weighted average discount rate)
    - FY 2001 onwards: SER (single effective rate)
- Each cohort has a "budget assumption" rate using the budget yield curve prior to substantial disbursement, and a final rate set at the first technical reestimate after the interest rate reestimate.

- CSC2 calculates FAI through a **compound interest calculation**. The PV factor to calculate compound interest is $(1 + rate)^{time}$.

- The calculation uses the cohort interest rate. Assume our cohort has a SER of 3.60%.

- The compound interest rate for one half year would be $(1.036)^{0.5}$ = 1.01784 = 1.784%. For the effective rate, do not add 1.

- For a $500,000 middle of the year repayment of debt, where the cash was held in the financing account, both the interest earnings and the interest expense would be $500,000 * 0.01784 = $8,920.

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FAI in the CSC2

Cash flows to or from the financing account prior to or after the last completed fiscal year have no effect on the FAI calculation.

Name:	Direct Loan Example D-1			
Description:	2006 Technical reestimate			
Program Type:	Direct			
Purpose:	Financing account interest			
Budget Year:	2008			
Latest completed fiscal year	2006			
Cohort:	2005			
Reestimate discount rate:	3.6			
Original Subsidy Rate:	12.33			
Interest Rate Reestimated Sub Rate	13.06			
	Year 1	Year 2	Year 3	Year 4
Obligations (+)	200,000			
Timing	Annual, Beginning			
Disbursements (+)	200,000			
*Balances with Treasury				
Debt to Treasury EOY	-138,652	-67,941		
Cash balance EOY	0	0		
*Intragovernmental Transactions				
Borrowings from Treasury SOY	-175,340	0		
Borrowings from Treasury EOY	-6,312	0		
Repayments of Treasury Debt MOY	0	0		
Repayments of Treasury Debt EOY	43,000	70,711		
Financing Account Interest	-6,312			
Financing Account Interest Adjustments		0		
Reestimate SOY		14,945		
Interest on Reestimate SOY		538		
Subsidy transfer [annual,beginning]	24,660	0		
Modification	0	9,155		
Modification Adjustment transfer	0	72		
*Borrower Cashflows	Year 1	Year 2	Year 3	Year 4
Timing	Annual, End			
Scheduled Principal Payments (+)	50,000	50,000	50,000	50,000
Scheduled Interest Payments (+)	8,000	6,000	4,000	2,000
Defaults	-20,000	-15,000	-15,000	-15,000
Recoveries	5,000	5,000	0	0
End				

FAI in the CSC2: Cohort Information

Set the purpose to financing account interest.

Latest completed fiscal year: The fiscal year for which reestimates and interest are being calculated.

Reestimate discount rate: the cohort interest rate (SER); the rate at which the cohort earns and pays interest.

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Description:	2006 Technical reestimate		
Program Type:	Direct		
Purpose:	**Financing account interest**		
Budget Year:	2008		
Latest completed fiscal year	**2006**		
Cohort:	2005		
Reestimate discount rate:	**3.6**		
Original Subsidy Rate:	12.33		
Interest Rate Reestimated Sub Rate	13.06		

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The CSC2 uses the following information to calculate interest accrued during the year on financing account balances:

- **Cash balances**
- **Intragovernmental transfers**
- **Transactions with the public**

- Interest is earned depending on the timing assumption indicated for the individual cash flow line.
- Outflows reduce interest earned; inflows increase interest earned.

Cash Balance at the end of the year.

Intragovernmental Transfers:
All reestimates, interest adjustments, and subsidy and modification transfers. Reflects balances *before* financing account interest.

Transactions to and from the Public:
All disbursements, claim payments, loan payments, fees, defaults, and recoveries.

	Year 1	Year 2	Year 3
Obligations (+)	200,000		
Timing	Annual, Beginning		
Disbursements (+)	200,000		
*Balances with Treasury			
Debt to Treasury EOY	-138,652	-67,941	
Cash balance EOY	0	0	
*Intragovernmental Transactions			
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Timing	Annual, End		
Scheduled Principal Payments (+)	50,000	50,000	50,000
Scheduled Interest Payments (+)	8,000	6,000	4,000
Defaults	-20,000	-15,000	-15,000
Recoveries	5,000	5,000	0
End			

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FAI in the CSC2: Interest Owed

The CSC2 uses the following information to calculate interest accrued during the year on financing account debt to Treasury:

- **Debt to Treasury**
- **Transactions with BPD**

- Borrowings made during the year are back-dated to the beginning of the year and a full year of interest is paid on the borrowing.

- Debt repayment and end of year borrowing to pay interest take place at year-end and does not impact the interest calculation.

- Interest owed is adjusted for repayments that occur at the middle of the year.

FAI in the CSC2: Interest Owed

Debt Owed to Treasury at the end of the year.

Intragovernmental Transactions: Transactions between the financing account and Treasury

	Year 1	Year 2	Year 3	Year 4
Obligations (+)	200,000			
Timing	Annual, Beginning			
Disbursements (+)	200,000			
*Balances with Treasury				
Debt to Treasury EOY	-138,652	-67,941		
Cash balance EOY	0	0		
*Intragovernmental Transactions				
Borrowings from Treasury SOY	-175,340	0		
Borrowings from Treasury EOY	-6,312	0		
Repayments of Treasury Debt MOY	0	0		
Repayments of Treasury Debt EOY	43,000	70,711		

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CSC2: Interest Calculation

Cohort Interest Rate:		3.60%

Interest Earned on Cash Balances:	Cash	Interest Earned
Start of year cash balance	0.00	0.00
Reestimates (start of year)	14945.00	538.02
Interest on reestimate (start of year)	538.00	19.37
Modification (start of year)	9155.00	329.58
Modification adjustment transfer (start of year)	72.00	2.59
Repayment of Treasury debt MOY (reduces cash balance)	0.00	0.00
Transactions with the public (end of year)	46000.00	0.00
Total interest earned		**889.56**

Interest Owed on Borrowings from Treasury:	Cash	Interest Owed
Start of year debt balance	-138652.00	-4991.47
Repayment of Treasury debt MOY (reduces debt balance)	0.00	0.00
Total interest owed		**-4991.47**

Start of year rate:	3.60%
Middle of year rate:	1.78%
End of year rate:	0.00%

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FAI in the CSC2:
Output In the "CSC2" Tab

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FAI in the CSC2:
Output in the "Sum" Tab

Credit Subsidy Calculator 2 - v1.4.3c - [Example Cash Flow D-1]

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------------------------------------------------------------------------
Latest Completed Fiscal Year:                    2006
------------------------------------------------------------------------
1) Financing Account Interest Summary
   (Dollars)
   Financing account interest as calculated by the CSC2
   Debt & Cash before financing account interest    Interest earnings    Interest costs     Cash balances     Debt to Treasury
                                          Cohort      (current year)     (current year)     (end of year)      (end of year)
                                            1992                  0                  0                 0                  0
                                            1993                  0                  0                 0                  0
                                            1994                  0                  0                 0                  0
                                            1995                  0                  0                 0                  0
                                            1996                  0                  0                 0                  0
                                            1997                  0                  0                 0                  0
                                            1998                  0                  0                 0                  0
                                            1999                  0                  0                 0                  0
                                            2000                  0                  0                 0                  0
                                            2001                  0                  0                 0                  0
                                            2002                  0                  0                 0                  0
                                            2003                  0                  0                 0                  0
                                            2004                  0                  0                 0                  0
                                            2005             889.59           -4991.48              0.00          -67941.31
                                            2006                  0                  0                 0                  0
                                           Total             889.59           -4991.48              0.00          -67941.31
```

Ready   NUM

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Summary

Why?

- Financing accounts earn interest on cash balances and pay interest on debt to Treasury to reconcile the current balance in the account with the net present value of costs.

When?

- Agencies submit their FAI calculations to Treasury before the end of the fiscal year.

How?

- Agencies calculate the FAI using the CSC2. The calculation uses the same rate, the cohort interest rate, for discounting cash flows, financing account interest earned and financing account interest owed.

References

- Federal Credit Reform Act, Sec. 505

  http://www.fms.treas.gov/ussgl/creditreform/fcra.html

- OMB Circular A-11, Sections 185.32-185.37

  http://www.whitehouse.gov/sites/default/files/omb/assets/a11_current_year/s185.pdf

- CSC2 User Guide, Section 4, Part 2 "CSC2 Reestimates and Financing Account Interest Calculations"

  https://max.omb.gov/community/display/OMB/CSC2+user+guide

- Treasury Financial Manual (TFM), Part 2, Chapter 4600, Sections 4635 and 4640:

  http://www.fms.treas.gov/tfm/vol1/v1p2c460.html