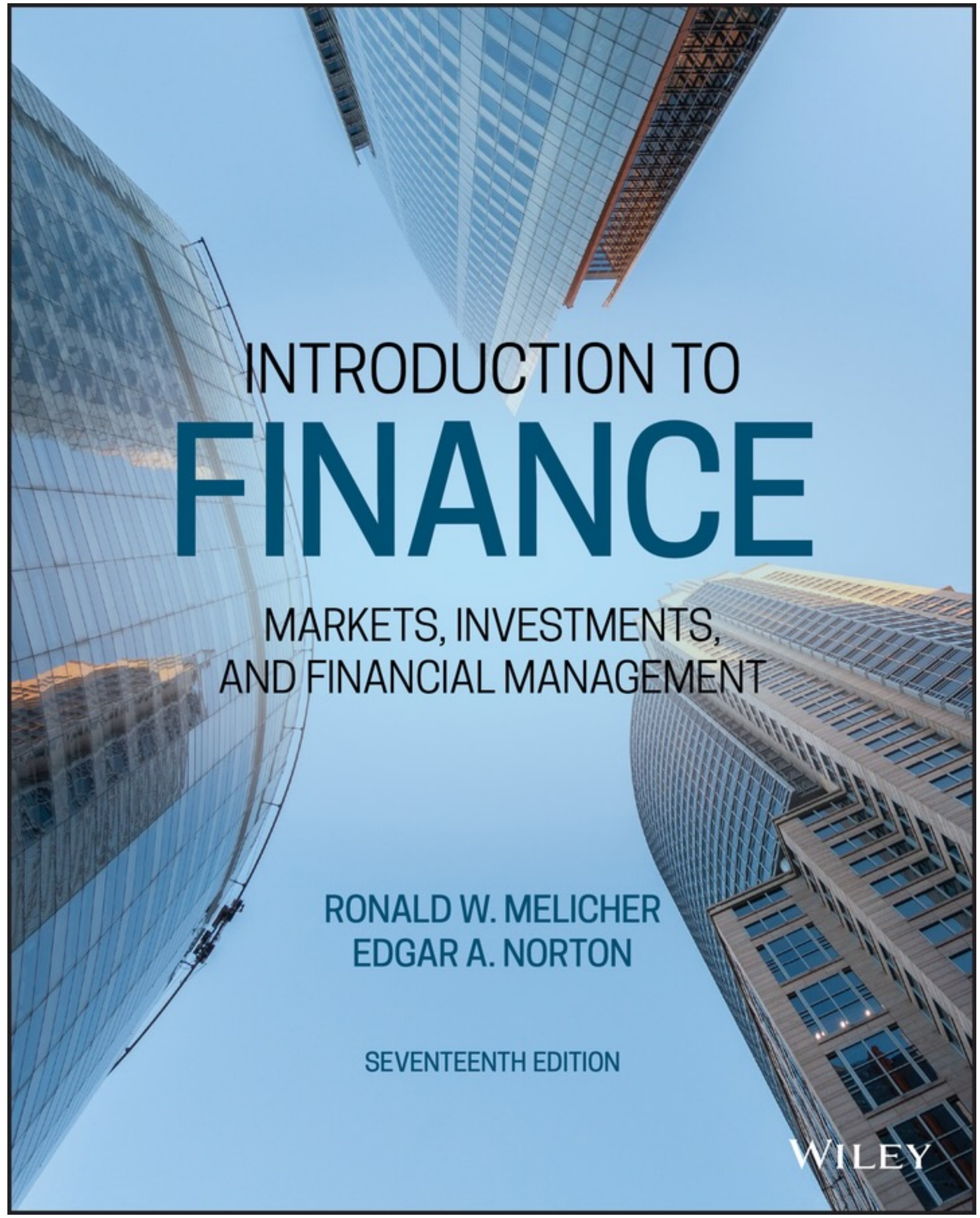
Chapter 7

Savings and Investment Process



Learning Objectives

- LO 7.1 Identify and describe the major components of the gross domestic product (GDP).
- LO 7.2 Describe the principal sources of federal government revenues and expenditures.

Learning Objectives

- LO 7.3 Explain how savings are created and describe the major sources of savings in the United States.
- LO 7.4 Identify and describe the factors that affect savings.
- LO 7.5 Describe major capital market securities that facilitate the savings and investment process.

Learning Objectives

- LO 7.6 Describe the types of mortgage loans available to individuals and how the mortgage markets facilitate home ownership.
- LO 7.7 Discuss the role of individuals in the 2007–08 financial crisis.

Section 7.1 Gross Domestic Product and Capital Formation

- LO 7.1 Identify and describe the major components of the gross domestic product (GDP).

U.S. Political and Economic System

Democracy

- System of government where limited authority and power are granted by law to its people who participate by voting on government goals and actions

Capitalism

- Economic system with private ownership of assets, production of goods and services for profit, a price mechanism for allocating resources, and financial markets

U.S. Political and Economic System

Democratic Capitalism

- Country or state organized as a democracy that uses or adopts a capitalistic economic system

Alternative System: Autocratic Capitalism

- Country or state organized as an autocratic political system that uses elements of a markets-based system

Basic Terms

Gross Domestic Product (GDP)

- Measure of the output of goods and services in an economy

Capital Formation

- Creation of capital goods including residential and commercial buildings, equipment and machinery, and business inventories

Gross Domestic Product (GDP) Components

GDP is composed of:

- Personal Consumption Expenditures
- Government Expenditures including Gross Investment
- Gross Private Domestic Investment
- Net Exports of Goods and Services

Gross Domestic Product (GDP) Components

Equation: **GDP = PCE + GE + GPDI + NE**

Personal Consumption Expenditures (PCE)

- Expenditures by individuals for durable goods, nondurable goods, and services

Government Expenditures (GE)

- Expenditures for goods and services plus gross investments by federal, state, and local governments

Gross Domestic Product (GDP) Components

Equation: **GDP = PCE + GE + GPDI + NE**

Gross Private Domestic Investments (GPDI)

- Measures fixed investment in residential and nonresidential structures, producers' durable equipment, and changes in business inventories

Net Exports (NE)

- Exports of goods and services minus imports

Recent Gross Domestic Product (GDP) Amounts

($ Billions)	2009	2015	2018
GDP	$14,258.7	$18,164.8	$20,500.6
PCE	10,092.6	12,444.7	13,951.6
GPDI	1,622.9	3,030.6	3,652.2
NE	-390.1	-514.3	-625.6
GE	2,933.3	3,203.9	3,522.5

U.S. Balance of Payment Imbalances

- Current account deficits continue to occur annually due to imports of goods and services exceeding exports.
- Financial account surpluses occur when foreign businesses and governments make larger direct and portfolio investments in the U.S. than their U.S. counterparts invest in foreign countries.
- When current account deficits are not fully offset by surpluses in the capital and financial accounts, the Fed must either reduce its reserve assets or borrow from foreign central banks.

Section 7.2 Federal Government Receipts and Expenditures

- LO 7.2 Describe the principal sources of federal government revenues and expenditures.

Federal Government Budget Terms

A review of budget-related terms follows:

Federal Budget

- The annual revenue and expenditure plans that reflect fiscal policy objectives concerning government influence on economic activity

Budget Surplus

- Occurs when tax revenues (receipts) are more than expenditures (outlays)

Budget Deficit

- Occurs when tax revenues (receipts) are less than expenditures (outlays)

Federal Government Budget Terms

Congress reviews the proposed budget, makes changes, and passes specific spending and revenue bills to implement the next fiscal budget.

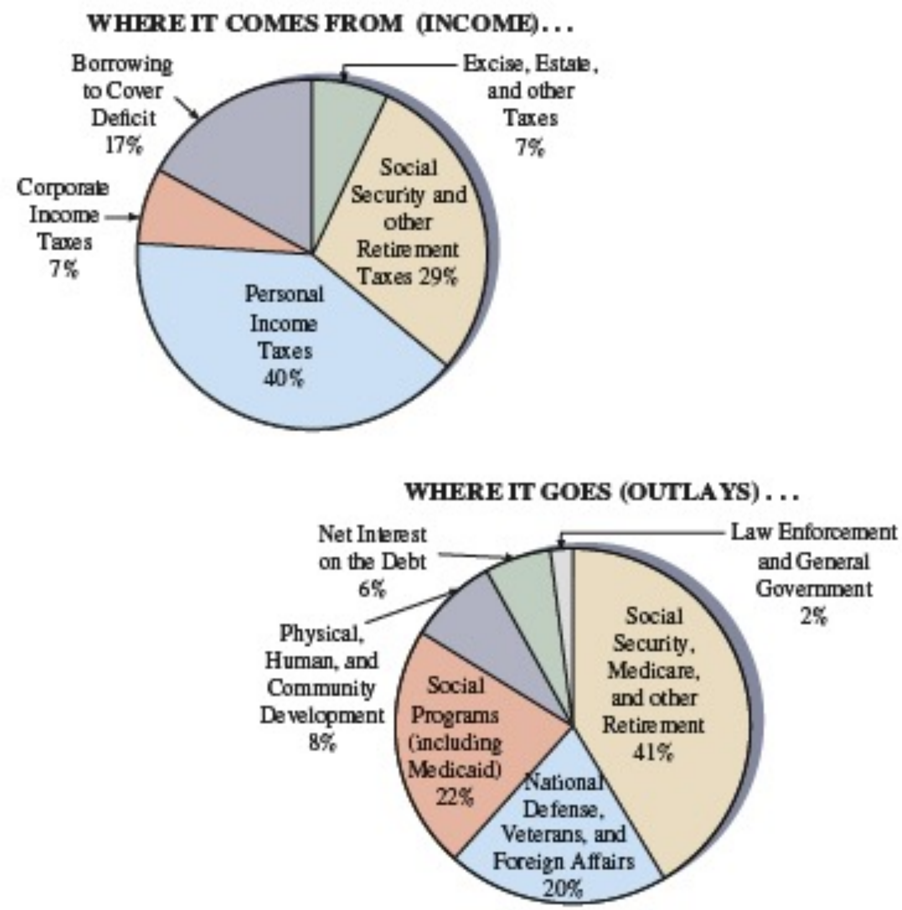
Mandatory Spending

- Government spending on entitlement (e.g., Social Security & Medicare) programs that must be funded according to existing law

Discretionary Spending

- Government spending provided by passage of appropriations bills that set aside funds for specific federal agencies and programs

Figure 7.1 The Federal Government Dollar, Fiscal Year 2017



Federal Government Dollar: Fiscal Year 2017

Where It Comes From (Income)

- Personal Income Taxes (40%)
- Social Security and other Retirement Taxes (29%)
- Borrowing to Cover Deficit (17%)
- Corporate Income Taxes (7%)
- Excise, Estate, and other Taxes (7%)

Federal Government Dollar: Fiscal Year 2014

Where It Goes (Outlays)

- Social Security, Medicare, and other retirement (41%)
- National Defense, veterans, and Foreign Affairs (20%)
- Social Programs (including Medicaid)(22%)
- Physical , Human, and Community Development (8%)
- Net Interest on the Debt (6%)
- Law Enforcement and General Gov’t. (2%)

The National Debt

National Debt

- Total debt owed by the government and it reflects the cumulative amount of annual budget surpluses and deficits throughout the history of the United States

Federal Statutory Debt Limits

- Limits by Congress setting the maximum amount of national debt that can be outstanding

Annual Budget Results and the Size of the National Debt

- Fiscal 1970-1997:
  Annual deficit budgets
- Fiscal 1998-2001:
  Annual surplus budgets
- Fiscal 2002-Present:
  Annual deficit budgets (with deficits greater than $1.0 trillion over the 2009-2012 period)
- National Debt: Reached $21.5 trillion at the end of fiscal 2018

Section 7.3 Role and Major Sources of Savings

- LO 7.3 Explain how savings are created and describe the major sources of savings in the United States.

Historical Role of Savings in the United States

- Foreign investors initially purchased large amounts of the securities sold by government & private promoters to develop the U.S.
- The American family later took over the function of providing savings for the capital formation process

Creation of Savings: Terms

Economic Unit Savings:

- Occur when an economic unit's income exceeds its expenses, taxes, and real asset investments

Savings Surplus Unit

- An economic unit that generates savings

Undistributed Profits

- Proportion of after-tax profits retained by corporations

Savings Deficit Unit

- An economic unit with income less than its expenses, taxes, & real asset investments

Personal Savings in the U.S.

Personal Saving

- Savings of individuals equal to personal income less personal current taxes less personal outlays

Voluntary Savings

- Savings held or set aside by choice for future use

Contractual Savings

- Savings accumulated on a regular schedule by prior agreement

Personal Savings in the U.S.

Personal Saving Equation

- Personal saving equals = personal income – personal current taxes – personal outlays

Where: personal income less personal current taxes equals disposable personal income

Personal Savings Rate

- Personal savings divided by disposable personal income

Historical Personal Savings Rates

1960	10.0%
1965	11.4
1970	12.6
1975	13.0
1980	10.6
1985	8.6
1990	7.8
1995	6.4
2000	4.2
2005	2.6
2010	5.6
2015	5.1
2018	6.7

Corporate Savings in the U.S.

The measurement of corporate savings begins with Corporate profits before taxes adjusted for inventory valuation adjustments and capital consumption adjustments.

Inventory Valuation Adjustment

- Estimate of the change in value of inventory held by corporations

Capital Consumption Adjustment

- Estimate of the "using up," or depreciation, of plant and equipment assets used for business purposes

Corporate Savings in the U.S.

Undistributed Profits Equation

- Undistributed profits = profits before taxes - tax liabilities – dividends
  Where: Profits before taxes less tax liabilities equals profits after taxes

Corporate Retention Rate

- Calculated as undistributed profits divided by profits after taxes

Section 7.4 Factors Affecting Savings

- LO 7.4 Identify and describe the factors that affect savings.

Factors Affecting Savings

- Levels of income
- Economic expectations
- Cyclical Influences (economic cycles)
- Life stage of the individual saver or corporation

Life Stages of the Individual Saver

Individual Saver

- Formative/education developing
- Career starting/family creating
- Wealth building
- Retirement enjoying

Life Stages of the Corporation

Corporation

- Start-up stage
- Survival stage
- Rapid growth stage
- Maturity stage

Section 7.5 Capital Market Securities

- LO 7.5 Describe major capital market securities that facilitate the savings and investment process.

Review of Securities and Markets

Money Markets

- Markets where debt securities of one year or less are issued or traded

Money Market Securities

- Debt instruments or securities with maturities of one year or less

Capital Markets

- Markets were debt securities with maturities longer than one year and corporate stocks are issued or traded

Capital Market Securities

- Debt securities with maturities longer than one year and corporate stocks

Figure 7.2 Major Capital Market Securities

Securities	Typical Maturities	Issuers	Investors	Secondary Market
Mortgages	5 to 30 years	Financial intermediaries	Individuals, business firms, and institutions	High activity
Treasury notes/ bonds	2 to 30 years	U.S. government	Individuals, business firms, and institutions	High activity
Municipal bonds	2 to 40 years	State/local governments	Individuals, business firms, and institutions	Moderate activity
Corporate bonds	2 to 30 years	Corporations	Individuals, business firms, and institutions	Moderate activity
Corporate stocks	None	Corporations	Individuals, business firms, and institutions	High activity

Major Capital Market Securities

Securities:	Issuers:
• Mortgages	Fin. intermediaries
• Treasury notes/bonds	U.S. government
• Municipal bonds	State/local gov'ts.
• Corporate bonds	Corporations
• Corporate stocks	Corporations

Major Capital Market Securities

Securities:	Secondary Market:
• Mortgages	High activity
• Treasury notes/bonds	High activity
• Municipal bonds	Moderate activity
• Corporate bonds	Moderate activity
• Corporate stocks	High activity

Capital Market Securities Defined

Mortgage

- Loan backed by real property in the form of buildings and houses

Treasury note/bond

- Debt instrument (with a maturity greater than one year) issued by the U.S. federal government

Municipal bond:

- Debt instrument (with a maturity greater than one year) issued by a state or local government

Capital Market Securities Defined

Corporate Bond

- Debt instrument (with a maturity greater than one year) issued by a corporation to raise longer-term funds

Common Stock

- Ownership interest in a corporation

Derivative Security

Derivative Security

- Financial contract that derives its value from a bond, stock, or other asset

Use of Derivative Securities

- Corporations can use derivative securities to insure or hedge against various financial risks

Section 7.6 Mortgage Markets

- LO 7.6 Describe the types of mortgage loans available to individuals and how the mortgage markets facilitate home ownership.

Mortgage Markets Definition

We previously defined a “mortgage” as a loan backed by real property in the form of buildings and houses

Mortgage Markets

- Where mortgage loans to purchase buildings and houses are originated and traded

Types of Mortgages

Fixed-Rate Mortgage

- Fixed interest rate with a constant periodic payment over the real estate loan's life

Adjustable-Rate Mortgage (ARM)

- Interest rate and periodic payments that vary with market interest rates over the real estate loan's life

Packaging Mortgage Loans into Securities

Securitization

- Process of pooling or packaging mortgage loans into debt securities

Mortgage-Backed Security

- Debt security created by pooling together a group of mortgage loans

Credit Ratings and Scores

Credit Rating

- Indicates the expected likelihood that a borrower will pay a debt according to the terms agreed to

Credit Score

- A number that indicates the creditworthiness or likelihood that a borrower will make loan payments when due

Prime and Subprime Mortgage Loans

Prime Mortgage

- Home loan made to borrower with a relatively high credit score indicating the likelihood that loan payments will be made as agreed to

Subprime Mortgage

- Home loan made to a borrower with a relatively low credit score indicating the likelihood that loan payments might be missed when due

Secondary Mortgage Markets Participants

- Mortgage loans are originated and sometimes packaged together to create mortgage-backed securities that often are sold in the secondary mortgage markets
- The federal government has played an active role in the development of secondary mortgage markets by creating:
  --Fannie Mae (1938)
  --Ginnie Mae (1968)
  --Freddie Mac (1970)

Section 7.7 Role of the Individual in the 2007-08 Financial Crisis and Today

- LO 7.7 Discuss the role of individuals in the 2007–08 financial crisis.

A Further Look at the 2007-08 Financial Crisis

Early Factors

- **2000**: Internet or “tech” bubble burst and stock prices began declining rapidly
- **2001**: Economic recession resulted (exacerbated by the 9/11/2001 terrorist attacks)
- **2001-2002**: Monetary policy focused on providing liquidity and fiscal policy focused on increased spending and tax cuts resulting in low interest rates and economic growth

Borrowing-Related Cultural Shift

- U.S. consumers moved from a “save now, buy later” view to “spend now, pay later” one with the result being increased mortgage loans and credit card borrowings
- U.S. government officials encouraged wider home ownership and mortgage lenders offered adjustable-rate mortgages (ARMs) and even subprime mortgages to poorly qualified borrowers
- The “housing price bubble” burst in mid-2006 and home owners began defaulting

Subsequent Recovery

- Fiscal stimulus efforts and Fed easy money policies helped foster economic recovery and growth that began in mid-2009 and has continued at least through 2018
- Unemployment rates declined from 10 in 2008 to below 4 percent by the end of 2018
- Individuals have increased their savings rates in recent years and seem to be more prudent in their use of credit

Web Links

- www.bea.gov
- www.irs.gov
- www.treasurydirect.gov
- www.federalreserve.gov