

ACTIVITY 37

The Multiple Expansion of Demand Deposits

This Activity is designed to illustrate how banks lending out excess reserves can expand the nation's money supply. Assume that (1) all banks keep a fractional reserve of ten percent of deposits and lend out 90 percent of deposits from their excess reserves (reserves over ten percent of deposits) and (2) all money lent out by one bank is redeposited in another bank.

1. Under these assumptions, if a new deposit of \$1,000.00 is made in Bank 1:
 - a. How much will the bank keep in reserve? \$ _____
 - b. How much will Bank 1 lend out as excess reserves? \$ _____
 - c. How much will be redeposited in Bank 2? \$ _____
 - d. How much will Bank 2 keep in reserve? \$ _____
 - e. How much will Bank 2 lend out? \$ _____
 - f. How much will be redeposited in Bank 3? \$ _____

2. Use your answers to question 1 to help you complete the table *Deposits, Reserves, and Loans in Seven Banks*. Fill in all the blanks in the table, rounding numbers to the second decimal (e.g., \$59.049 = \$59.05 and \$53.144 = \$53.14). After you have completed the table, answer the questions that follow by filling in the blanks or crossing out the incorrect words in parentheses so that each statement is a true statement.

Deposits, Reserves, and Loans in Seven Banks

| Bank No. | New Deposits | 10% Fractional | |
|--------------------------|--------------|----------------|----------|
| | | Reserves | Loans |
| 1 | \$1,000.00 | \$100.00 | \$900.00 |
| 2 | 900.00 | _____ | 810.00 |
| 3 | _____ | 81.00 | _____ |
| 4 | _____ | _____ | 656.10 |
| 5 | _____ | _____ | _____ |
| 6 | _____ | 59.05 | _____ |
| 7 | 531.44 | _____ | 478.30 |
| All Other Banks Combined | _____ | _____ | _____ |
| Total for All Banks | 10,000.00 | _____ | 9,000.00 |

3. In this example:
 - a. The original deposit of \$1,000 increased total bank reserves by \$ _____. Eventually this led to an expansion of bank deposits to a total of \$10,000, \$_____ of which was due to the original deposit and \$ _____ of which was due to bank lending activities.

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- b. This total-to-original deposit expansion ratio of _____ to one was based on a fractional reserve of ten percent, a lending out of all excess reserves by all banks, and a redeposit of all loans to the banking system.
- c. Therefore, if the fractional reserve had been 15 percent instead of ten percent, the amount of deposit expansion would have been (*more/less*) than in this example.
- d. If the fractional reserve had been five percent instead of ten percent, the amount of deposit expansion would have been (*more/less*) than in this example.
- e. If banks had not lent out all their excess reserves, the amount of deposit expansion would have been (*more/less*) than in this example.
- f. If all loans had not been redeposited in the banking system, the amount of deposit expansion would have been (*more/less*) than in this example.