Macroeconomics
CHAPTER 9

Savings, Investment Spending, and the Financial System

What you will learn in this chapter:
1. The relationship between savings and investment spending
2. About the loanable funds market, which shows how savers are matched with borrowers
3. The purpose of the four principal types of assets: stocks, bonds, loans, and bank deposits
4. How financial intermediaries help investors achieve diversification
5. Some competing views of what determines stock prices and why stock market fluctuations can be a source of macroeconomic instability

Matching Up Savings and Investment Spending

- According to the savings–investment spending identity, savings and investment spending are always equal for the economy as a whole.
- The budget surplus is the difference between tax revenue and government spending when tax revenue exceeds government spending.
- The budget deficit is the difference between tax revenue and government spending when government spending exceeds tax revenue.

The Savings–Investment Spending Identity in a Closed Economy

In a closed economy: GDP = C + I + G

\[
S_{Private} = GDP + TR - T - C \\
S_{Government} = T - TR - G \\
NS = S_{Private} + S_{Government} = (GDP + TR - T - C) + (T - TR - G) \\
= GDP - C - G
\]

Hence, \( I = NS \)

Investment spending = National savings in a closed economy

A Budget Surplus

- The budget balance is the difference between tax revenue and government spending.
- National savings, the sum of private savings plus the budget balance, is the total amount of savings generated within the economy.

The graph shows the distribution of savings and investment spending with a budget surplus.
The Savings–Investment Spending Identity in an Open Economy

\[ I = S_{\text{Private}} + S_{\text{Government}} + (IM - X) = NS + KI \]

Investment spending = National savings + Capital inflow in an open economy

The Market for Loanable Funds

- The loanable funds market is a hypothetical market that examines the market outcome of the demand for funds generated by borrowers and the supply of funds provided by lenders.
- The interest rate is the price, calculated as a percentage of the amount borrowed, charged by the lender to a borrower for the use of their savings for one year.
The Market for Loanable Funds

The rate of return of a project is the profit earned on the project expressed as a percentage of its cost.

\[
\text{Rate of return} = \left( \frac{\text{Revenue from project} - \text{Cost of project}}{\text{Cost of project}} \right) \times 100
\]

The Supply for Loanable Funds

Equilibrium in the Loanable Funds Market

Savings, Investment Spending, and Government Policy

Increasing Private Savings

The Financial System – Definitions

- A household’s wealth is the value of its accumulated savings.
- A financial asset is a paper claim that entitles the buyer to future income from the seller.
- A physical asset is a claim on a tangible object that gives the owner the right to dispose of the object as he or she wishes.
The Financial System – Definitions

- A **liability** is a requirement to pay income in the future.
- **Transaction costs** are the expenses of negotiating and executing a deal.
- **Financial risk** is uncertainty about future outcomes that involve financial losses and gains.

The Financial System – More Definitions

- An individual can engage in **diversification** by investing in several different things so that the possible losses are independent events.
- An asset is **liquid** if it can be quickly converted into cash.
- An asset is **illiquid** if it cannot be quickly converted into cash.

Three Tasks of a Financial System

- Reducing **transaction costs**—the cost of making a deal;
- Reducing **financial risk**—uncertainty about future outcomes that involves financial gains and losses;
- Providing **liquid** assets—assets that can be quickly converted into cash (in contrast to **illiquid** assets, which can’t).

Financial Intermediaries

- A **financial intermediary** is an institution that transforms the funds it gathers from many individuals into financial assets.
- A **mutual fund** is a financial intermediary that creates a stock portfolio and then resells shares of this portfolio to individual investors.
- A **pension fund** is a type of mutual fund that holds assets in order to provide retirement income to its members.
Financial Intermediaries

- A life insurance company sells policies that guarantee a payment to a policyholder’s beneficiaries when the policyholder dies.
- A bank is a financial intermediary that provides liquid assets in the form of bank deposits to lenders and uses those funds to finance the illiquid investments or investment spending needs of borrowers.

Financial Fluctuations

Financial market fluctuations can be a source of macroeconomic instability.

The demand for stocks:
- Stock prices are determined by supply and demand as well as the desirability of competing assets, like bonds: when the interest rate rises, stock prices generally fall and vice versa.

Financial Fluctuations

- One view of how expectations are formed is the efficient markets hypothesis, which holds that the prices of financial assets embody all publicly available information.
- It implies that fluctuations are inherently unpredictable—they follow a random walk.

Irrational Markets?

- Many market participants and economists believe that, based on actual evidence, financial markets are not as rational as the efficient markets hypothesis claims.
- Such evidence includes the fact that stock price fluctuations are too great to be driven by fundamentals alone.

An Example of a Diversified Mutual Fund

State Street Global Advisors, S&P 500 Index Fund, Top Holdings (as of March 31, 2005)

<table>
<thead>
<tr>
<th>Company</th>
<th>Percent of mutual fund assets invested in company</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Electric</td>
<td>3.53</td>
</tr>
<tr>
<td>Exxon Mobil</td>
<td>3.52</td>
</tr>
<tr>
<td>Microsoft</td>
<td>2.26</td>
</tr>
<tr>
<td>Citigroup</td>
<td>2.17</td>
</tr>
<tr>
<td>Johnson &amp; Johnson</td>
<td>1.85</td>
</tr>
<tr>
<td>Pfizer</td>
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<tr>
<td>Bank of America</td>
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<tr>
<td>Wal-Mart Stores</td>
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<tr>
<td>IBM</td>
<td>1.38</td>
</tr>
<tr>
<td>Intel</td>
<td>1.34</td>
</tr>
</tbody>
</table>
Stock Prices and Macroeconomics

How do macroeconomists and policy makers deal with the fact that stock prices fluctuate a lot and that these fluctuations can have important economic effects?

The short answer is that, for the most part, they adopt an open-minded but watchful attitude.

Policy makers assume neither that markets always behave rationally nor that they can outsmart them.

The End of Chapter 9

coming attraction:
Chapter 10: Aggregate Supply and Aggregate Demand