Saving and Investment

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Lesson Objectives

In this chapter look for the answers for the following questions:

- What are the main types of financial institutions in the U.S. economy, and what is their function?
- What are the three kinds of saving?
- What's the difference between saving and investment?
- How does the financial system coordinate saving and investment?
- How do govt policies affect saving, investment, and the interest rate?

The Financial System/Institutions

The **financial system:** the group of institutions that helps match the saving of one person with the investment of another. There are two types of them

- **Financial markets:** institutions through which savers can directly provide funds to borrowers (Includes the Bond and Stock markets)
- A **bond** is a certificate of indebtedness (IOU).
- Interest rates that different bonds pay varies by the term, credit risk and tax treatment of the bonds
- There are primary and secondary bond markets . . .

The Financial System/Institutions

- A **stock** is a claim to partial ownership in a firm. When the firm value increases, its stock prices go up and the owners get richer!
- Some of characteristics of a stock include its **Price**, **Dividend Yield**, **Price-Earning (P/E) ratio.**
- Raising funds issuing stock is called **equity finance** while raising funds issuing bonds is called **debt finance**

How to Read Stock data

Market Summary > Apple Inc.
NASDAQ: AAPL

+ Follow

225.27 USD −1.79 (0.79%)

Oct 8, 10:06 AM EDT · Disclaimer

1 day | 5 days | 1 month | 6 months | YTD | 1 year | 5 years | Max

Open	225.82	Div yield	1.37%
High	227.22	Prev close	227.06
Low	225.20	52-wk high	229.93
Mkt cap	1.02T	52-wk low	142.00
P/E ratio	18.45		

Financial Institutions

- **Financial intermediaries:** institutions through which savers can indirectly provide funds to borrowers.

Examples:

- **Banks**
- **Mutual funds** – institutions that sell shares to the public and use the proceeds to buy portfolios of stocks and bonds

Three Important Tasks of a Financial System

1. Reducing transaction costs:
2. Reducing Financial risk:
3. Providing liquidity:

Different Kinds of Saving

- **Private saving,** S_p

  = The portion of households after tax current income that is not used for consumption

  $= Y - T - C$

  = Tax revenue less government spending

- **Government (or Public) Saving,** S_g**:**

  $S_g = T - G$

$$\text{if } (T-G)\begin{cases} >0, & \text{it is budget surplus} \\ <0, & \text{it is budget deficit} \\ =0, & \text{it is balanced budget} \end{cases}$$

National (or aggregate) Saving

- **National Saving,** S

  = Private saving + Gov't saving

  $= (Y - T - C) + (T - G)$

  $= Y - C - G$

  = the portion of national income that is not used for consumption or government purchases

Difference between saving and investment

Explain the difference between saving and investment as defined by a macroeconomist. Which of the following situations represent investment and which represent saving? Explain.

a. Your family takes out a mortgage and buys a new house.
b. You use your paycheck to buy stock in AT&T.
c. Your roommate earns and deposits it in his account at a bank.
d. You borrow from a bank to buy a car to use in your pizza delivery business.

Saving and Investment for Closed (autrky) Economy

From National Income Identity:

$$Y = C + I + G + NX$$

For closed economy:

$$Y = C + I + G$$

by rearranging:

$$Y - C - G = I$$

But Y-C-G= S, hence,

$$S = I$$

- Thus, in closed economy, National Saving always equals Investment.

ACTIVE LEARNING: Saving and Investment in Closed Economy

- Suppose GDP equals $10 trillion, consumption equals $6.5 trillion, the government spends $2 trillion and has a budget deficit of $300 billion.
- Find gov't saving, taxes, private saving, national saving, and investment.

The Market for Loanable Funds

- A supply–demand model of the financial system
- Helps us understand:
  - how the financial system coordinates saving & investment.
  - how govt policies and other factors affect saving, investment, the interest rate.

The Market for Loanable Funds

Assume: only one financial market

- All savers deposit their saving in this market.
- All borrowers take out loans from this market.
- There is one interest rate, which is both the return to saving and the cost of borrowing.

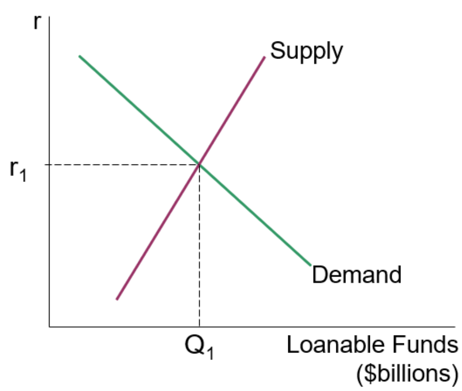
The Market for Loanable Funds: Slope of the Supply for Loanable Funds

- The supply of loanable funds comes from saving:
  - Households with extra income can loan it out and earn interest.
  - gov't saving, if positive, adds to national saving and the supply of loanable funds. If negative, it reduces national saving and the supply of loanable funds.
- The slope of the supply for loanable fund is positive. Why?

The Market for Loanable Funds: Slope for the demand of Loanable Funds

- The demand for loanable funds comes from investment:
  - Firms borrow the funds they need to pay for new equipment, factories, etc.
  - Households borrow the funds they need to purchase new houses.
- The slope of demand for loanable funds is negative. Why?

EQUILIBRIUM IN THE FINANCIAL SECTOR



Changes in r^* and Q^*: Supply Shifters

Anything that shifts the supply curve for L.F. to the right,decreases eq'm r* and increases the quantity of L.F. such as:

1. A saving incentives such as 401K programs, lower taxes on interest income, dividends and capital gains
2. Consumption tax increases
3. Increase in government budget surplus (decrease in deficit)
4. (Financial) capital inflows (from abroad)

Changes in r^* and Q^*: Demand Shifters

- Anything that shifts the demand for L.F. to the right, increases both r^* and Q^* Such shift factors include:

1. Investment Incentives such as investment tax credit
2. Technological progress

ACTIVE LEARNING: Changes in equilbrium points

Use the loanable funds model to analyze the effects of a government budget deficit:

- Draw the diagram showing the initial equilibrium.
- Determine which curve shifts when the government runs a budget deficit.
- Draw the new curve on your diagram. What happens to the equilibrium values of the interest rate and investment?

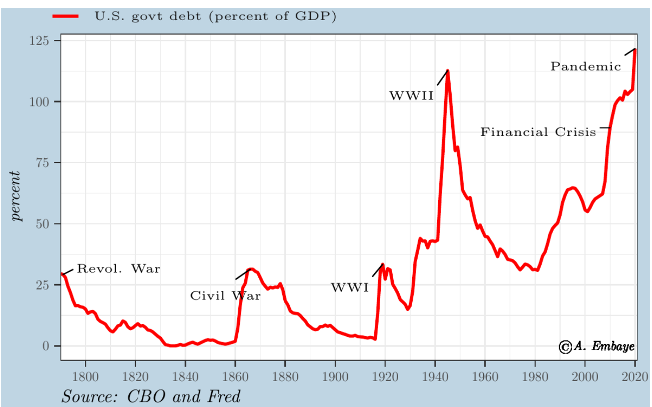
A DIGRESSION: On the Elasticity of Supply of Loanable Fund

- If the supply of LF is steeper, then we call it **Inelastic** (extreme case is **Perfectly Inelastic**) and occurs when supply is vertical
- If the supply of LF is flatter, then we call it **Elastic** (extreme case is **Perfectly Elastic**)

Crowding-out and Crowding-in

- Our analysis: Increase in budget deficit causes fall in investment. The govt borrows to finance its deficit, leaving less funds available for investment. This is called crowding out.
- Recall from the preceding chapter: Investment is important for long-run economic growth. Hence, budget deficits reduce the economy's growth rate and future standard of living.

U.S. Government Debt as a Percentage of GDP, 1790-2020



Financial Crisis

- Effective working of the financial ststyem depends on the confidence on the system
- If the financial system fails, it can take down the economy
- One cause of failure is the instability caused by asset price fluctuations (prices of houses, stocks, etc, fall by large amount creating panic)– when everybody wants to withdraw their saving from the system
- this in turn makes the financial institutions (banks and mutual funds) insolvent, unable to meet withdrawal demands

Anathomy of 2008- 2009 Financial Crisis

The elements of financial crisis are:

1. Asset- price booms and busts
2. Insolvencies at financial institutions
3. Falling Confidence (in the financial system)
4. Credit Crunch
5. Recession (effect on Main Street)
6. Vicious Circle

Who should be blamed?

"Victory has many fathers, but defeat is an orphan," - J. F. Kennedy

- Federal Reserve:
- Home- buyers:
- Mortgage brokers :
- Investment banks:
- Rating agencies:
- Regulators (the Fed, Securities and Exchange Commission (SEC)
- Govt policy makers

CONCLUSION

- Like many other markets, financial markets are governed by the forces of supply and demand.
- One of the Principles from Chapter 1: Markets are usually a good way to organize economic activity. Financial markets help allocate the economy's scarce resources to their most efficient uses.
- Financial markets also link the present to the future: They enable savers to convert current income into future purchasing power, and borrowers to acquire capital to produce goods and services in the future.