



# Calculating reestimates with the CSC2

OMB Annual Training  
June 25, 2008  
[CSC2@omb.eop.gov](mailto:CSC2@omb.eop.gov)



# What we'll cover

Executive Office of the President • Office of Management and Budget

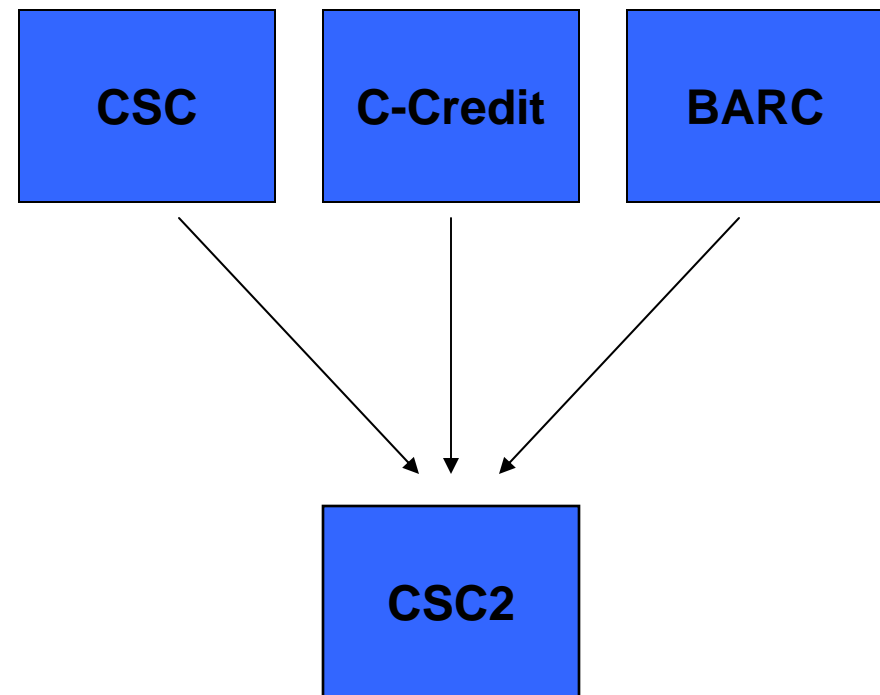
- Goals & Challenges of the CSC2
- Key reestimate calculations
  - Interest Rate Reestimate
  - Setting Single Effective Rate
  - Calculating Reestimates
- Input data requirements
- Output overview
- Examples



# Goals: Streamline the process

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- Three separate tools combined into one
  - Budget subsidy rates
  - Reestimates
  - Financing Account Interest in C-Credit





# Goals: Better cost estimates

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- Consistent data for credit calculations
- Disconnects in financing account balances are transparent
- Accounting differences are transparent
  - Subsidy execution
  - Financing account interest earnings/costs
  - Modifications
- Opportunity to reconcile → Better cost estimates



# Challenges: Reconciliation

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- Calculates reestimates using traditional and balances approach
  - Calculated vs reported cohort balances
  - Balances approach (assets = liabilities)
  - Traditional approach (cashflows to/from public)
- Differences will require explanation



# Challenges: Transparency

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- Accounting mistakes uncovered sooner rather than later
- Auditors will see any differences
  - Will ask questions—require explanations
- Key is to work now to identify and analyze discrepancies



# Reestimate calculations

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- Traditional CSC2 calculations
  - Interest rate reestimate
  - Cohort interest rate—single effective rate
- CSC2 technical reestimates
  - Data requirements
  - Input format
  - Examples



# CSC2: Interest Rate Reestimate

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- Interest rate reestimate accounts for the difference between estimated budget discount rates and actual average annual rates
- Generally performed once when a cohort reaches at least 90% disbursement
- Same input requirements, and same output as CSC





# CSC2: Interest rate reestimate input

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Name:	Direct Loan Example D-1			
Description:	Interest rate reestimate			
Program Type:	Direct			
Purpose:	Interest Rate Reestimate			
Budget Year:	2006			
Cohort	2005			
Reestimate discount rate	use 90			
	Year 1	Year 2	Year	
Obligations (+) .....	1,000,000			
Timing .....	Annual, Beginning			
Disbursements (+) .....	1,000,000			
Timing .....	Annual, End			
Scheduled Principal Payments (+) .....	232,012	243,612	255,793	268,583
Scheduled Interest Payments (+) .....	50,000	38,399	26,219	13,429
Defaults	-28,201	-28,201	-28,201	-28,201
End				

Set Purpose to "Interest Rate Reestimate"

Set reestimate discount rate to "use all" or "use 90"

Do not update cashflows for borrower performance

- No changes
  - Original Budget Cashflows adjusted ONLY for effects of interest
  - Purpose=Interest Rate Reestimate; reestimate discount rate (use all or use 90)
- Resulting output will be a required input for the CSC2 reestimate



# CSC2: Interest rate reestimate

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Credit Subsidy Calculator version.....CSC2 version 1.2a  
Run date/time.....Mon 23 Jun 2008 14:22:22  
Display type.....Subsidy and components display  
Program name.....Direct Loan Example D-1  
Description.....Interest rate reestimate  
Program type.....direct loan  
Spreadsheet name.....J:\CREDIT\TRAINING\Annual08\Reest\CF\_directloan.xls  
Range name and coordinates.....IRR B:B14..B:F29  
Last updated on.....Mon 23 Jun 2008 14:19:57  
Pro-rata method.....Construction model  
All content displayed.....See ~~Tips-Views-Limitations~~ menu for potential problems  
Purpose of this calculation.....Interest Rate Reestimate  
Interest rate assumptions.....~~Reestimate rates may vary~~ by cohort. See PUF display for details.

Year	Total Subsidy	Subsidy components					Reestimate Discount rate	
		Financing Subsidy	Default Subsidy	Subsidy Reduction for Fees	All Other components			
2005	6.99	-3.34	10.33	0.00	0.00	3.60	Single Effective Rate	

Footnotes:  
The reestimate discount rate is either a weighted average rate or a single effective rate depending on the cohort year of the cash flows. Subsidy reestimates for all cohorts dated prior to FY 2001 are based on a weighted average rate. Both the weighted average rates and the single effective rates are stated in terms of effective annual yield. For more details,

- Change due to interest rates
- Total subsidy rate: 6.99—becomes interest rate reestimated subsidy rate input for CSC2



## CSC2: Single effective rate

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- SER is set at the first technical reestimate after the interest rate reestimate
- Use the CSC2 input file
  - Reestimate discount rate “use all” or “use 90”
  - Updated actual and projected borrower cashflows
  - Can use previous CSC format, but MUST update actual and projected cashflows
- Provides traditional CSC output
- Single effective rate method has not changed



# CSC2: Single effective rate

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Name:	Direct Loan Example D-1			
Description:	Original Subsidy estimate			
Program Type:	Direct			
Purpose:	Cohort Interest Rate			
Budget Year:	2006			
Cohort	2005			
Reestimate discount rate	use 90			
	Year 1	Year 2	Year 3	Year 4
Obligations (+) .....	1,000,000			
Timing .....	Annual, Beginning			
Disbursements (+) .....	1,000,000			
Timing .....	Annual, End			
Scheduled Principal Payments (+) .....	232,012	243,612	255,793	268,583
Scheduled Interest Payments (+) .....	50,000	38,399	26,219	13,429
Defaults	-55,098	-41,324	-41,324	-41,324
End				

Set Purpose to “Cohort Interest Rate”

Set reestimate discount rate to “use all” or “use 90”

Do update cashflows for borrower performance and technicals

- Set purpose to “Cohort Interest Rate”
- Set reestimate discount rate to “use all” or “use 90”
- Resulting output will be a required input for the CSC2 reestimate



# CSC2: Single effective rate output

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Credit Subsidy Calculator 2 - [CF\_directloan]

File Edit View Actions Window Tips Help

CFs SUB PVFs DDP NPV Calc CSC SUB Msg

Credit Subsidy Calculator version.....CSC2 version 1.2a  
Run date/time.....Mon 23 Jun 2008 14:30:32  
Display type.....Subsidy and components display  
Program name.....Direct Loan Example D-1  
Description.....Original Subsidy estimate  
Program type.....direct loan  
Spreadsheet name.....J:\CREDIT\TRAINING\Annual08\Reest\CF\_directloan.xls  
Range name and coordinates.....TechSER C:B15..C:F30  
Last updated on.....Mon 23 Jun 2008 14:23:27  
Pro-rata method.....Construction model  
All content displayed.....~~See Tips-Views-Limitations menu for potential problems~~  
Purpose of this calculation.....Cohort Interest Rate (SER)  
Interest rate assumptions.....Reestimate rates may vary by cohort. See PUF display for

-----  
Subsidy components  
-----

Year	Total Subsidy	Financing Subsidy	Default Subsidy	Subsidy Reduction for Fees	All Other components	Reestimate Discount rate	
2005	13.14	-3.34	16.48	0.00	0.00	3.60	Single Effective Rate

Ready NUM



# Calculating a Technical Reestimate

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- Input cash flow data for technical reestimates using the CSC2 include:
  - Actual borrower cashflows (to or from the public)
  - Updated estimated future cashflows

AND

- Financing account balances
  - End of year Debt/Cash balance in the financing account
- Actual intragovernmental transactions
  - Borrowing, repayment, subsidy, financing account interest, and prior reestimates



# CSC2—Reestimate cashflow Inputs

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- Latest completed fiscal year, cohort rates
  - LCFY: Reference point--required for financing account interest and reestimate calculations
  - Cohort interest rate as a number, original subsidy rate, interest rate reestimated subsidy rate
- Cohort Balances
  - Debt to Treasury/Cash Balance with Treasury—required for financing account interest and reestimate calculations
  - Ideally—Debt/Cash balances for all prior fiscal years
- Cohort Treasury & Budget Transactions
  - Subsidy transfers, financing account interest, reestimates, and modifications—reconciling balances, financing account interest, and reestimates
- Cashflows with the public
  - Historical used to reconciling financing account balances, interest adj.
  - Updated cashflows to and from the public



# CSC2—Input Cashflows (cont.)

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- Input cashflows include data that was previously required in spreadsheet tools
- New keywords for new cash flow items
  - Timing for Balance sheet, borrowings, repayments, financing account interest, and reestimates are **FIXED**.
  - Debt to Treasury EOY must be entered as a negative
  - Cash Held by Treasury EOY must be positive
  - Subsidy and modifications—must specify timing!
  - Inflows to the financing account are positive
  - Outflows from the financing account are negative
    - (e.g. Upward reestimates—positive, downward—negative)





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# CSC2: Input example

Cohort information

Borrower cashflows

Balances with Treasury

Treasury Transactions

Budgetary Transactions

Name:	Direct Loan Example D-1			
Description:	2005 Technical reestimate			
Program Type:	Direct			
Purpose:	Reestimate			
Budget Year:	2007			
Latest completed fiscal year	2005			
Cohort	2005			
Reestimate Discount Rate	3.6			
Original Subsidy Rate	6.23			
Interest Rate Reestimated Sub Rate	6.99			
	Year 1	Year 2	Year 3	Year 4
Obligations (+) .....	1,000,000			
Timing .....	Annual, Beginning			
Disbursements (+) .....	1,000,000			
*Balances with Treasury				
Debt to Treasury EOY [Annual, End]	-937,700			
Cash balance EOY [Annual, End]	226,914			
*Intragovernmental Transactions				
Borrowings from Treasury SOY [Annual, Beginning]	-937,700			
Borrowings from Treasury EOY [Annual, End]	0			
Repayments of Treasury Debt MOY	0			
Repayments of Treasury Debt EOY [Annual, End]	0			
Financing Account Interest [Annual, End]				
Financing Account Interest Adjustments [Annual, Beginning]				
Reestimate SOY [Annual, Beginning]				
Interest on Reestimate SOY [Annual, Beginning]				
Subsidy transfer [Annual, Beginning]	62,300			
Modification	0			
Modification Adjustment transfer	0			
*Borrower Cashflows	Year 1	Year 2	Year 3	Year 4
Timing .....	Annual, End			
Scheduled Principal Payments (+) .....	232,012	243,612	255,793	268,583
Scheduled Interest Payments (+) .....	50,000	38,399	26,219	13,429
Defaults	-55,098	-41,324	-41,324	-41,324
End				



# CSC2: Output (see handout 1)

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CSC 2 Credit Subsidy Calculator 2 - [CF\_directloan]

File Edit View Actions Window Tips Help

CFs SUB PVFs DDP NPV Calc CSC<sub>2</sub> SUM Msg

Interest rate assumptions..... Reestimate rates may vary by cohort. Se

Cohort year: 2005

Latest Completed Fiscal Year: 2005

1)Present Value Calculation

	2005 Beg	Mid	2005/2006 End/Beg
2005 Annual PV factor.....	1.000000	0.982472	0.965251
2006 Annual PV factor.....	1.036000	1.017841	1.000000
Converted cashflow.....	-937700.000		226913.824

2)Reported Balances Compared to Net Cashflows

2005 End of year debt (calculated).....	-937700.000
2005 End of year debt (reported).....	-937700.000
Difference .....	0.000
2005 End of year cash (calculated).....	226913.824
2005 End of year cash (reported).....	226913.824
Difference .....	0.000

Ready NUM



# CSC2 Output: CSC2 Tab

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## 1) Present Value Calculations

- PVF relative to the beginning of the cohort
- PVF relative to the latest completed fiscal year
- Converted Cashflow—sum of all inflows and outflows to and from the financing account

## 2) Reported balances compared to net Cashflows

- End of year balance calculated vs. reported
- Any difference must be explained



# CSC2 Output: CSC2 Tab

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The screenshot shows a window titled "Credit Subsidy Calculator 2 - [CF\_directloan]". The menu bar includes File, Edit, View, Actions, Window, Tips, and Help. The toolbar contains icons for file operations and calculation functions: CFs, SUB, PVFs, DDP, NPV, Calc, CSC, SUM, and Msg. The main display area shows the following output:

```
3)Financing Account Interest Calculation (as calculated by CSC2)

Financing account interest owed..... -33757.200
Financing account interest earned.....    0.000
Net financing account interest..... -33757.200
```

The status bar at the bottom indicates the file path: J:\CREDIT\TRAINING\Annual08\Reest\CF\_directloan.xls: Done. A NUM button is visible in the bottom right corner of the window.



# CSC2 Output: CSC2 Tab

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## 3) Financing Account Interest Calculation

- Interest owed—Debt balance SOY, borrowings backdated to 10/1, MOY repayment
- Interest earned—Cash balance SOY, borrowings backdated to 10/1, MOY repayment, cashflows to and from the account
- Net financing account interest



# CSC2 Output: CSC2 Tab

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Credit Subsidy Calculator 2 - [CF\_directloan]

File Edit View Actions Window Tips Help

CFs SUB PVFs DDP NPV Calc CSC SUM Msg

4) Balances Approach Reestimate, using computed balances with computed FA interest

	2005 Beg	Mid	2005/ End
Total cash flows.....			0
2006 Start of year PV factors.....			0
NPV of remaining cash flows.....	673035.277		
2005 Net EOY debt (-) or cash (+) with interest.....	-744543.376		
Total reestimate.....	<b>71508.100</b>		
Reestimate.....	69023.263		
Interest on reestimate.....	2484.837		
Financing account interest adjustment.....	-0.000		
Reestimated subsidy rate.....	13.132		

J:\CREDIT\TRAINING\Annual08\Reest\CF\_directloan.xls: Done

NUM



# CSC2 Output: CSC2 Tab

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## 4) Balances Approach Reestimate

- Assets vs. Liabilities approach
- NPV of cashflows *after* LCFY
- Net EOY debt or cash balance *with interest*
- Difference=reestimate
- Financing account interest adjustment included with reestimate



# CSC2 Output: CSC2 Tab

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**Credit Subsidy Calculator 2 - [CF\_directloan]**

File Edit View Actions Window Tips Help

CFs SUB PVFs DDP NPV Calc CSC SUM Msg

**5) Traditional Reestimate Check**

	2005	Mid	2005/2006
	Beg		End/Beg
Borrower cashflows.....	-1000000.000		226913.824
2005 Start of period PU.....	-1000000.000		219028.787
NPV.....	-131323.263		
Reestimated subsidy rate.....	13.132		

**6) Financing Account Interest Adjustment**

	2005	Mid	2005/2006
	Beg		End/Beg
Cashflow (without interest).....	-937700.000		226913.824
Corrected interest.....	-33757.200		0.000

	2006/2007	Mid	Beg
	Beg		
Cashflow (without interest).....			
Corrected interest.....			
FAI Adjustment.....	-0.000		

J:\CREDIT\TRAINING\Annual08\Reest\CF\_directloan.xls: Done

NUM





# CSC2 Output: CSC2 Tab

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## 5) Traditional reestimate check

- Same as current reestimate
- Should generate the same result as BA reestimate

## 6) Financing Account Interest Adjustment

- Calculates interest that should have been earned/paid on the financing account
- Compares to the sum of reported interest, plus section 3 net interest
- Any difference = financing account interest adjustment



# CSC2 Output: Summary Tab

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- Financing account interest
- Reestimate summary
  - (Federal credit supplement)
  - Cohort-level reestimate breakout
- Current year reestimate summary
  - MAX data entry
  - Financing account interest adjustment is part of interest on reestimate



# Three Ways to Calculate CSC2 Reestimates

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- **Calculating Reestimates and Financing Account Interest for cohorts with complete historical data (previous example)**
- **Calculating Reestimates after Financing Account Interest for cohorts with complete historical data**
- **Calculating Reestimates Using Reported Balances when historical transactions with the public incomplete or not available**



# Reestimates after Financing Account Interest

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## CSC2: Input example

Cohort information

Borrower cashflows

Balances with Treasury

Treasury Transactions

Budgetary Transactions

Name:	Direct Loan Example D-1			
Description:	2005 Technical reestimate			
Program Type:	Direct			
Purpose:	Reestimate			
Budget Year:	2007			
Latest completed fiscal year	2005			
Cohort	2005			
Reestimate Discount Rate	3.6			
Original Subsidy Rate	6.23			
Interest Rate Reestimated Sub Rate	6.99			
	Year 1	Year 2	Year 3	Year 4
Obligations (+) .....	1,000,000			
Timing .....	Annual, Beginning			
Disbursements (+) .....	1,000,000			
*Balances with Treasury				
Debt to Treasury EOY [Annual, End]	-971,457			
Cash balance EOY [Annual, End]	226,914			
*Intragovernmental Transactions				
Borrowings from Treasury SOY [Annual, Beginning]	-937,700			
Borrowings from Treasury EOY [Annual, End]	-33,757			
Repayments of Treasury Debt MOY	0			
Repayments of Treasury Debt EOY [Annual, End]	0			
Financing Account Interest [Annual, End]	-33,757			
Financing Account Interest Adjustments [Annual, Beginning]				
Reestimate SOY [Annual, Beginning]				
Interest on Reestimate SOY [Annual, Beginning]				
Subsidy transfer [Annual, Beginning]	62,300			
Modification	0			
Modification Adjustment transfer	0			
*Borrower Cashflows	Year 1	Year 2	Year 3	Year 4
Timing .....	Annual, End			
Scheduled Principal Payments (+) .....	232,012	243,612	255,793	268,583
Scheduled Interest Payments (+) .....	50,000	38,399	26,219	13,429
Defaults	-55,098	-41,324	-41,324	-41,324
End				

3. Update EOY Balances
2. Enter EOY Borrowing
1. Enter Net Interest Amount



# Reestimate after Financing Account Interest CSC2 Output

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2)Reported Balances Compared to Net Cashflows

2005 End of year debt (calculated).....	-971457.200
2005 End of year debt (reported).....	-971457.200
Difference .....	0.000
2005 End of year cash (calculated).....	226913.824
2005 End of year cash (reported).....	226913.824

Ready NUM

EOY Balances are shown after FAI

3)Financing Account Interest Calculation (from input spreadsheet)

Financing account interest owed.....	0.000
Financing account interest earned.....	0.000
Net financing account interest.....	-33757.200

Ready NUM

Output states that FAI is "from input spreadsheet"

Only reported "net" amount is shown



# Reestimate after Financing Account Interest CSC2 Output (Continued)

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Credit Subsidy Calculator 2 - [CF\_directloan]

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CFs SUB PVFs DDP NPV Calc CSC<sub>2</sub> SUM Msg

rest Cohort	Interest earnings (current year)	Interest costs (current year)	Cash balances (end of year)	Debt to Treasury (end of year)	DWADR/SER	Footnotes
1992	0	0	0	0	0	
1993	0	0	0	0	0	
1994	0	0	0	0	0	
1995	0	0	0	0	0	
1996	0	0	0	0	0	
1997	0	0	0	0	0	
1998	0	0	0	0	0	
1999	0	0	0	0	0	
2000	0	0	0	0	0	
2001	0	0	0	0	0	
2002	0	0	0	0	0	
2003	0	0	0	0	0	
2004	0	0	0	0	0	
2005	0	0	0	0	0	
Total	0.00	-33757.20	226913.82	-971457.20	3.60	1

Ready NUM

Only reported "net" amount is shown

EOY Balances are shown after FAI

Footnote "1" Indicates "reported" FAI

Credit Subsidy Calculator 2 - [CF\_directloan]

File Edit View Actions Window Tips Help

CFs SUB PVFs DDP NPV Calc CSC<sub>2</sub> SUM Msg

FOOTNOTES:

\* Current portion of the reestimate is the pro-rata portion of the total r  
 A cohort's current portion of the reestimate will be lower than the t  
 1. Net financing account interest reported in cash flow.

Ready NUM



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# Reported Balances Reestimate

## CSC2: Input example

Cohort information

Borrower cashflows

Balances with Treasury

Treasury Transactions

Budgetary Transactions

Name:	Direct Loan Example D-1			
Description:	2005 Technical reestimate			
Program	Direct			
Purpose	Reported Balances Reestimate			
Budget	2007			
Latest c	2005			
Cohort	2005			
Reestimate Discount Rate	3.6			
Original Subsidy Rate	6.23			
Interest Rate Reestimated Sub Rate	6.99			
	Year 1	Year 2	Year 3	Year 4
Obligations (+) .....	1,000,000			
Timing .....	Annual, Beginning			
Disbursements (+) .....	1,000,000			
*Balances with Treasury				
Debt to Treasury EOY [Annual, End]	-971,457			
Cash balance EOY [Annual, End]	226,914			
*Intragov				
Borrowing	-937,700			
Borrowing	-33,757			
Repayment	0			
Repayment	0			
Financing	-33,757			
Financing				
Reestimate SOY [Annual, Beginning]				
Interest on Reestimate SOY [Annual, Beginning]				
Subsidy transfer [Annual, Beginning]	62,300			
Modification	0			
Modification Adjustment transfer	0			
*Borrower Cashflows	Year 1	Year 2	Year 3	Year 4
Timing .	Annual, End			
Schedule		243,612	255,793	268,583
Schedule		38,399	26,219	13,429
Defaults		-41,324	-41,324	-41,324
End				

1. Set purpose to "Reported Balances Reestimate"

2. Include all historical intragovernmental transactions (FAI must be reported)

3. Historical transactions with the public are not required



# Reported Balances Reestimate CSC2 Output

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Output states that reestimate calculated using reported balances

	2005		2005/2006		2006/2007
	Beg	Mid	End/Beg	Mid	End/Beg
Total cash flows.....			0.000	0.000	240688.326
2006 Start of year PU factors.....			0.000	0.000	232324.639
NPV of remaining cash flows.....	673035.277				
2005 Net EOY debt (-) or cash (+) with interest.....	-744543.376				
Total reestimate.....	71508.100				
Reestimate.....	69023.263				
Interest on reestimate.....	2484.837				
Financing account interest adjustment.....	0.000				
Reestimated subsidy rate.....	13.132				

\*Traditional reestimate check and financing account interest adjustment are not calculated when using reported balances

The traditional reestimate check and financing account interest adjustment are not calculated when using reported balances





# Reported Balances Reestimate CSC2 Output (Continued)

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Credit Subsidy Calculator 2 - [CF\_directloan]

File Edit View Actions Window Tips Help

CFs SUB PVFs DDP NPV Calc CSC<sub>2</sub> SUM Msg

tion to be apportioned and executed) \*

Cohort	Current Reestimate	Current Interest on Reestimate	FAI adjustment	Total Reestimate	Footnotes
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	69023.26	2484.84	0.00	71508.10	2
Total	69023.26	2484.84	0.00	71508.10	

Ready NUM

Footnote "2" indicates cohorts using reported balances



## For More Information

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- Guidance on Reestimates:
  - OMB Circular A-11, Ch. 185, especially Section 185.6
- Federal Credit Support Page:
  - <http://www.whitehouse.gov/omb/credit>
    - OMB Credit Subsidy Calculator 2 (CSC2 page)
    - CSC2 User Guide (Section 4: Performing Credit Calculations with the CSC2)
    - email [csc2@omb.eop.gov](mailto:csc2@omb.eop.gov)