

## Solutions to Chapter 2

### Financial Markets and Institutions

1. The story of Apple Computer provides three examples of financing sources: equity investments by the founders of the company, trade credit from suppliers, and investments by venture capitalists. Other sources include reinvested earnings of the company and loans from banks and other financial institutions.

*Est time: 01–05*

*Raising capital*

2. *Money markets*: where short-term debt instruments are bought and sold.

*Foreign-exchange markets*: where currencies are traded; most trading takes place in over-the-counter transactions between the major international banks.

*Commodities markets*: where agricultural commodities, fuels (including crude oil and natural gas), and metals (such as gold, silver, and platinum) are traded.

*Derivatives markets*: where options and other derivative instruments are traded.

*Est time: 01–05*

*Capital markets*

3.
  - a. False. Financing could flow through an intermediary, for example.
  - b. False. Investors can buy shares in a private corporation, for example.
  - c. False. There is no centralized FOREX exchange. Foreign exchange trading takes place in the over-the-counter market.
  - d. False. Derivative markets are not sources of financing, but markets where the financial manager can adjust the firm's exposure to various business risks.
  - e. False. The opportunity cost of capital is the expected rate of return that shareholders can earn in the financial markets on investments with the same risk as the firm's capital investments.
  - f. False. The cost of capital is an *opportunity* cost determined by expected rates of return in the financial markets. The opportunity cost of capital for risky investments is normally higher than the firm's borrowing rate.

*Est time: 06–10*

*Raising capital*

4.
  - a. Investor A buys shares in a mutual fund, which buys part of a new stock issue by a rapidly growing software company.
  - b. Investor B buys shares issued by the Bank of New York, which lends money to a regional department store chain.

- c. Investor C buys part of a new stock issue by the Regional Life Insurance Company, which invests in corporate bonds issued by Neighborhood Refineries, Inc.

*Est time: 01–05*

*Types of financial institutions*

5. Buy shares in a mutual fund. Mutual funds pool savings from many individual investors and then invest in a diversified portfolio of securities. Each individual investor then owns a proportionate share of the mutual fund's portfolio.

*Est time: 01–05*

*Financial institution functions*

6. Yes, an insurance company is a financial intermediary. Insurance companies sell policies and then invest part of the proceeds in corporate bonds and stocks and in direct loans to corporations. The returns from these investments help pay for losses incurred by policyholders.

*Est time: 01–05*

*Financial institution functions*

7.
  - a. Equities. As a percentage of all investors, households are the largest investor in equities.
  - b. Pension funds. Banks own almost no corporate equities, but instead rely on fixed-income investments.
  - c. Commercial banks. In contrast, investment banks raise money for corporations.

*Est time: 06–10*

*Financial institutions*

8. NASDAQ and The Chicago Mercantile Exchange are financial markets.

*Est time: 01–05*

*Financial institutions*

9.
  - a. False. Exchange traded funds (ETFs) are portfolios of stocks that can be bought or sold in a single trade.
  - b. False. Hedge funds may provide diversification, but are usually only for large investors with significant resources and experience, and have very high fees.
  - c. True. Insurance policy premiums are used to pay claims, create reserves and provide financing for company operations.
  - d. True. The size of the pension investment is variable, depending on market conditions, while the amount contributed is somewhat fixed.

*Est time: 06-10*

*Financial institution functions*

10. Liquidity is important because investors want to be able to convert their investments into cash quickly and easily when it becomes necessary or desirable to do so. Should personal circumstances or investment considerations lead an investor to conclude that it is desirable to sell a particular investment, the investor prefers to be able to sell the investment quickly and at a price that does not require a significant discount from market value.

Liquidity is also important to mutual funds. When the mutual fund's shareholders want to redeem their shares, the mutual fund is often forced to sell its securities. In order to maintain liquidity for its shareholders, the mutual fund requires liquid securities.

*Est time: 01–05*  
*Liquidity*

11. The key to the bank's ability to provide liquidity to depositors is the bank's ability to pool relatively small deposits from many investors into large, illiquid loans to corporate borrowers. A withdrawal by any one depositor can be satisfied from any of a number of sources, including new deposits, repayments of other loans made by the bank, bank reserves, and the bank's debt and equity financing.

*Est time: 01–05*  
*Financial institution functions*

12. Commercial banks accept deposits and provide financing primarily for businesses. Investment banks do not accept deposits and do not loan money to businesses and individuals. Investment banks may make bridge loans as temporary financing for a takeover or acquisition. In addition, investment banks trade many different financial contracts, such as bonds and options, while providing investment advice and portfolio management for institutional and individual investors.

*Est time: 01–05*  
*Financial institution functions*

13. Mutual funds pool money from small investors and invest the money in corporate stocks or bonds for the small investors, thus channeling savings from savers/investors to corporations. For individuals, the advantages of mutual funds are diversification, professional investment management, and record keeping.

*Est time: 01–05*  
*Money and capital markets*

14. Financial markets and financial intermediaries channel savings to real investments. They also channel money from individuals who want to save for the future to those who need cash to spend today. A third function of financial markets is to allow individuals and businesses to adjust their risk. For example, mutual funds, such as the Vanguard Index fund, and ETFs, such as the SPDR's or "spiders," allow individuals to spread their risk across a large number of stocks. Financial markets provide other mechanisms for sharing risks. For example, a wheat farmer and a baker may use the commodity markets to reduce their exposure to wheat prices. Financial markets and intermediaries allow investors to turn

an investment into cash when needed. For example, the shares of public companies are liquid because they are traded in huge volumes on the stock market. Banks are the main providers of payment services by offering checking accounts and electronic transfers. Finally, financial markets provide information, particularly price and demand. For example, the CFO of a company that is contemplating an issue of debt can look at the yields on existing bonds to gauge how much interest the company will need to pay.

*Est time: 06-10*

### *Capital markets*

15. The major functions of financial markets and institutions in a modern financial system are:

- *Channeling savings to real investment:* The savings of individual investors are made available for real investments by corporations and other business entities by way of financial markets and institutions.
- *Transporting cash across time:* Savers can save money now to be withdrawn and spent at a later time, while borrowers can borrow cash today, in effect spending today income to be earned in the future.
- *Risk transfer and diversification:* Insurance companies allow individuals and business firms to transfer risk to the insurance company, for a price. Financial institutions, such as mutual funds, allow an investor to reduce risk by diversification of the investor's holdings.
- *Liquidity:* Financial markets and institutions provide investors with the ability to exchange an asset for cash on short notice, with minimal loss of value. A deposit in a bank savings account earns interest but can be withdrawn at almost any time. A share of stock in a publicly traded corporation can be sold at virtually any time.
- *Payment mechanism:* Financial institutions provide alternatives to cash payments, such as checks and credit cards.
- *Information provided by financial markets:* Financial markets reveal information about important economic and financial variables such as commodity prices, interest rates and company values (i.e., stock prices).

*Est time: 06-10*

### *Financial institution functions*

16. The market price of gold can be observed from transactions in commodity markets. For example, gold is traded on the COMEX division of the New York Mercantile Exchange. Look up the price of gold and compare it to  $\$2,500/6 = \$416.67$  per ounce.

*Est time: 01-05*

### *Primary and secondary markets*

17. Financial markets provide extensive data that can be useful to financial managers. Examples include:
- Prices for agricultural commodities, metals, and fuels.
  - Interest rates for a wide array of loans and securities, including money market instruments, corporate and U.S. government bonds, and interest rates for loans and investments in foreign countries.
  - Foreign exchange rates.
  - Stock prices and overall market values for publicly listed corporations, as determined by trading on the New York Stock Exchange, NASDAQ, or stock markets in London, Frankfurt, Tokyo, and so on.

*Est time: 01–05*

*Financial institution functions*

- 18.
- a.  $332.5 \times \$180 = \$59.850$  billion
  - b. 3.8%, which is the yield to maturity on other A-rated bonds from Table 2.2.
  - c. The farmer sells cattle having raised them. The meat packer buys cattle as the input into products to be processed and sold.

*Est time: 01–05*

*Financial institution functions*

- 19.
- a. False. The financial crisis had its roots in an easy monetary policy that provided funds for banks to expand the supply of subprime mortgages to low-income borrowers.
  - b. False. Subprime mortgages are for residential properties.
  - c. True. Most subprime mortgages were packaged together to be resold as mortgage-backed securities (MBSs), though many banks retained exposure to these securities.
  - d. False. The government arranged for Bank of America to take over Merrill but did nothing to rescue Lehman Brothers, which filed for bankruptcy protection.
  - e. False. Though the massive bailout of Greece calmed the markets somewhat, concerns over Greece and other weak eurozone countries, such as Portugal, Italy, Spain, and even Ireland, remain today.

*Est time: 01–05*

*Money and capital markets*