Introduction to Federal Credit Budgeting

OMB Annual Training

June 25, 2007

Types of Federal Credit

- Direct Loan
- Loan Guarantee
- Sale of Government Assets on Credit Terms

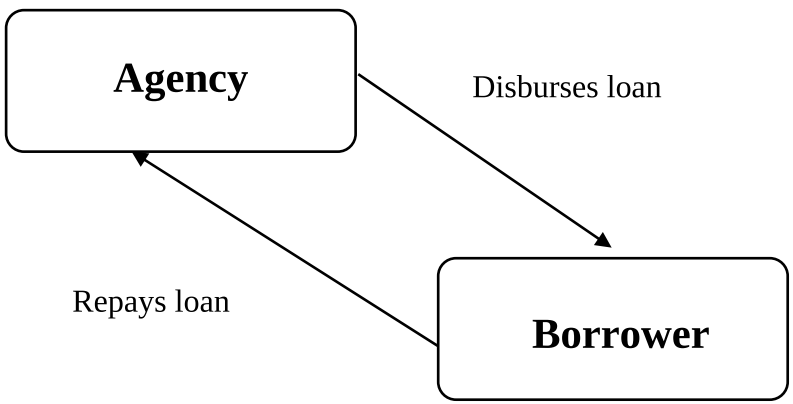
Critical Determinant:

- Non-Federal Borrower

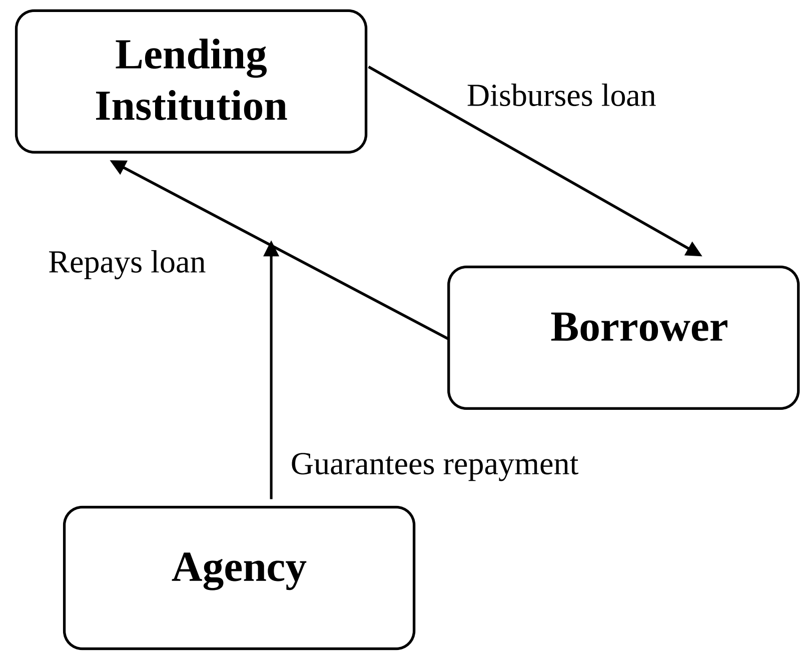
Types of Federal Credit

- **Direct Loan:**
  - A disbursement of funds made by the Federal government to a non-Federal borrower under terms that require repayment with or without interest.
- **Loan Guarantee:**
  - Any guarantee, insurance, or other pledge with respect to the payment of all or a part of the principal or interest on a debt obligation of a non-Federal borrower to a non-Federal lender.
- **Sale of Government Assets on Credit Terms:**
  - The sale of a Federal Government asset to a Non-Federal borrower on credit terms (payment of purchase price, with or without interest, over time).

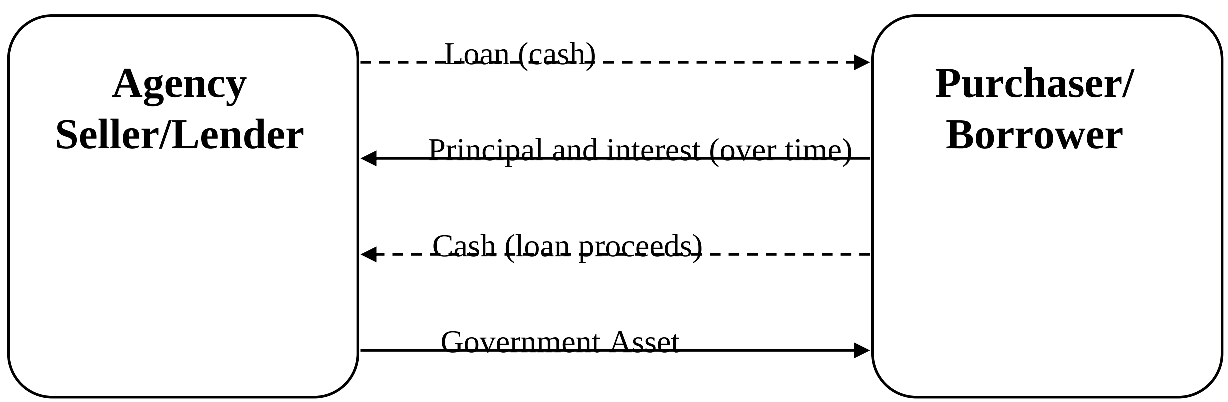
Direct Loans



Loan Guarantees



Sale of Government Assets on Credit Terms



The Federal Credit Reform Act of 1990

- Established a system for budgeting and accounting for the cost of credit programs.

- Changed the budgetary basis from annual cash transactions to cash transactions over the life of the loan on a present value basis.

- Separated the accounting between on-budget and non-budgetary effects.

Established a system for budgeting and accounting for the cost of credit programs

Cash basis:

- Outlays recorded when direct loans were disbursed or claims on loan guarantees were paid.
- Consequently, overstated cost of direct loans and understated cost of loan guarantees.
- No resources set aside for future defaults and claims.
- No budgetary control over loan guarantees.

Credit reform basis:

- Recognizes the cost of future losses at time of obligation.
- Sets aside resources for future losses.
- More accurately measures cost of credit programs.
- Allows for cost comparison between credit programs and other forms of assistance.
- Encourages the most efficient form of assistance delivery for beneficiaries.

Credit Subsidy Cost Estimation

- The credit subsidy cost is the net present value of the expected cash inflows and outflows over the full life of the direct or guaranteed loan.
  – Agencies develop technical assumptions and models, subject to OMB approval, to estimate these expected cash inflows and outflows.
  – OMB provides discount rates (an economic assumption).
  – These inflows and outflows are discounted using the OMB Credit Subsidy Calculator (CSC) software to arrive at the subsidy estimate.

Cohorts and Risk Categories

Agency: Department of Agriculture

Bureau: Farm Service Agency

Fund: A. CCC Export Guarantees
B. Agricultural Credit Insurance Fund

Program: B1. Farm Ownership Loans
B2. Farm Operating Loans

Cohort: B2a. FY92 Farm Operating Loans
B2b. FY93 Farm Operating Loans
B2c. FY94 Farm Operating Loans

Risk Category: B2b1. FY93 Farm Operating Loan, Southwest
B2b2. FY93 Farm Operating Loan, Northeast

Loan: B2b2i. FY93 Farm Operating Loan, Northeast, Farmer A
B2b2ii. FY93 Farm Operating Loan, Northeast, Farmer B

Types and Sources of Cash Flow Assumptions

Technical Assumptions:

- Contract terms (explicit)
  - Maturity
  - Borrower's interest rate
  - Fees
  - Grace periods
- Estimated factors (forecast)
  - Defaults
  - Recoveries
  - Prepayments
  - Workouts
- Methodology
  - Equations
  - Models

Economic Assumptions:

- Discount rates
- Other

Sources:

Technical assumptions are developed by the Agency, using:

- Historical cash reports and loan performance
- Actuarial studies
- Sensitivity analysis
- Legislation or regulations
- Loan contracts and guarantee agreements

Economic assumptions are provided by OMB in preparation of the budget and the mid-session review.

Credit Subsidy Estimate Assumptions for Budget Execution

<u>At the Time of Obligation:</u>

- Update subsidy estimate for explicit assumptions
  - cash flows specified in loan contract
- Update subsidy estimate for changes in law
- Forecast assumptions remain the same
  - forecast assumptions must be same as the assumptions used to formulate the President's Budget

<u>At the Time of Disbursement:</u>

- Update for changes in law, regulation or policy (modification)

<u>After Disbursement:</u>

- Update for all forecast assumptions (reestimate)
- Update for changes in law, regulation or policy (modification)

Example Subsidy Estimate for a Direct Loan and Loan Guarantee

Assumptions:

Principal...	$1,000	Technical assumption - Contract terms
Borrower's interest rate......................	7.0%	
Maturity...	5	
Default year.......................................	5	Technical assumption - Estimated factors
Discount rate.....................................	7.0%	Economic assumption

	Year 1	Year 2	Year 3	Year 4	Year 5
Direct Loan:					
Loan disbursement............................	$1,000		Cash Flows		
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	Subsidy amount

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Borrower's interest rate......................	7.0%
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Default year......................................	5
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Discounting to the Present Value

The future value of money invested in the present.

Compounding interest example - Savings account in a bank

Amount deposited $100 Interest rate 5%

Year 1……………………………..(1+0.05) x $100 = $105

Year 2……………………………..(1+0.05) x $105 = $110.25

Year 3……………………………..(1+0.05) x $110.25 = $115.76

Year 4……………………………..(1+0.05) x $115.76 = $121.55

Year 5……………………………..(1+0.05) x $121.55 = $127.63

The present value of money to be received or paid in the future.

Discounting example - Buying a bond

Face value of bond $127.63 Discount rate 5%

Year 5……………………………..$127.63/(1+0.05) = $121.55

Year 4……………………………..$121.55/(1+0.05) = $115.76

Year 3……………………………..$115.76/(1+0.05) = $110.25

Year 2……………………………..$110.25/(1+0.05) = $105

Year 1……………………………..$105/(1+0.05) = $100

Budget Accounts for Credit Programs

- Liquidating
- Program
- Financing
- Negative receipt

Budget Accounts for Credit Programs

Liquidating Account	Program Account	Financing Account(s)
For direct loans obligated or loan guarantees committed prior to FY 1992 (pre-1992)	For direct loans obligated or loan guarantees committed in FY 1992 and fiscal years thereafter (post-1991)	For direct loans obligated or loan guarantees committed in FY 1992 and fiscal years thereafter (post-1991)
Pre-1992 loan activity	Amounts for subsidy and administrative expenses for post-1991 loans	Cash flows from post-1991 loans
Recorded on a cash basis (on-budget)	Recorded on a credit reform basis (subsidy)	Recorded as a means-of-financing (non-budgetary)
• Collects repayments, interest, fees, et al. • Repays any borrowing with interest • Pays default claims and interest subsidies	• Receives appropriation of subsidy and administrative expenses • Subsidy is transferred from the program account to the financing account(s)	Direct Loans: o Receives subsidy from program account o Borrows unsubsidized portion of loan from Treasury o Disburses new loans o Collects repayments, interest, fees, et al. o Repays borrowing to Treasury, plus interest Guaranteed Loans: o Receives subsidy from program account o Collects fees from borrowers o Acts as a reserve for default claims o Receives interest on reserves from Treasury o Pays default claims and interest subsidies

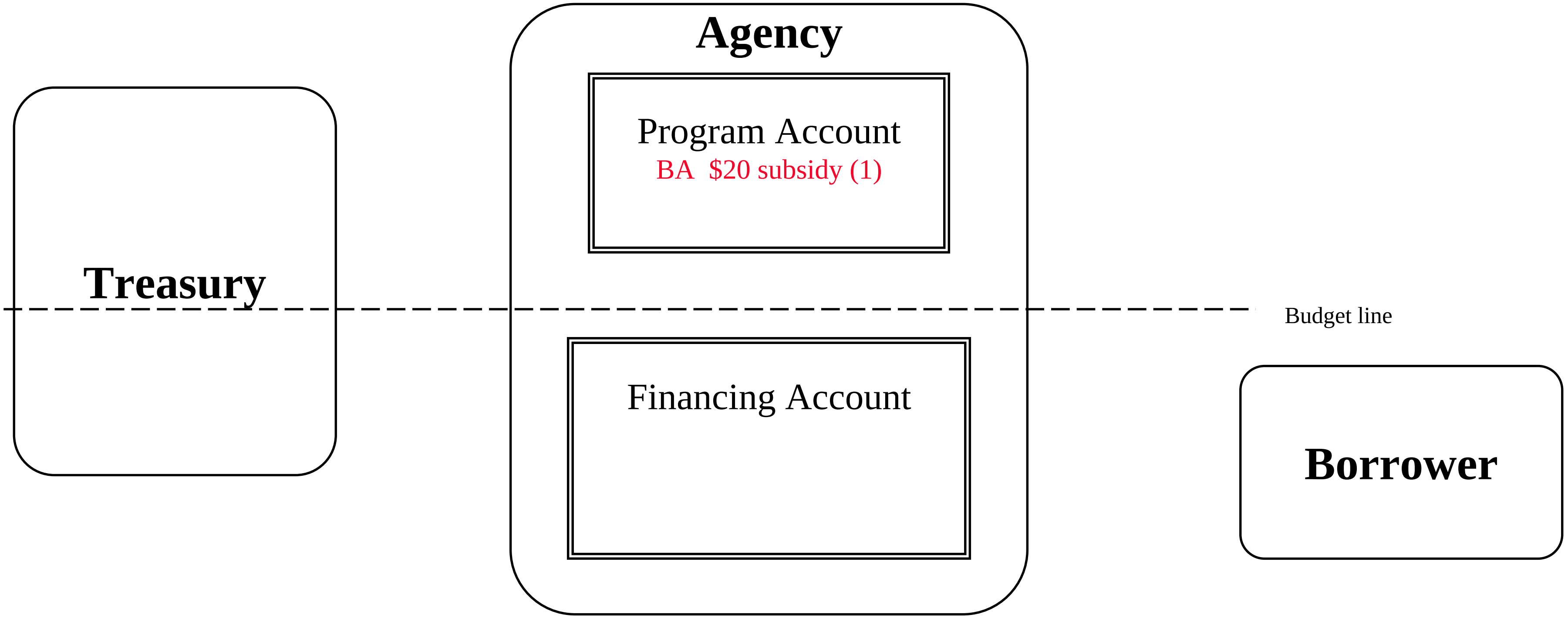
Budget Accounts for Credit Programs

Negative receipt account

- For direct loans obligated or loan guarantees committed in FY 1992 and fiscal years thereafter (post-1991).
- Amounts of negative subsidy and downward reestimates from associated financing accounts.
- Recorded as on-budget.
- Available for appropriation.

Budgetary Accounting: Cash Flows for Direct Loans

EXAMPLE: $100 loan, 20% subsidy rate, disburses in one year.



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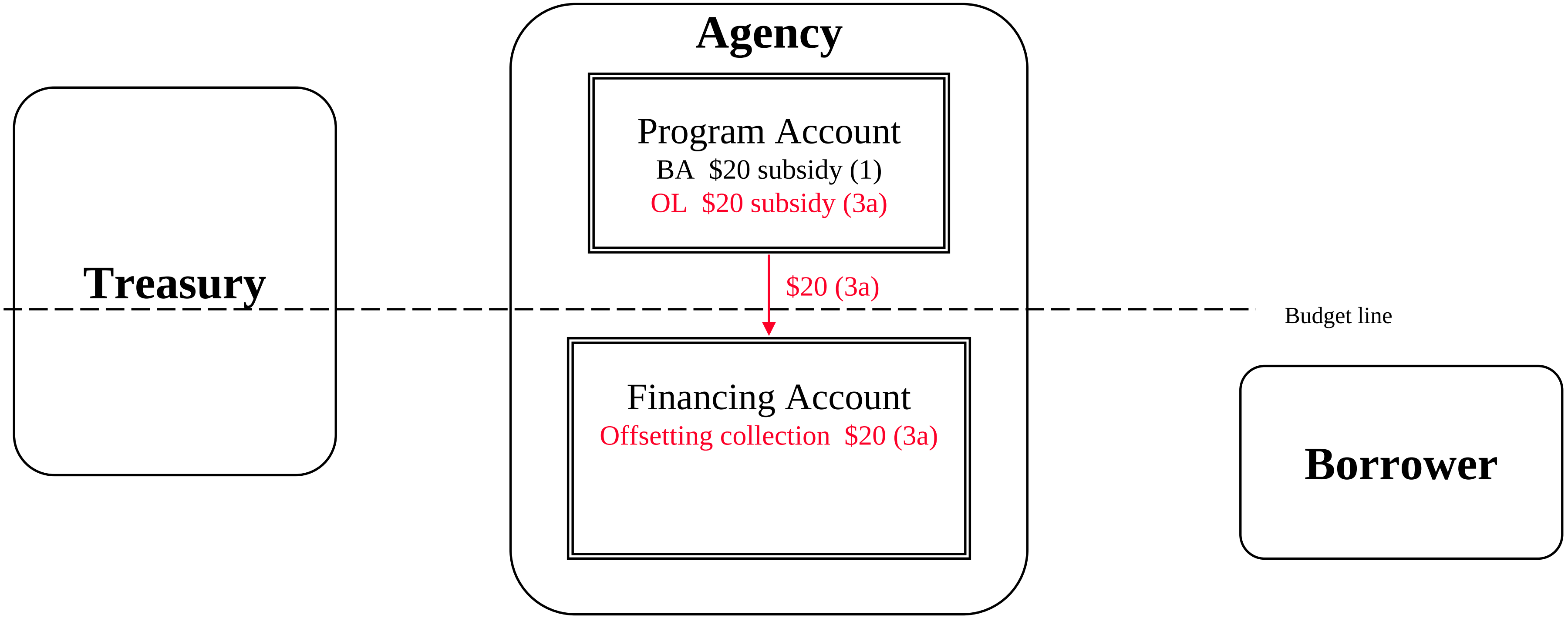

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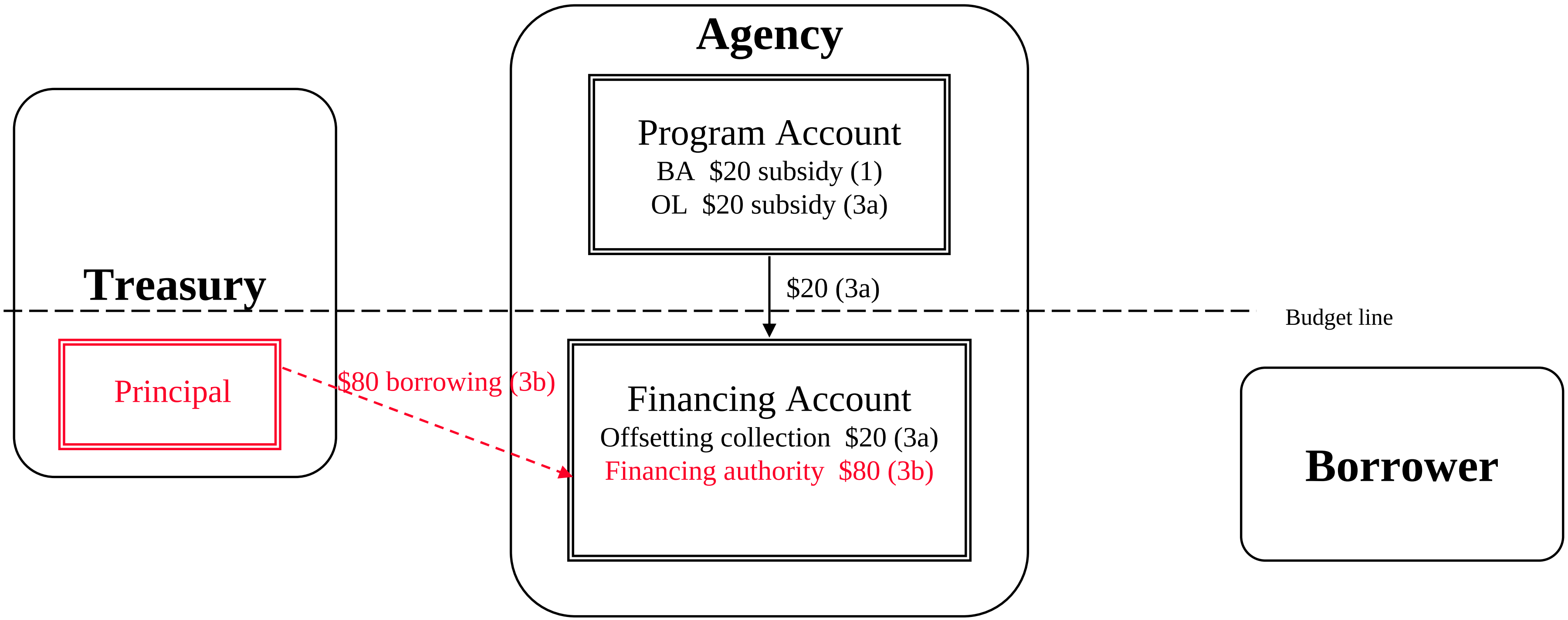

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    b. The financing account borrows $80 from Treasury.

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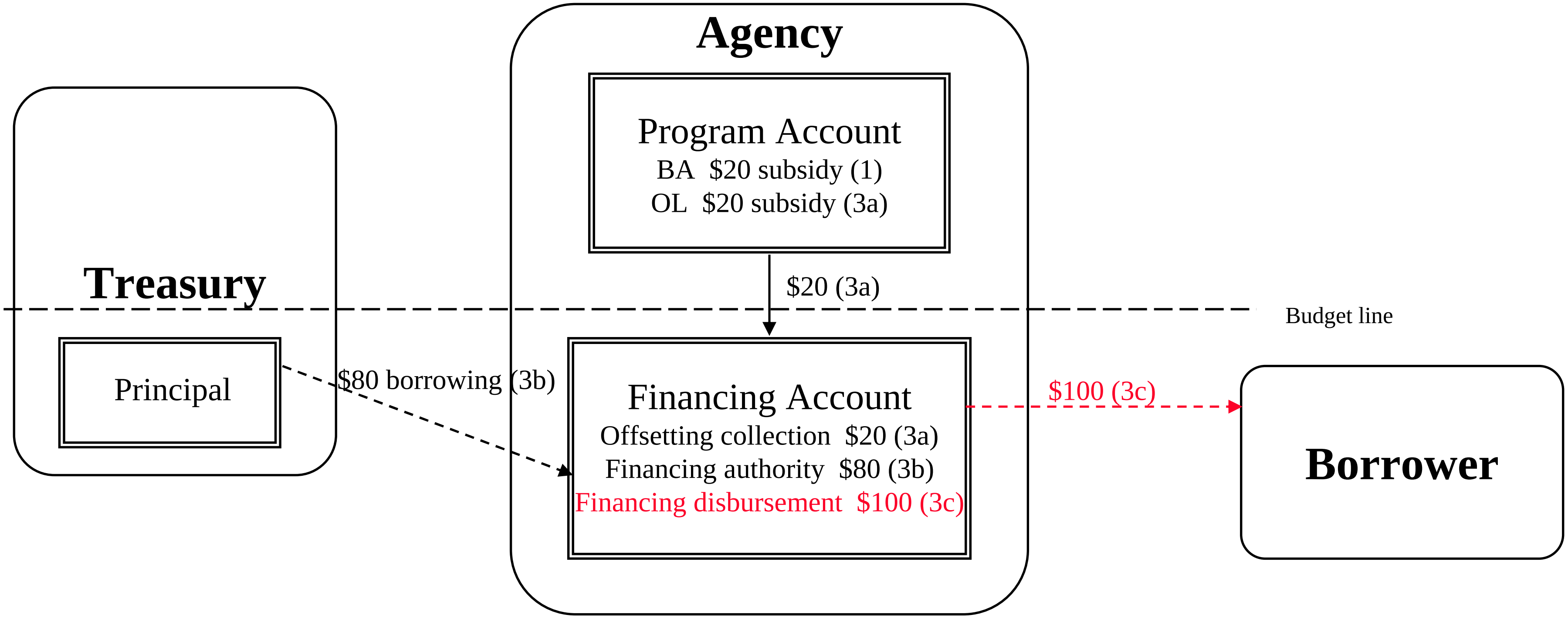

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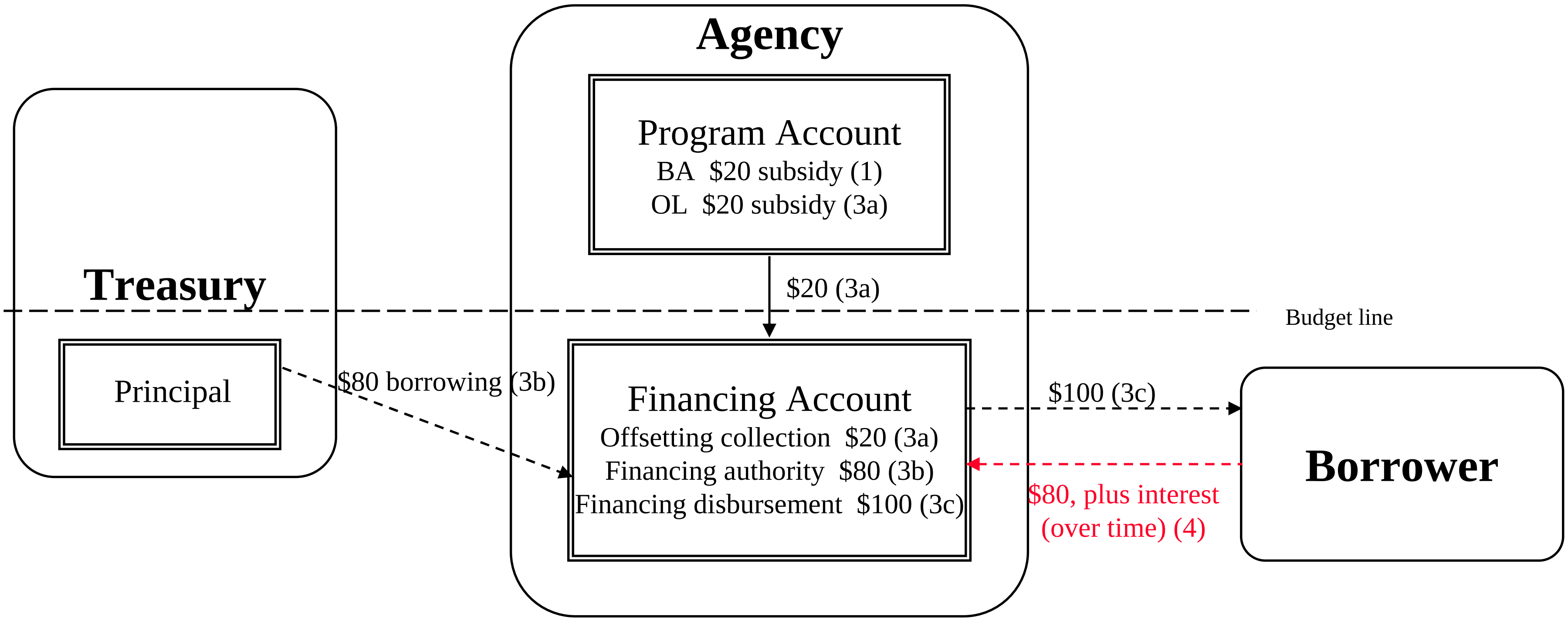

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4. The Borrower pays fees (if any), interest, and principal to the financing account, under the terms of the contract over time.

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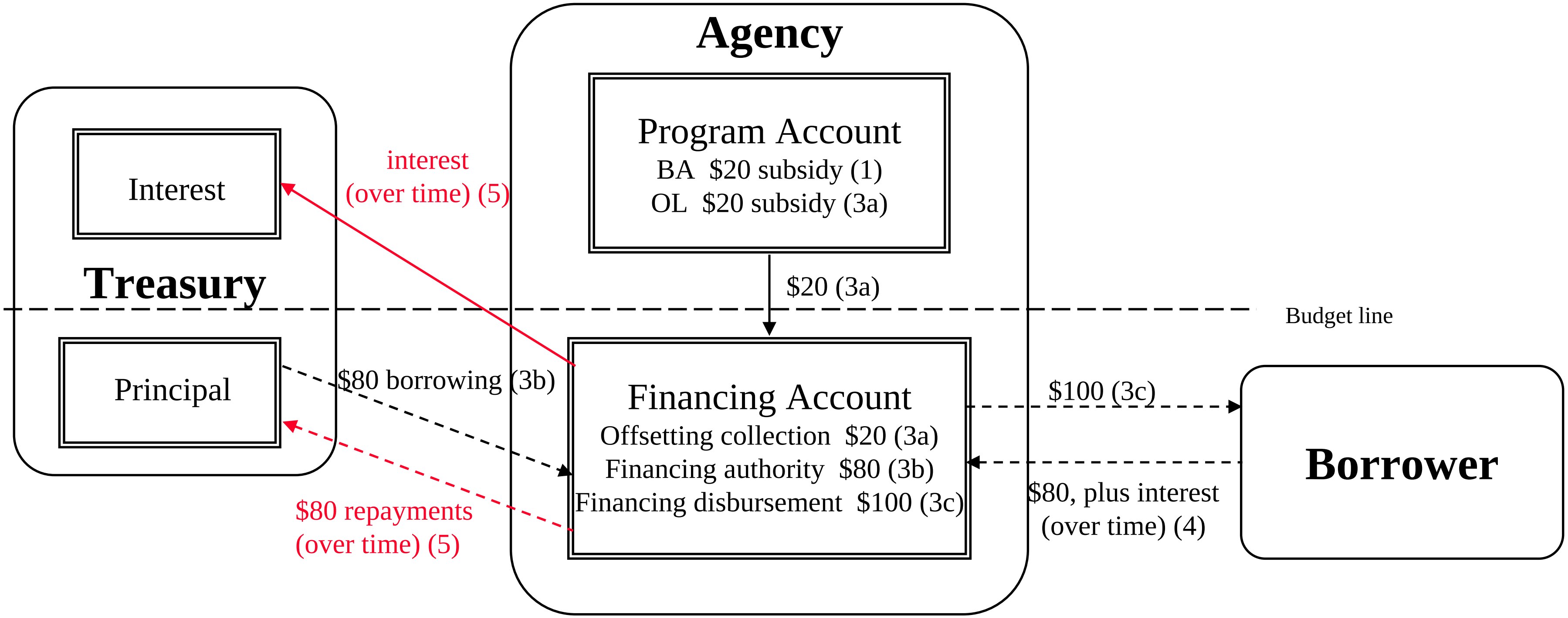

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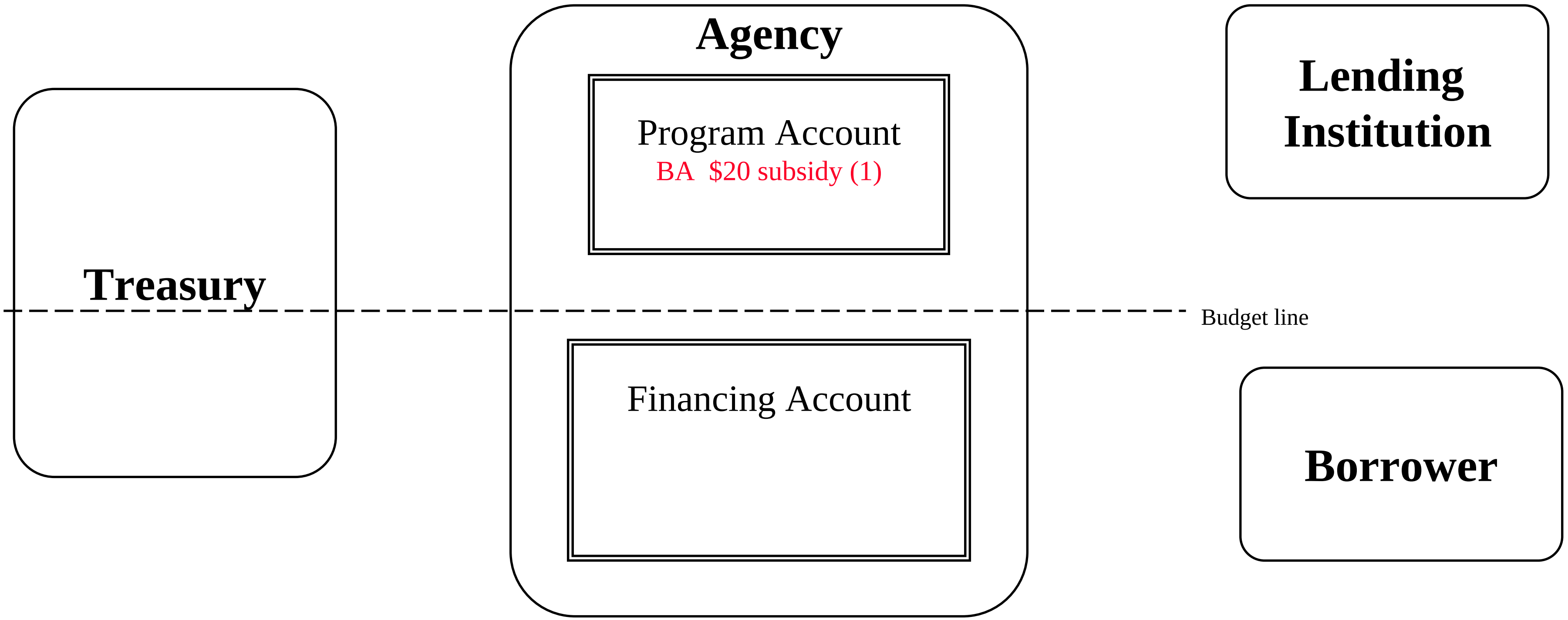
   b. The financing account borrows $80 from Treasury.
   c. The financing account disburses a $100 loan to the Borrower.
4. The Borrower pays fees (if any), interest, and principal to the financing account, under the terms of the contract over time.
5. If the subsidy rate is accurate, the Borrower will make payments to the financing account exactly in the amount necessary to repay the original Treasury borrowing ($80) plus interest. The financing account pays interest and principal to Treasury each year, which are a means of financing and do not affect the budget totals. The interest that Treasury receives from the financing account is a offsetting receipt from the public, reducing the deficit.
6. If the subsidy is not accurate, a reestimate will be made and, as necessary, either (1) additional subsidy will be disbursed from the program account to the financing account to cover the amount of the reestimate or (2) excess funds will be moved from the financing account to a negative receipt account, where these funds are unavailable until appropriated.

Budgetary Accounting: Cash Flows for Loan Guarantees

EXAMPLE: $100 loan with 75% Federal guarantee on principal outstanding, 20% subsidy rate, disbursed in one year, upfront fee of 2%, and 40% default rate with no recoveries.



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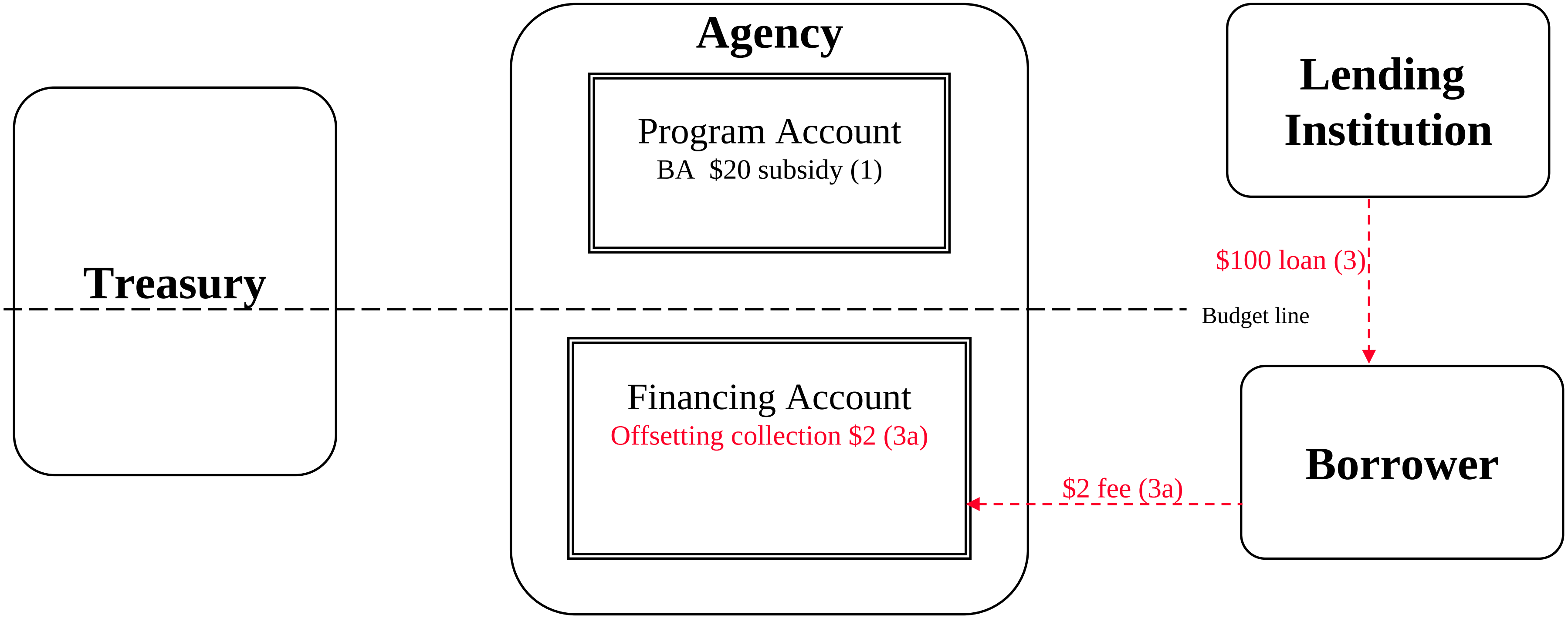

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3. When the Lending Institution disburses the loan to the Borrower:
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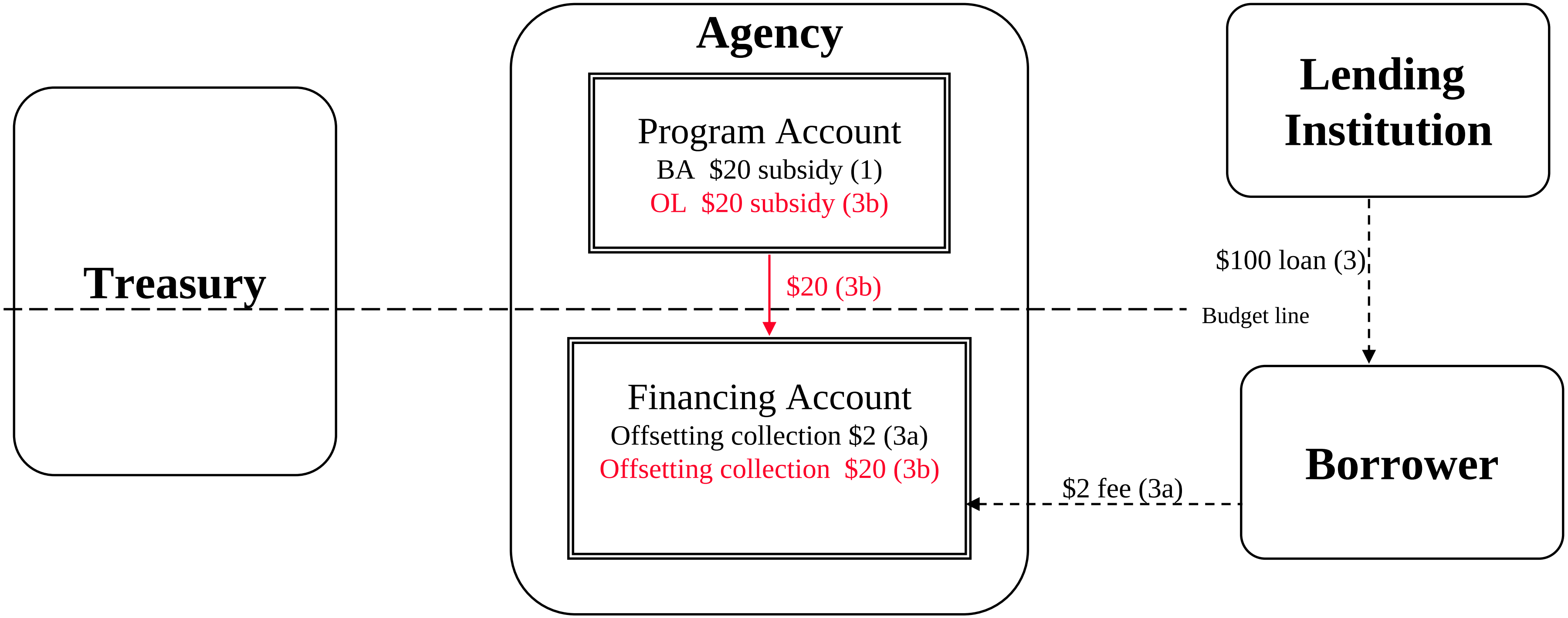

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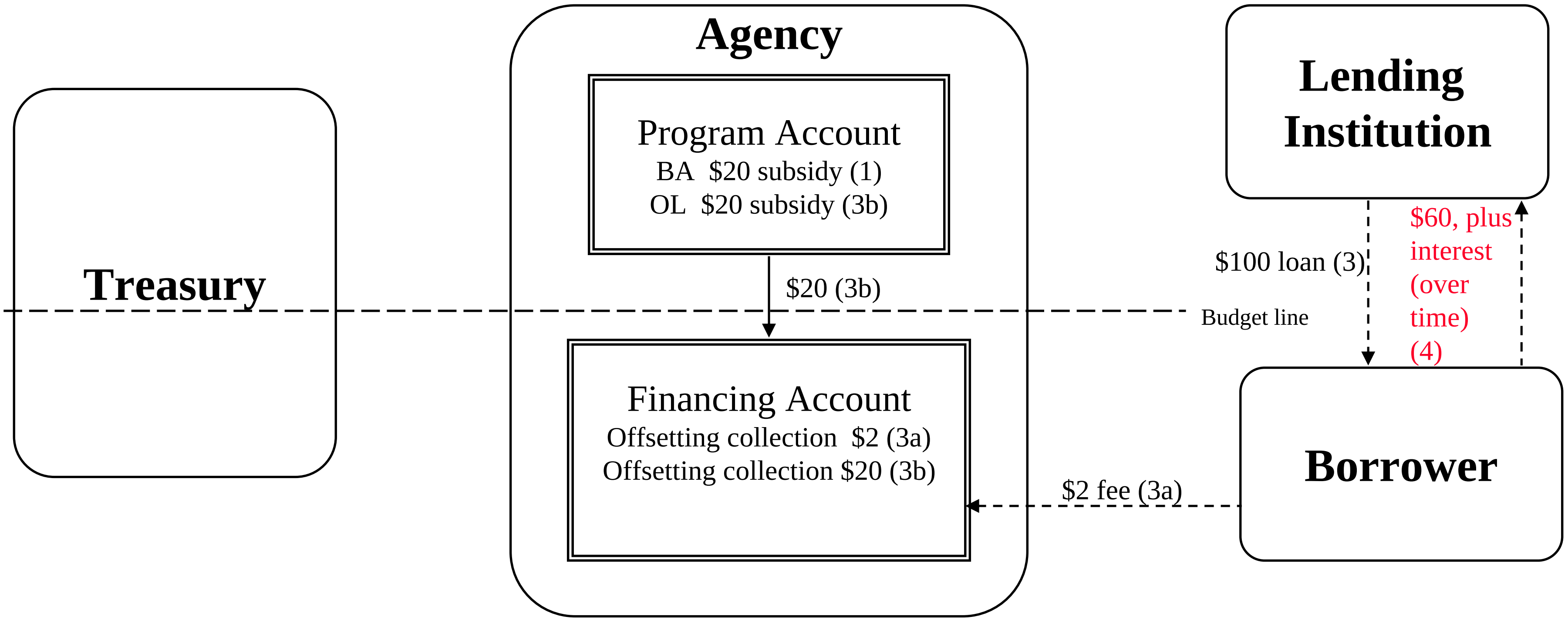

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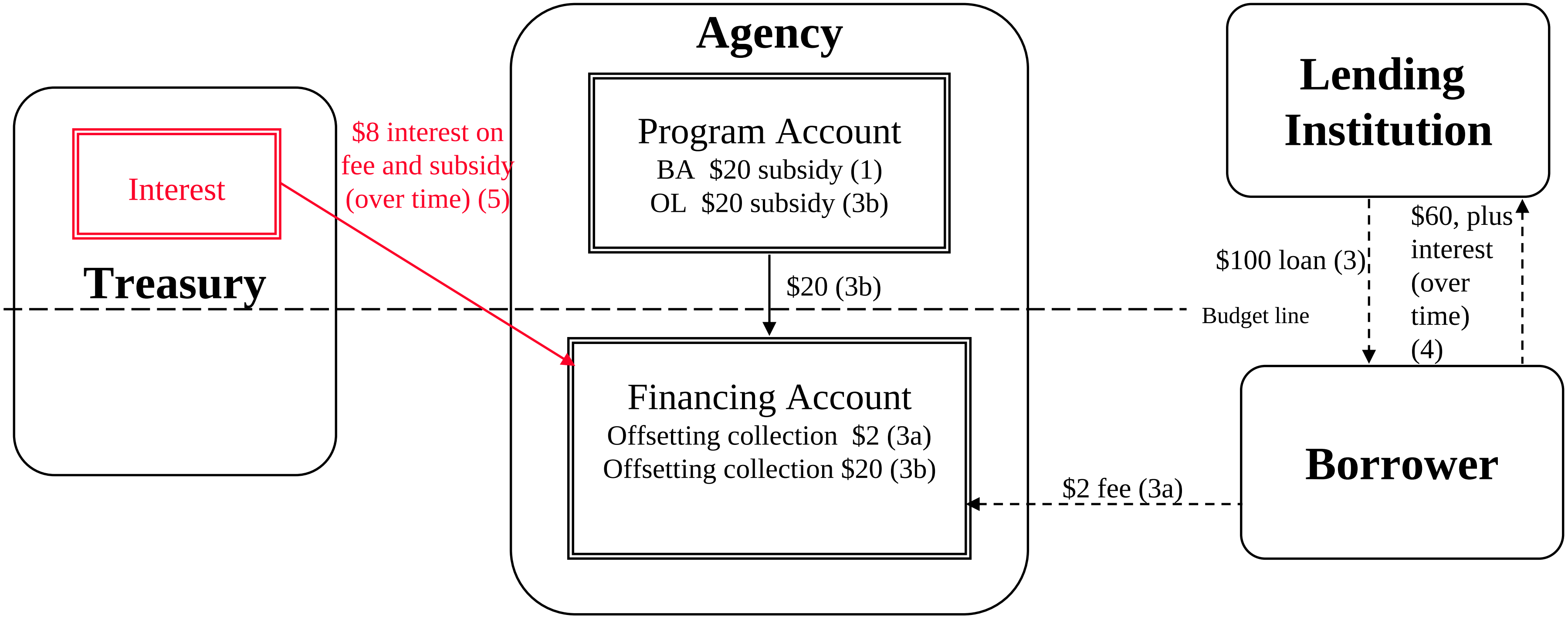

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4. The Borrower pays principal and interest to the Lending Institution under the terms of the contract over time.
5. Reserves (uninvested funds) are held in the financing account and earn interest. The interest that Treasury pays to the financing account is an outlay, increasing the deficit, but the interest received by the financing account is a means of financing and does not affect the budget totals.

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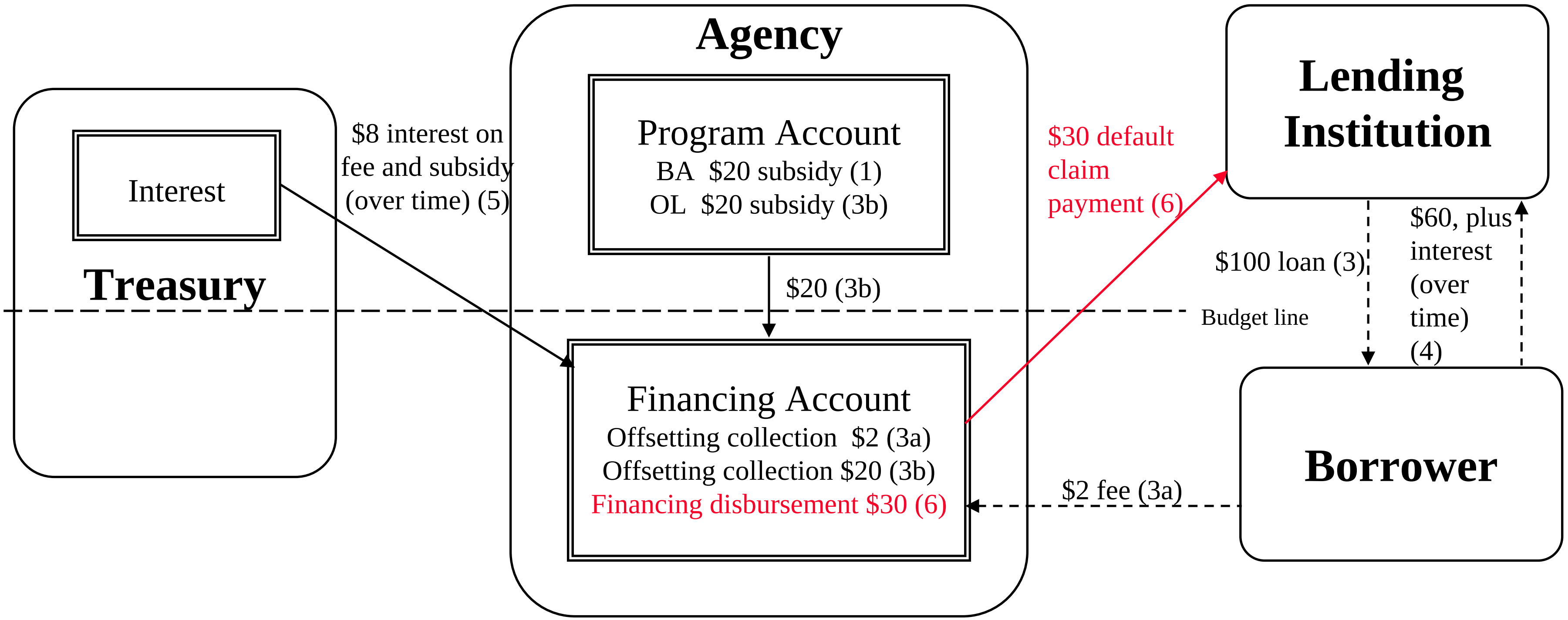

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5. Reserves (uninvested funds) are held in the financing account and earn interest. The interest that Treasury pays to the financing account is an outlay, increasing the deficit, but the interest received by the financing account is a means of financing and does not affect the budget totals.
6. If the Borrower defaults, the reserves held in the financing account ($22 plus interest) are used to make claim payments to the Lending Institution. If the subsidy rate is accurate, the financing account will have exactly the reserves needed to cover all defaults and other subsidies for that cohort of loans.
7. If the subsidy is not accurate, a reestimate will be made and, as necessary, either (1) additional subsidy will be disbursed from the program account to the financing account to cover the amount of the reestimate or (2) excess funds will be moved from the financing account to a negative receipt account, where these funds are unavailable until appropriated.

Subsidy Reestimate

Annual comparison of:

- Estimated cash flows and actual cash flows, plus updated assumptions about future cash flows, or
- End-of-year financing account balances and present value of estimated future cash flows.

Types of reestimates:

- Interest rate reestimate.
- Technical reestimate.
- Plus an adjusting entry, interest on the reestimate.

Covered by permanent, indefinite authority.

Subsidy Reestimate Cost

- Upward or downward.
- Upward indicates a net increase in the subsidy cost.
  - Requires a transfer of funds between the program account and financing account.
- Downward indicates a net decrease in the subsidy cost.
  - Requires a transfer of funds from the financing account to the negative receipt account.

Types of Subsidy Reestimates

Interest rate:

- Difference between estimated discount rates and actual average annual rates (disbursement weighted average or single effective rate).
- At a minimum, required at 90% disbursement.

Technical:

- Difference between estimated cash flows and actual cash flows, plus changes in assumptions about future cash flows.
- First technical after 90% disbursement sets the final cohort interest rate for discounting and calculating financing account interest.
- Annual, unless otherwise approved by OMB examiner.

Illustration of Technical Reestimate

# of loans..................	50
Loan amount	1,000
Borrower's rate..........	5.0%
Maturity......................	10 years
Annual P&I per loan.....	129.50
Discount rate...............	4.0%

Original Subsidy Rate:	
Outstanding.............	50,000
PV of cash flows...........	(44,575)
Subsidy cost.............	5,425
Subsidy rate..................	10.85%

Reestimated Subsidy Rate:	
Outstanding.............	50,000
PV of cash flows...........	(42,385)
Subsidy cost.............	7,615
Subsidy rate..................	15.23%

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Default assumptions:										
Original..................	0.0%	2.0%	3.0%	5.0%	5.0%	2.0%	0.0%	0.0%	0.0%	0.0%
Reestimate.............	0.0%	2.0%	3.0%	7.0%	7.0%	5.0%	2.0%	0.0%	0.0%	0.0%
Cash Flows										
Original:										
Contractual P&I.......	6,475	6,475	6,475	6,475	6,475	6,475	6,475	6,475	6,475	6,475
Less defaults...........	0	(130)	(324)	(648)	(971)	(1,101)	(1,101)	(1,101)	(1,101)	(1,101)
Estimated...............	6,475	6,346	6,151	5,828	5,504	5,374	5,374	5,374	5,374	5,374
Reestimate:										
Contractual P&I.......	6,475	6,475	6,475	6,475	6,475	6,475	6,475	6,475	6,475	6,475
Less defaults...........	0	(130)	(324)	(777)	(1,230)	(1,554)	(1,684)	(1,684)	(1,684)	(1,684)
Estimated...............	6,475	6,346	6,151	5,698	5,245	4,921	4,792	4,792	4,792	4,792

Interest on the Reestimate

- Interest on the reestimate represents interest that would have been earned or paid if the reestimate amount was included in the original estimate.

- When calculating the interest on the reestimate, use the disbursement weighted average rate (cohorts 1992-2000) or single effective rate (cohorts 2001-present).

Modification

Occurs when a Government action:

- changes actions assumed in the baseline estimate of cash flows and changes the estimated subsidy cost.

Modification cost estimate:

- the difference between the present value of the remaining cash flows prior to modifying action and after the modifying action,
- plus an adjusting entry (modification adjustment transfer) if the loan has already disbursed.

Requires an appropriation in advance.

Modification Cost

- Positive, negative, or zero.
- Positive indicates an additional subsidy cost.
  - Requires a transfer of funds between the program account and financing account.
- Negative indicates a savings is achieved.
  - Requires a transfer of funds from the financing account to the negative receipt account.

Modification Adjustment Transfer

- The current discount rates are used to calculate the modification cost.
- To account for the difference between the current discount rate and cohort's interest rate, a modification adjustment transfer is made between the financing account and general fund.
- The effect of the modification adjustment transfer depends on whether a direct loan or loan guarantee was modified and whether the current discount rate is lower or higher relative to the cohort's.

Reestimate vs. Modification

Reestimate

- Uses permanent, indefinite authority
- Annual
- Adjusts subsidy estimate for difference between assumptions and actual experience
- Economic and technical assumptions

Modification

- Requires an appropriation in advance of the action
- As needed basis
- Adjusts subsidy for decisions to relax or tighten terms
- Technical assumptions

For More Information

- Legislation
  - The Federal Credit Reform Act of 1990
- OMB Circulars
  - OMB Circular A-11, Section 185 “Federal Credit Data”: http://www.whitehouse.gov/omb/circulars
  - OMB Circular A-129, “Policies for Federal Credit Programs and Non-Tax Receivables”: http://www.whitehouse.gov/omb/circulars/a129/a129rev.html
- Budget Publications
  - Federal Credit Supplement: http://www.gpo.gov/usbudget/fy2006/pdf/cr_supp.pdf

For More Information (continued)

- **Other OMB**
  - Your Program Examiner
  - Federal Credit Support Page: http://www.whitehouse.gov/omb/credit
    - OMB Credit Subsidy Calculator, Including Credit Discount Rates
    - Credit Tools
- **Other Sources**
  - Federal Credit Council
  - U.S Treasury Financial Management Service websites
    - Credit reform accounting information: http://www.fms.treas.gov/ussgl/creditreform/index.html
    - Debt management information: http://www.fms.treas.gov/debt