Market for Loanable Funds

Table 5-1 indicates that individual households, business firms, governmental units, and foreign entities participate on both sides of the market for loanable funds. Households are major suppliers of funds through personal saving. However, they are demanders of funds through consumer credit purchases and home mortgages. Business saving is a source of funds. Business investment in plants, equipment, and inventories creates a demand for funds. State and local governments use temporarily idle cash to purchase federal government bonds and other IOUs, supplying funds to the market. On the other hand, federal (or state and local) government deficits produce a demand for funds as the government issues new bonds and related instruments. Foreign lending in the United States is a source of U.S. funds. Foreign borrowing in the United States represents a demand for U.S. funds.

If we look at the categories of borrowers and lenders on an actual *net* basis and assume (accurately) that the federal government is running a budget deficit, the supply of loanable funds typically comes from three sources: personal saving, bank loans (strongly influenced by the Federal Reserve), and foreign lending in the United States. Collectively, personal saving by households normally exceeds household buying on credit, making the household sector a net supplier of funds. On the other hand, aggregate business saving typically is outstripped by business investment, rendering the business sector a net demander of funds. In the past 40 years, the federal government budget has been in deficit about 90 percent of the years, making the federal government a demander of funds in most years. In recent years, foreign lending in the United States has exceeded foreign borrowing here (this could change in the future). On a *net* basis, demanders of loanable funds (suppliers of bonds and other debt instruments) include the business and government sectors.

Just as the quantity of wheat supplied and demanded in the market responds to the price of wheat, the quantity of loanable funds supplied and demanded depends on the price of loanable funds, that is, the interest rate. This principle is illustrated in Figure 5-2.

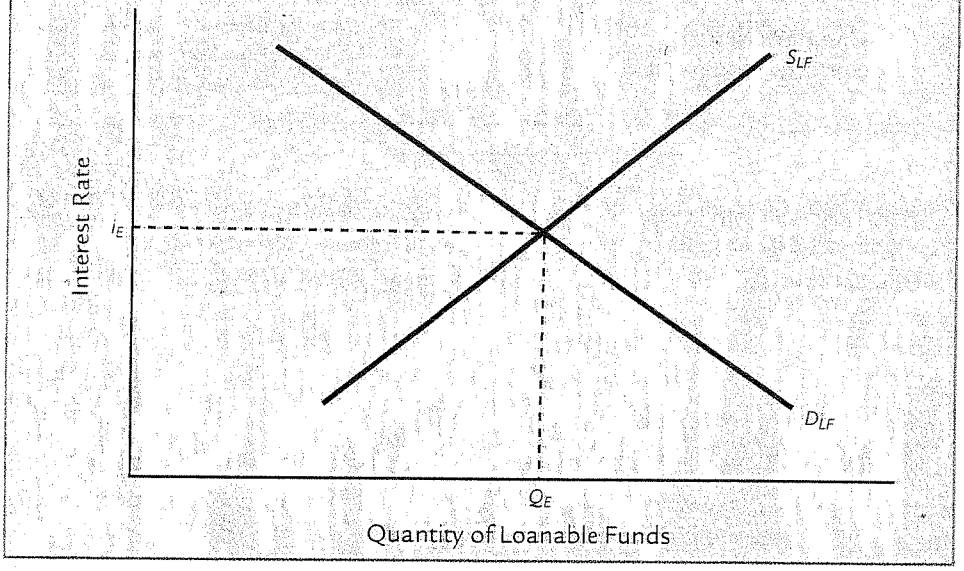
In the figure, S_{LF} and D_{LF} represent the supply and demand curves for loanable funds. The appearances (slopes) of these curves can be explained intuitively by as-

Table 5-1 Individual Sources of Supply and Demand for Loanable Funds in the United States

Sources of Supply	Sources of Demand
Personal saving	Household credit purchases
Business saving	Business investment spending
Government budget surplus	Government budget deficit
Bank loans	Foreign borrowing in the United States
Foreign lending in the United States	

Figure 5-2 Interest Rates and Supply and Demand for Loanable Funds

Interest rates are determined in financial markets by supply and demand for loanable funds. Changes in interest rates are produced by shifts in supply and demand curves.



sessing the interest-rate responsiveness of the individual sources of supply and demand for funds.

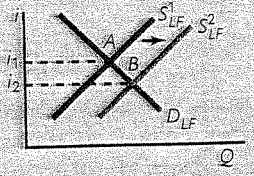
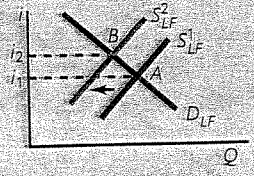
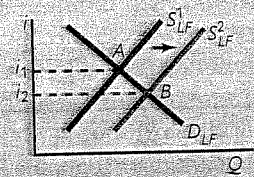
The supply curve of loanable funds is an upward-sloping function of the interest rate. Classical (pre-1930s) economists regarded the interest rate as a measure of the incentive to abstain from current consumption. That is, they viewed the interest rate as the reward for saving. Individuals who save substitute future consumption for current consumption. The higher the interest rate, the greater the amount of future consumption gained by abstaining from current consumption, that is, by saving. A high interest rate counteracts the human trait of **time preference**—the propensity for people to prefer current consumption over future consumption—to want things *now*—and encourages saving.[1]

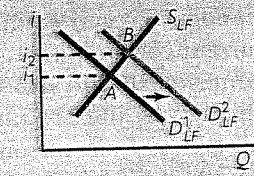
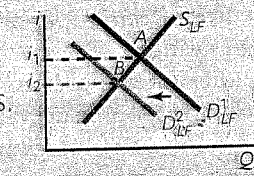
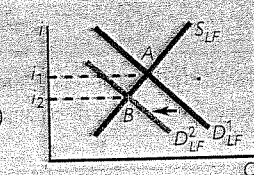
time preference human propensity to exhibit preference for current consumption over future consumption

According to econometric studies, household saving does not respond strongly to interest rate changes. This lack of response suggests a very steep or nearly vertical supply curve in Figure 5-2. However, other forces are working to make the quantity of funds supplied fairly responsive to the interest rate. For example, bank lending (and the money supply) varies directly with interest rates because profit-maximizing banks more aggressively seek out and grant loans as rates rise. When foreign interest rates are held constant, an increase in U.S. rates attracts foreign funds to U.S. financial markets because an enormous pool of financial capital

[1] Suppose you have $20,000 of accumulated savings and are considering buying today a new Ford priced at $20,000. Suppose as an alternative you postpone the purchase and can earn 2 percent on a 20-year government bond, with car prices remaining constant over time. Your $20,000 grows to $29,719 after 20 years, allowing purchase of a fancier car. If you earn 5 percent per year, your $20,000 grows to $53,066 in 20 years, possibly permitting purchase of a Mercedes at that time. The *opportunity cost* (value of the alternative choice you give up) of spending the $20,000 today rather than saving it increases as the interest rate rises. A rational and forward-looking individual likely saves more when interest rates are higher.

Table 5-2 Examples of Events Shifting the Supply and Demand for Loanable Funds

Factors Shifting S_{LF}	Impact on Interest Rate
1. Household thriftiness increases (S_{LF} shifts right)	 ↓
2. Banks tighten their lending standards (S_{LF} shifts left)	 ↑
3. Federal Reserve increases money supply (S_{LF} shifts right)	 ↓

Factors Shifting D_{LF}	Impact on Interest Rate
1. Consumer confidence improves (D_{LF} shifts right)	 ↑
2. Interest rates in Europe decline, reducing desire of foreigners to borrow in U.S. (D_{LF} shifts left)	 ↓
3. Profits decline sharply, impairing business confidence (D_{LF} shifts left)	 ↓

can be transferred easily and instantaneously between countries in response to yield incentives. For these reasons, we draw the S_{LF} curve as upward sloping.

The demand curve for loanable funds is downward sloping: lower interest rates stimulate expenditures on items financed through borrowing. A decline in car loan rates reduces monthly payments, thereby increasing affordability of cars and the quantity of car loans demanded. Other examples of interest-sensitive expenditures contributing to the downward slope of the demand curve in Figure 5-2 include other durable goods purchases, new home purchases, and investment in plants, equipment, inventories, and nonresidential real estate. Lower interest rates in the United States when interest rates in other countries are held constant induce foreigners to increase borrowing in the United States.

Factors Shifting Supply and Demand for Loanable Funds

According to the loanable funds model, the interest rate moves to the equilibrium level—the level that equates the quantity of loanable funds supplied with the quantity of loanable funds demanded. In Figure 5-2, equilibrium occurs at i_E. Any factor producing a shift in the position of the supply curve or demand curve changes the equilibrium interest rate. An increase in demand (rightward shift of the demand curve) or a reduction of supply (leftward shift of the supply curve) increases interest rates. An increase in supply (rightward shift of the supply curve) or a decrease in demand (a leftward shift of the demand curve) decreases interest rates.

Return to the list of factors in Table 5-1. What specific factors would exert downward pressure on interest rates? An increase in personal saving resulting from demographic changes or increasing thriftiness would increase the supply of loanable funds, causing interest rates to decline. So would an increase in business saving resulting from cost-cutting measures on the part of firms. Federal Reserve actions increasing the availability of loans through banks boost the supply of funds and reduce interest rates. Increased political and economic instability in foreign nations increases worldwide preference for U.S. financial assets, boosting supply of funds. On the demand side of the market, a decline in business and consumer confidence due to events such as the terrorist attacks of September 11, 2001, reduce demand for loanable funds and exert downward pressure on interest rates. A decline in foreign interest rates that reduces the willingness of foreigners to borrow in the United States also decreases interest rates. Table 5-2 illustrates the effects of several specific events that shift the supply and demand curves for loanable funds, thereby altering interest rates.

Federal Reserve Policy

The Federal Reserve uses certain policy tools to influence the availability of loans through banks and the nation's money supply. When banks expand loans, the money supply rises. When banks reduce loans, the money supply falls. This process is analyzed in depth in Parts 4 and 5. Because bank loans are an important component of the supply of loanable funds, Federal Reserve policy actions initiate shifts in the supply curve of loanable funds (S_{LF}) in Figure 5-2.

To stimulate the economy, the Fed implements measures encouraging banks to expand loans, thereby boosting the money supply. The supply curve of loanable funds shifts rightward, reducing interest rates. To restrain economic activity, the Fed implements actions forcing banks to reduce lending. The money supply falls and the supply curve of loanable funds shifts leftward, driving up interest rates.