

CHAPTER 01

INVESTMENTS: BACKGROUND AND ISSUES

1. Equity is a lower-priority claim and represents an ownership share in a corporation, whereas fixed-income (debt) security is a higher-priority claim but does not have an ownership interest. Fixed-income (debt) security pays a specified cash flow at pre-contracted time intervals until the last payment on the maturity date. Equity has an indefinite life.
2. The primary asset has a claim on the real assets of a firm, whereas a derivative asset provides a payoff that depends on the prices of a primary asset but not the claim on real assets.
3. Asset allocation is the allocation of an investment portfolio across broad asset classes. Security selection is the choice of specific securities within each asset class.
4. Agency problems are conflicts of interest between managers and stockholders. They can be addressed through corporate governance mechanisms, such as the design of executive compensation, oversight by the Board, and monitoring from the institutional investors.
5. Real assets are assets used to produce goods and services. Financial assets are claims on real assets or the income generated by them.
6. Investment bankers are firms specializing in the sale of new securities to the public, typically by underwriting the issue. Commercial banks accept deposits and lend the money to other borrowers. After the Glass-Steagall Act was repealed in 1999, some commercial banks started transforming to “universal banks” which provide the services of both commercial banks and investment banks. With the passage of the Dodd–Frank Wall Street Reform and Consumer Protection Act in 2010, Glass-Steagall was partially restored via the Volker Rule.
7.
 - a. Toyota creates a real asset—the factory. The loan is a financial asset that is created in the transaction.
 - b. When the loan is repaid, the financial asset is destroyed but the real asset continues to exist.
 - c. The cash is a financial asset that is traded in exchange for a real asset, inventory.
8.
 - a. No. The real estate in existence has not changed, only the perception of its value has.
 - b. Yes. The financial asset value of the claims on the real estate has changed, and thus the balance sheet of individual investors has been reduced.

c. The difference between these two answers reflects the difference between real and financial asset values. Real assets still exist, yet the value of the claims on those assets or the cash flows they generate do change. Thus, there is the difference.

9.

- a. The bank loan is a financial liability for Lanni. Lanni's IOU is the bank's financial asset. The cash Lanni receives is a financial asset. The new financial asset created is Lanni's promissory note held by the bank.
- b. The cash paid by Lanni is the transfer of a financial asset to the software developer. In return, Lanni gets a real asset, the completed software. No financial assets are created or destroyed. Cash is simply transferred from one firm to another.
- c. Lanni sells the software, which is a real asset, to Microsoft. In exchange Lanni receives a financial asset, 2,500 shares of Microsoft stock. If Microsoft issues new shares in order to pay Lanni, this would constitute the creation of new financial asset.
- d. In selling 2,500 shares of stock for \$125,000, Lanni is exchanging one financial asset for another. In paying off the IOU with \$50,000, Lanni is exchanging financial assets. The loan is "destroyed" in the transaction, since it is retired when paid.

10.

a.

| <i>Assets</i> | | <i>Liabilities & Shareholders' Equity</i> | |
|---------------|---------------|---|---------------|
| Cash | \$70,000 | Bank loan | \$50,000 |
| Computers | <u>30,000</u> | Shareholders' equity | <u>50,000</u> |
| Total | \$100,000 | Total | \$100,000 |

$$\text{Ratio of real to total assets} = \frac{\$30,000}{\$100,000} = 0.3$$

b.

| <i>Assets</i> | | <i>Liabilities & Shareholders' Equity</i> | |
|-------------------|---------------|---|---------------|
| Software product* | \$70,000 | Bank loan | \$50,000 |
| Computers | <u>30,000</u> | Shareholders' equity | <u>50,000</u> |
| Total | \$100,000 | Total | \$100,000 |
| *Value at cost | | | |

$$\text{Ratio of real to total assets} = \frac{\$100,000}{\$100,000} = 1.0$$

c.

| <i>Assets</i> | | <i>Liabilities & Shareholders' equity</i> | |
|------------------|---------------|---|----------------|
| Microsoft shares | \$125,000 | Bank loan | \$50,000 |
| Computers | <u>30,000</u> | Shareholders' equity | <u>105,000</u> |
| Total | \$155,000 | Total | \$155,000 |

$$\text{Ratio of real to total assets} = \frac{\$30,000}{\$155,000} = 0.2$$

Conclusion: When the firm starts up and raises working capital, it will be characterized by a low ratio of real to total assets. When it is in full production, it will have a high ratio of real assets. When the project "shuts down" and the firm sells it, the percentage of real assets to total assets goes down again because the product is again exchanged into financial assets.

11. Passed in 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act proposes several mechanisms to mitigate systemic risk. The act attempts to limit the risky activities in which the banks can engage and calls for stricter rules for bank capital, liquidity, and risk management practices, especially as banks become larger and their potential failure becomes more threatening to other institutions. The act seeks to unify and clarify the lines of regulatory authority and responsibility in government agencies and to address the incentive issue by forcing employee compensation to reflect longer-term performance. It also mandates increased transparency, especially in derivatives markets.
12. a. For commercial banks, the ratio is: $\frac{\$148.6}{\$15,164.6} = 0.0098$
 b. For non-financial firms, the ratio is: $\frac{\$18,569}{\$34,997} = 0.5306$
 c. The difference should be expected since the business of financial institutions is to make loans that are financial assets.
13. National wealth is a measurement of the real assets used to produce GDP in the economy. Financial assets are claims on those assets held by individuals.

Financial assets owned by households represent their claims on the real assets of the issuers, and thus show up as wealth to households. Their interests in the issuers, on the other hand, are obligations to the issuers. At the national level, the financial interests and the obligations cancel each other out, so only the real assets are measured as the wealth of the economy. The financial assets are important since they drive the efficient use of real assets and help us allocate resources, specifically in terms of risk return trade-offs.

14.

- a. A fixed salary means compensation is (at least in the short run) independent of the firm's success. This salary structure does not tie the manager's immediate compensation to the success of the firm, and thus allows the manager to envision and seek the sustainable operation of the company. However, since the compensation is secured and not tied to the performance of the firm, the manager might not be motivated to take any risk to maximize the value of the company.
- b. A salary paid in the form of stock in the firm means the manager earns the most when shareholder wealth is maximized. When the stock must be held for five years, the manager has less of an incentive to manipulate the stock price. This structure is most likely to align the interests of managers with the interests of the shareholders. If stock compensation is used too much, the manager might view it as overly risky since the manager's career is already linked to the firm. This undiversified exposure would be exacerbated with a large stock position in the firm.
- c. When executive salaries are linked to firm profits, the firm creates incentives for managers to contribute to the firm's success. However, this may also lead to earnings manipulation or accounting fraud, such as divestment of its subsidiaries or unreasonable revenue recognition. That is what audits and external analysts will look out for.

15. Even if an individual investor has the expertise and capability to monitor and improve the managers' performance, the payoffs would not be worth the effort, since his ownership in a large corporation is so small compared to that of institutional investors. For example, if the individual investor owns \$10,000 of IBM stock and can increase the value of the firm by 5%, a very ambitious goal, the benefit would only be: $\$10,000 \times 5\% = \500 .

In contrast, a bank that has a multimillion-dollar loan outstanding to the firm has a big stake in making sure the firm can repay the loan. It is clearly worthwhile for the bank to spend considerable resources to monitor the firm.

16. Since the traders benefited from profits but did not get penalized by losses, they were encouraged to take extraordinary risks. Since traders sell to other traders, there also existed a moral hazard since other traders might facilitate the misdeed. In the end, this represents an agency problem.
17. Securitization requires access to a large number of potential investors. To attract these investors, the capital market needs:
 - (1) A safe system of business laws and low probability of confiscatory taxation/regulation;
 - (2) A well-developed investment banking industry;
 - (3) A well-developed system of brokerage and financial transactions, and;
 - (4) Well-developed media, particularly financial reporting.

These characteristics are found in (and make for) a well-developed financial market.

18. Progress in securitization facilitates the shifting of default risk from the intermediaries to the investors of such a security. Since the intermediaries no longer bear the default risk, their role and motivation in assessing and monitoring the quality of the borrowers is mitigated. For example, when the national market in mortgage-backed securities becomes highly developed, local banks can easily sell their claims on mortgages to the issuers of mortgage-backed securities and then use the money they receive to create more mortgages because the local banks make profits both from making loans and selling loans to the issuers of mortgage-backed securities. This way the local banks are actually incentivized by the volume of the loan that they lend out, instead of by the quality of the loan, and thus they become less cautious in originating subprime mortgages.
19. Mutual funds accept funds from small investors and invest, on behalf of these investors, in the national and international securities markets.

Pension funds accept funds and then invest, on behalf of current and future retirees, thereby channeling funds from one sector of the economy to another.

Venture capital firms pool the funds of private investors and invest in start-up firms.

Banks accept deposits from customers and loan those funds to businesses or use the funds to buy securities of large corporations.

20. Even if the firm does not need to issue stock in any particular year, the stock market is still important to the financial manager. The stock price provides important information about how the market values the firm's investment projects. For example, if the stock price rises considerably, managers might conclude that the market believes the firm's future prospects are bright. This might be a useful signal to the firm to proceed with an investment such as an expansion of the firm's business.

In addition, the fact that shares can be traded in the secondary market makes the shares more attractive to investors since they know that, when they wish to, they will be able to sell their shares. This in turn makes investors more willing to buy shares in a primary offering, and thus improves the terms on which firms can raise money in the equity market.

21. Treasury bills serve a purpose for investors who prefer a low-risk investment. The lower average rate of return compared to stocks is the price investors pay for predictability of investment performance and portfolio value.
22. You should be skeptical. If the author actually knows how to achieve such returns, one must question why the author would then be so ready to sell the secret to others. Financial markets are very competitive; one of the implications of this fact is that riches do not come easily. High expected returns require bearing some risk, and obvious bargains are few and far between. Odds are that the only one getting rich from this book is its author.