

5. What differentiates transaction costs from financial costs?

6. José Martínez is a carpenter who needs \$500 to purchase wood. He could repay a loan in equal instalments over a six-month period. He has two alternatives for the loan: the Loans for Entrepreneurial Development (LED) program or Margarita, the money lender. Both sources offer him \$500 for six months with monthly payments.

- a. Given the specific conditions of each of these sources of credit (detailed below), which has the lowest financial costs?
- b. What other factors might José feel are important for deciding between the different alternatives?

Loans for Entrepreneurial Development

3 % monthly interest calculated on a declining balance.

3% loan processing fee (added to the loan amount and paid in full upon loan disbursement).

\$10 flat fee for fiscal stamps (added to the loan amount and paid in full upon loan disbursement).

(Note: The loan amount would be for $[500 + 10 + (0.03 \times 500)]$, but Jose would only receive 500 as the rest would cover the fee and commission.)

Margarita the Moneylender

5% monthly interest calculated on original loan amount (flat), payable monthly.

7. The Microenterprise Credit Association (MCA) provides loans to micro entrepreneurs in a country with 22% annual inflation, under the following conditions:

- 2 % monthly interest on declining balance
- 6 - 12 month loan terms
- monthly payments
- 3 % commission payable upon loan disbursement
- \$2 flat fee for fiscal stamps payable upon loan disbursement

(Note: as in question 6, the fee and commission are added on to the amount to be received by the borrower, but then kept by the lending institution.)

- a. What is the annual, nominal interest rate?
- b. What is the real nominal interest rate per year?
- c. What is the monthly effective interest rate?

8. Marie makes clay pots and receives a \$350 loan (to which fees and commission must be added) for six months from MCA.

- a. How much does she pay in interest?
- b. How much does she pay in commissions and fees?
- c. What is the monthly effective interest rate on her loan?
- d. If MCA calculated interest based on the original loan amount (rather than the declining balance), how much interest would Marie have to pay? How much in commission and fees? What would the monthly effective interest rate be?
- e. Why is the effective interest rate higher when interest is calculated based on the original loan amount (flat method), than using the declining balance method?

B. Setting Interest Rates

1. What three types of costs should a lending institution try to cover with its income from interest and fees? Explain each type and give examples of the costs within each category.

2. How can a lending institution maintain the value of its portfolio in a country where inflation is 22 % per year?

3. How does inflation affect an institution's portfolio? What is the effect on the portion of the portfolio that is borrowed from a bank? What is the effect on the portion of the portfolio that is the institution's own resources?

4. Which package of loans below (A or B) generates more income for a lending institution in one 12 month period, and why? For both A and B assume that funds are lent out again as soon as they have been repaid, thereby never remaining idle, and that on-time repayment is 100%.

	A	B
Outstanding Portfolio	\$10,000	\$10,000
Loan Terms	3 months	12 months
Average Loan Size	\$100	\$1000
Fees or commissions	None	None
Monthly interest rate	2 % (declining balance)	2 % (declining balance)

5. The Microenterprise Credit Corporation (MCC) is opening a new credit program in January 2002 and is trying to decide how much in interest and fees to charge the borrowers. MCC's goal is to cover all costs, and maintain the value of the portfolio, by the end of the third year (2004). MCC predicts that its average loan size will be \$500 and the average loan term six months. MCC's financial projections show the following situation for 2004:

Amount of portfolio belonging to MCC (donated or retained earnings):	275,000	
Amount of portfolio borrowed:		
Asian Development Bank (4% interest charge per year)	500,000	
National Bank (18% interest charge per year)	200,000	
Private Bank (22 % interest charge per year)	100,000	
TOTAL PORTFOLIO		1,075,000
ESTIMATED LOAN LOSS (2004)		25,000
ESTIMATED OPERATIONAL COSTS (2004)		161,250
ESTIMATED INFLATION RATE (2004)		18 %

a. What yield does MCC need to earn on its portfolio if it is to break even in 2004?

- b. Assume that all borrowers pay on time, and that the entire portfolio is always lent out. How could the program charge a nominal rate equal to the nominal rate of commercial banks (22%) and still break even?
- c. Instead of charging any fees, MCC in 2004 charges 30% interest on a declining balance on all loans. MCC shows the following results for the year:
- No interest is earned on the 2.3 % of the portfolio which is to be written off at the end of the year;
 - 12% of the portfolio does not generate any interest income during 2004 because of delinquency.
 - Costs are the same as projected.
 - All 1,075,000 is lent out to borrowers for the whole year.
 - How much is MCC's deficit in 2004?
- d. Assume that all of the conditions set out in c above are true, except the last one. Instead, MCC has an average of 10% of its portfolio on short-term deposit earning 20% during 2004, while the rest is always in the hands of borrowers. How much is their deficit under these conditions?
- e. If MCC could have predicted the results described above, what could they have done to diminish or eliminate their deficit in 2004?