Practice Problem

Consider a country with one bank, one household, and a Central Bank. The balance sheet items for each entity on 01/01/2012 are described below.

The Fed has:

- \$10,000 in T-bills
- \$21,500 in T-notes

The bank has:

- \$50,000 in T-bills
- \$1,000 in cash (notes only)
- deposit account at the Fed with \$30,000 in it

The household:

- a deposit account at the bank with \$5,000 in it
- \$500 in cash

a) Construct balance sheets for the Fed, the bank, and the firm on 01/01/2012.

The central bank:

Assets		Liabilities	
Item	*value*	*Item*	*value*
Total assets		Total liabilities	

The bank:

Assets		Liabilities	
Item	*value*	*Item*	*value*
Total assets		Total liabilities	

The household:

Assets		Liabilities	
Item	*value*	*Item*	*value*
Total assets		Total liabilities	

b) The required reserve ratio (RR) is 15%. What are the bank's excess reserves?

Answer:

c) The household wants to buy a car that costs \$40,000. Since the household doesn't have this much money on hand, it has to take a loan from the bank. How much money does the central bank need to inject in the economy so the bank can provide such a loan to the firm?

Answer:

d) On 01/02/2012 The central bank proceeds with buying the required number of securities (the number you found in part c) from the bank. Construct the balance sheets for the central bank, the bank, and the firm on 01/02/2012.

The central bank:

Assets		Liabilities	
Item	*value*	*Item*	*value*
Total assets		Total liabilities	

The bank:

Assets		Liabilities	
Item	*value*	*Item*	*value*
Total assets		Total liabilities	

The household:

Assets		Liabilities	
Item	*value*	*Item*	*value*
Total assets		Total liabilities	

e) On the next day, the household comes to the bank to apply for the loan. The loan officer at the bank approves the application. The household immediately gets a loan for the required amount in cash. Construct the balance sheets for the central bank, the bank, and the household on 01/03/2012. Assume that the household doesn't buy the car until a week later.

The central bank:

Assets		Liabilities	
Item	*value*	*Item*	*value*
Total assets		Total liabilities	

The bank:

Assets		Liabilities	
Item	*value*	*Item*	*value*
Total assets		Total liabilities	

The household:

Assets		Liabilities	
Item	*value*	*Item*	*value*
Total assets		Total liabilities	

f) What are the bank's excess reserves on 01/03/2015?

Answer: