



Understanding Economics

2nd edition

by Mark Lovewell and Khoa Nguyen

Chapter 13

Money

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Chapter Objectives

In this chapter, you will:

- examine the functions of money, its components, and the various definitions of money
- learn about the demand for and supply of money and about equilibrium in the money market
- see how money is created and consider the money multiplier

The Functions of Money

- There are three main functions that money performs
 - a means of exchange (it overcomes the need for barter)
 - a store of purchasing power
 - a measure of value

Deposit-Takers

- Deposit-takers
 - accept funds provided by savers and lend these funds to borrowers
 - hold cash reserves to meet the needs of depositors withdrawing funds

The Canadian Financial System

- The four traditional pillars of the Canadian financial system were
 - chartered banks
 - trust companies
 - insurance companies
 - investment dealers
- Financial deregulation is allowing institutions in each pillar to perform a wider range of functions

Chartered Banks and Near Banks

- Chartered banks are deposit-takers allowed by charter to offer a wide range of financial services
- Near banks are deposit-takers that are not chartered and have more specialized services
 - trust companies
 - mortgage loan companies
 - credit unions and *caisses populaires*

Chartered Banks and Near Banks in Canada

Figure 13.1, Page 325

(total assets, \$ billions, 31 July 2000)

Assets		Liabilities	
Royal Bank	\$ 277.6	Trust and mortgage	
CIBC	265.8	loan companies	\$ 12.2
Montreal	235.6	Credit unions and	
Scotiabank	243.1	caisses populaires	117.7
Toronto-Dominion	272.7	Total	<u>\$129.9</u>
National	73.6		
Others	115.2		
Total	<u>\$1483.6</u>		

Components of the Money Supply

(a)

- There are various possible components of the money supply
 - currency includes notes and coinage
 - demand deposits are funds to which depositors have immediate access
 - notice deposits are funds for which deposit-takers may require notice for withdrawals
 - term deposits are funds to which depositors have no access for a fixed period

Components of the Money Supply

(b)

- foreign currency deposits are funds held by Canadian residents that are valued in foreign currency

Money Defined (a)

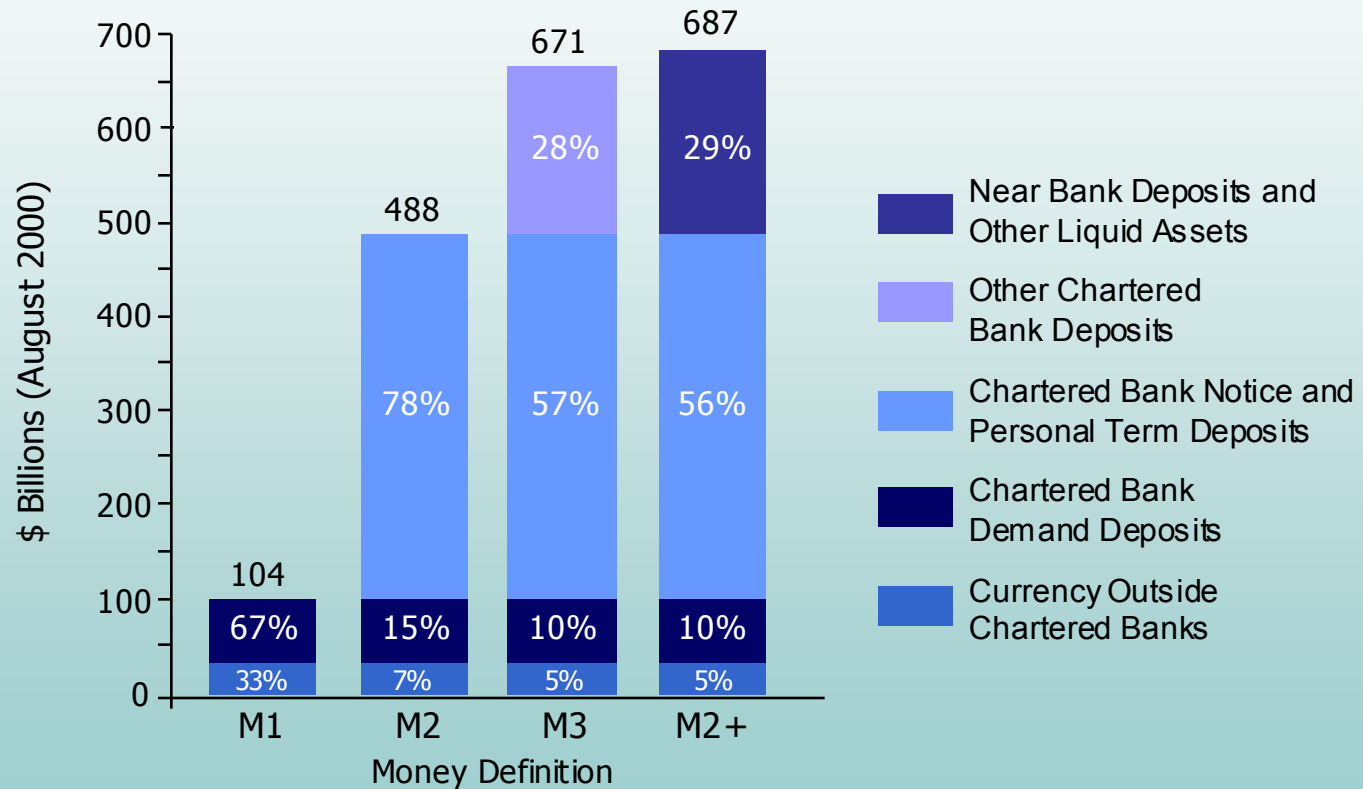
- There are four common definitions of money in Canada
 - M1 includes currency outside chartered banks and publicly held demand deposits at chartered banks
 - M2 consists of M1 plus notice deposits and personal term deposits at chartered banks

Money Defined (b)

- M3 consists of M2 plus nonpersonal term deposits and foreign currency deposits at chartered banks
- M2+ consists of M2 plus corresponding deposits at near banks and some other liquid assets

The Canadian Money Supply

Figure 13.2, Page 327



Choosing a Definition (a)

- Some economists believe that M1 is the most accurate definition of the money supply
- Other economists prefer M2 or M2+ especially because of recent innovations in payments methods
 - credit cards make it more convenient for purchasers to use deposits for payments purposes by borrowing funds for short periods

Choosing a Definition (b)

- debit cards add to the convenience of using deposits for payment purposes by allowing funds to be electronically moved from these deposits

Money Demand (a)

- There are two types of money demand
 - transactions demand is related to money's use as a means of exchange and varies directly with real output and the price level
 - asset demand is related to money's use as a store of purchasing power and is inversely related to the nominal interest rate

Money Demand and Money Supply

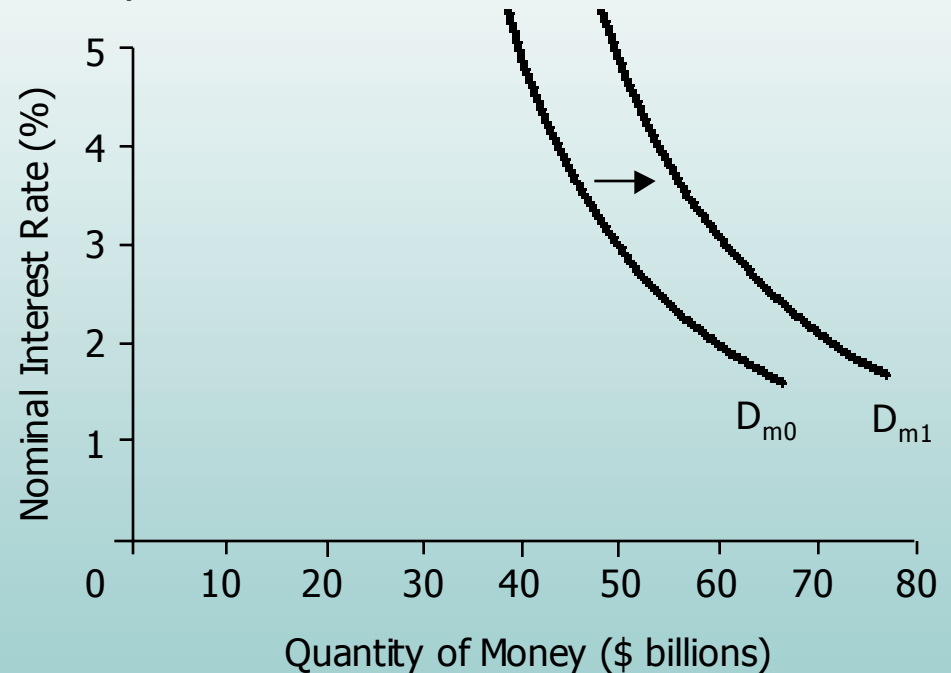
- Money demand
 - represents the amounts of money demanded (for both transactions and asset demand purposes) at all possible interest rates
 - is represented by a schedule or curve
- Money supply
 - is a set amount determined by government decision-makers
 - is represented by a schedule or curve

The Demand for Money

Figure 13.3, Page 331

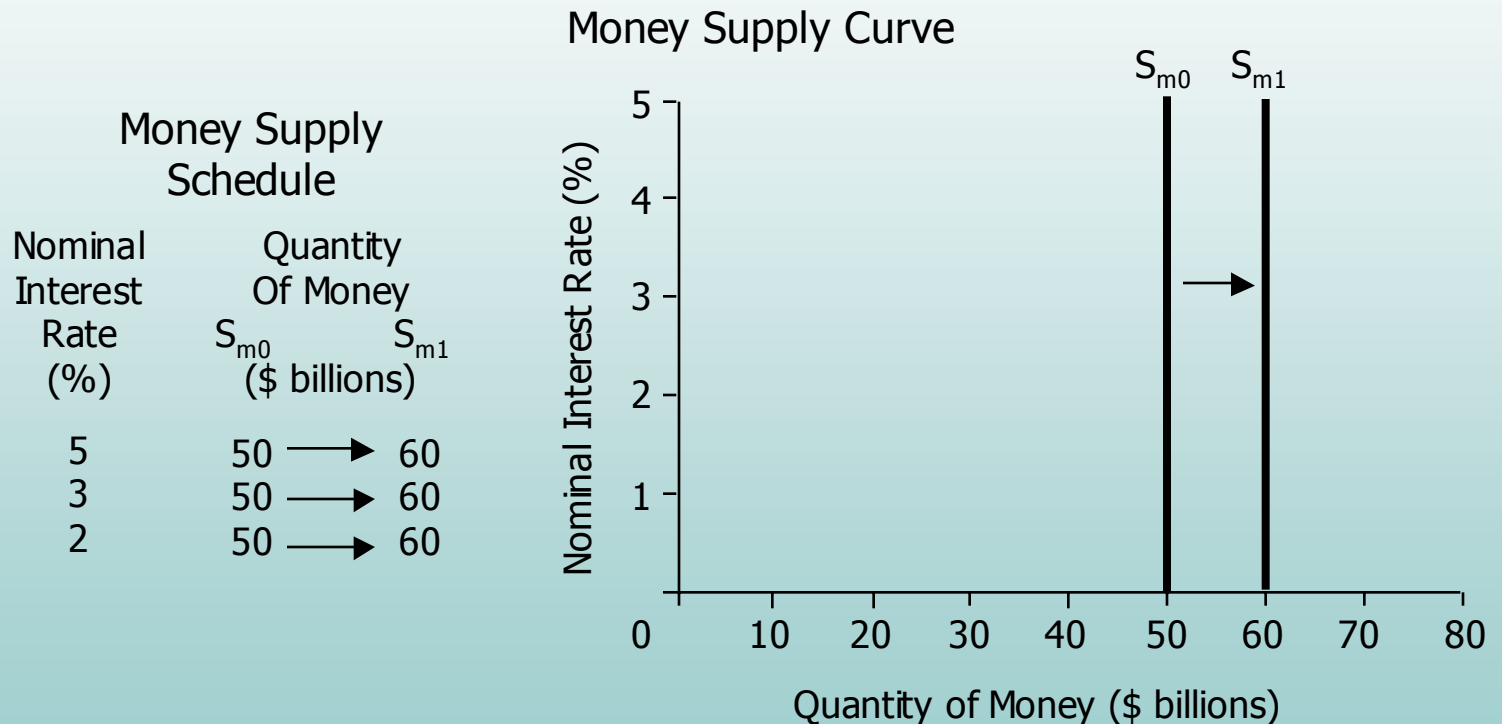
Nominal Interest Rate (%)	Quantity of Money (\$ billions)	
	D_{m0}	D_{m1}
5	40	50
3	50	60
2	60	70

Money Demand Curve



The Supply of Money

Figure 13.4, Page 332



Equilibrium in the Money Market

- Equilibrium in the money market occurs at the intersection of the money demand and money supply curves
- The equilibrium interest rate is inversely related to the money supply

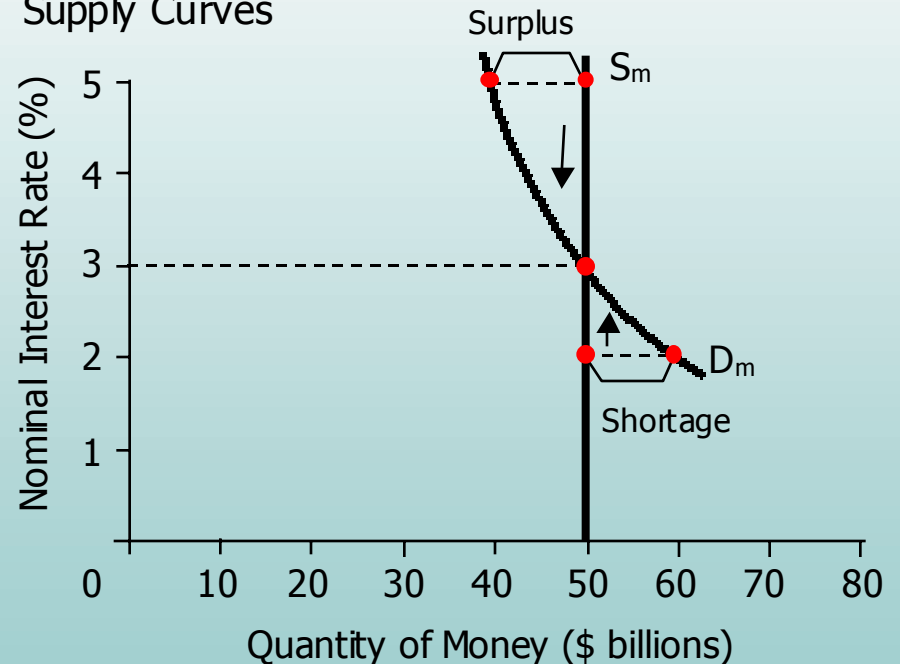
Equilibrium in the Money Market

Figure 13.5, Page 333

Money Demand and Supply Schedules

Nominal Interest Rate (%)	Quantity Supplied (\$ billions)	Quantity Demanded (\$ billions)	(surplus (+) or shortage (-))
5	50	40	+10
3	50	50	0
2	50	60	-10

Money Demand and Supply Curves



Money Creation (a)

- Desired reserves are the minimum cash reserves that deposit-takers hold to satisfy anticipated withdrawal demands
- The reserve ratio equals desired reserves divided by deposits
- Excess reserves equal cash reserves minus desired reserves
- As long as excess reserves exist new money will be created

Opening a Deposit

Figure 13.6, Page 335

Cabot Bank			
Assets		Liabilities	
Cash Reserves	+\$1000	Saver A's Deposit	\$1000

Granting a Loan

Figure 13.7, Page 335

Cabot Bank			
Assets		Liabilities	
Cash Reserves	\$1000	Saver A's Deposit	\$1000
Loan to Borrower X	+\$900	Borrower X's Deposit	+\$900

Withdrawing a Deposit

Figure 13.8, Page 336

Cabot Bank			
Assets		Liabilities	
Cash Reserves	\$100(\$1000 - \$900)	Saver A's Deposit	\$1000
Loan to Borrower X	\$900	Borrower X's Deposit	\$0(\$900 - \$900)

Accepting Deposit Funds

Figure 13.9, Page 336

Fraser Bank			
Assets		Liabilities	
Cash Reserves	+\$900	Saver B's Deposit	+\$900

Granting a Loan

Figure 13.10, Page 337

Fraser Bank			
Assets		Liabilities	
Cash Reserves	+\$900	Saver B's Deposit	+\$900
Loan to Borrower Y	+\$810	Borrower Y's Deposit	+\$810

Money Creation (b)

- The money multiplier
 - is the value by which an amount of excess reserves is multiplied to give the maximum change in the money supply
 - equals $(1/\text{the reserve ratio})$
- The actual money supply change is less than the maximum amount found using the above formula because of publicly held currency and non-monetary deposits

We Are What We Make

- Harold Innis

- outlined the staples thesis which highlights the role of staple products (e.g. fish and furs) in Canada's economic development
- devised a communications theory which classifies societies based on whether they use a time-biased medium (e.g. parchment) or space-biased medium (e.g. paper)

The Evolution of Money (a)

- Precious metals began to be used as money 7000 years ago.
- The first coins were developed in the 7th century BCE in what is now Turkey.
- Early coins were full-bodied, and cheaters tried to make a profit by employing practices known as clipping and hollowing. In addition, rulers sometimes debased their currency.

The Evolution of Money (b)

- Gresham's Law states that "cheap money" always drives "dear money" out of circulation.
- Paper money first appear in China in the 7th century CE.
- In Europe, the introduction of paper money was closely tied to the evolution of banks.

The Evolution of Money (c)

- By the 17th century, the certificates of deposit issued by banks were being generally accepted as money, first in England and the Netherlands, and then more generally in Europe.
- Paper currency in the European world dates back to the 17th century also, with the colony of New France being an early pioneer with playing cards.

The Evolution of Money (d)

- During the 19th and early 20th centuries, Europe and North America were on the gold standard
- This standard meant that a unit of paper currency could be exchanged for a certain amount of gold
- The gold standard finally lapsed in Canada and other countries during the Great Depression.



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The End

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