

CHAPTER 15

Multiple Deposit Creation and the Money Supply Process

Four Players in the Money Supply Process

1. Central bank: the Fed
2. Banks
3. Depositors
4. Borrowers from banks

Federal Reserve System

1. Conducts monetary policy
2. Clears checks
3. Regulates banks

The Fed's Balance Sheet

Federal Reserve System

Assets	(Monetary) Liabilities
Government securities	Currency in circulation
Discount loans	Reserves

Monetary Base (high powered money): $MB = C + R$

Deposit Creation: Single Bank

First National Bank		Liabilities	
Assets			
Securities	- \$100		
Reserves	+ \$100		

First National Bank		Liabilities	
Assets			
Securities	- \$100	Deposits	+ \$100
Reserves	+ \$100		
Loans	+ \$100		

First National Bank		Liabilities	
Assets			
Securities	- \$100	Deposits	+ \$100
Loans	+ \$100		

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Deposit Creation: Banking System

Bank A		Liabilities	
Assets			
Reserves	+ \$100	Deposits	+ \$100

Bank A		Liabilities	
Assets			
Reserves	+ \$10	Deposits	+ \$100
Loans	+ \$90		

Bank B		Liabilities	
Assets			
Reserves	+ \$90	Deposits	+ \$90

Bank B		Liabilities	
Assets			
Reserves	+ \$9	Deposits	+ \$90
Loans	+ \$81		

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Deposit Creation

Bank	Increase in Deposits (\$)	Increase in Loans (\$)	Increase in Reserves (\$)
First National	0.00	100.00	0.00
A	100.00	90.00	10.00
B	90.00	81.00	9.00
C	81.00	72.90	8.10
D	72.90	65.61	7.29
E	65.61	59.05	6.56
F	59.05	53.14	5.91
.	.	.	.
.	.	.	.
.	.	.	.
Total for all banks	1,000.00	1,000.00	100.00

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Deposit Creation

If Bank A buys securities with \$90 check

Bank A

Assets		Liabilities	
Reserves	+ \$10	Deposits	+ \$100
Securities	+ \$90		

Seller deposits \$90 at Bank B and process is same

Whether bank makes loans or buys securities, get same deposit expansion

Deposit Multiplier

Simple Deposit Multiplier

$$\Delta D = \frac{1}{r} \times \Delta R$$

Deriving the formula

$$R = RR = r \times D$$

$$D = \frac{1}{r} \times R$$

$$\Delta D = \frac{1}{r} \times \Delta R$$

Deposit Creation: Banking System as a Whole

Banking System

Assets		Liabilities	
Securities	- \$100	Deposits	+ \$1000
Reserves	+ \$100		
Loans	+ \$1000		

Critique of Simple Model

Deposit creation stops if:

1. Proceeds from loan kept in cash
2. Bank holds excess reserves
