

# Instructor's Solutions Manual

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# Corporate Finance

*Sixth Edition*

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# Contents

Chapter 1	The Corporation and Financial Markets	1
Chapter 2	Introduction to Financial Statement Analysis	7
Chapter 3	Financial Decision Making and the Law of One Price	21
Chapter 4	The Time Value of Money	31
Chapter 5	Interest Rates	59
Chapter 6	Valuing Bonds	79
Chapter 7	Investment Decision Rules	97
Chapter 8	Fundamentals of Capital Budgeting	117
Chapter 9	Valuing Stocks	135
Chapter 10	Capital Markets and the Pricing of Risk	147
Chapter 11	Optimal Portfolio Choice and the Capital Asset Pricing Model	161
Chapter 12	Estimating the Cost of Capital	181
Chapter 13	Investor Behavior and Capital Market Efficiency	191
Chapter 14	Capital Structure in a Perfect Market	201
Chapter 15	Debt and Taxes	211
Chapter 16	Financial Distress, Managerial Incentives, and Information	221
Chapter 17	Payout Policy	237
Chapter 18	Capital Budgeting and Valuation with Leverage	249
Chapter 19	Valuation and Financial Modeling: A Case Study	269
Chapter 20	Financial Options	279
Chapter 21	Option Valuation	291
Chapter 22	Real Options	303
Chapter 23	Raising Equity Capital	331
Chapter 24	Debt Financing	341
Chapter 25	Leasing	345
Chapter 26	Working Capital Management	353
Chapter 27	Short-Term Financial Planning	361
Chapter 28	Mergers and Acquisitions	367
Chapter 29	Corporate Governance	373
Chapter 30	Risk Management	377
Chapter 31	International Corporate Finance	389

# Chapter 1

## The Corporation

**1-1. What is the most important difference between a corporation and *all* other organizational forms?**

A corporation is a legal entity separate from its owners.

**1-2. What does the phrase *limited liability* mean in a corporate context?**

Owners' liability is limited to the amount they invested in the firm. Stockholders are not responsible for any encumbrances of the firm; in particular, they cannot be required to pay back any debts incurred by the firm.

**1-3. Which organizational forms give their owners limited liability?**

Corporations and limited liability companies give owners limited liability. Limited partnerships provide limited liability for the limited partners, but not for the general partners.

**1-4. What are the main advantages and disadvantages of organizing a firm as a corporation?**

Advantages: Limited liability, liquidity, infinite life

Disadvantages: Double taxation, separation of ownership and control

**1-5. Explain the difference between an S corporation and a C corporation.**

C corporations must pay corporate income taxes; S corporations do not pay corporate taxes, but must pass through the income to shareholders to whom it is taxable. S corporations are also limited to 100 shareholders and cannot have corporate or foreign stockholders.

**1-6. You are a shareholder in a C corporation. The corporation earns \$2 per share before taxes. Once it has paid taxes it will distribute the rest of its earnings to you as a dividend. The corporate tax rate is 40% and the personal tax rate on (both dividend and non-dividend) income is 30%. How much is left for you after all taxes are paid?**

First, the corporation pays the taxes. After taxes,  $\$2 \times (1 - 0.4) = \$1.20$  is left to pay dividends. Once the dividend is paid, personal tax must be paid, which leaves  $\$1.20 \times (1 - 0.3) = \$0.84$ . So, after all the taxes are paid, you are left with 84¢.

**1-7. Repeat Problem 6 assuming the corporation is an S corporation.**

An S corporation does not pay corporate income tax. So it distributes \$2 to its stockholders. These stockholders must then pay personal income tax on the distribution. So they are left with  $\$2 \times (1 - 0.3) = \$1.40$ .

**1-8. You have decided to form a new start-up company developing applications for the iPhone. Give examples of the three distinct types of financial decisions you will need to make.**

As the manager of an iPhone applications developer, you will make three types of financial decisions.

- i. You will make investment decisions, such as determining which type of iPhone application projects will offer your company a positive NPV and that your company, therefore, should develop.
- ii. You will make the decision on how to fund your iPhone application investments and what mix of debt and equity your company will have.
- iii. You will be responsible for the cash management of your company, ensuring that your company has the necessary funds to make investments, pay interest on loans, and pay your employees.

**1-9. When a pharmaceutical company develops a new drug, it often receives patent protection for that medication, allowing it to charge a higher price. Explain how this public policy of providing patent protection might help align the corporation's interests with society's interests.**

Without patent protection, the developer of the drug would be forced to lower prices to compete with generic manufacturers. Because this price competition would lower expected future profits, the developer would be willing to spend much less in R&D to develop the drug initially, and drug innovation would be curtailed.

Alternatively, by allowing the drug's developer to earn higher profits that are commensurate with the value of the drug to society, drug developers will find it in their best interests to spend more on R&D, and drug innovation is enhanced. Thus, patent protection can align the corporation's and society's interests and provide for more efficient spending on drug R&D.

**1-10. Corporate managers work for the owners of the corporation. Consequently, they should make decisions that are in the interests of the owners, rather than their own. What strategies are available to shareholders to help ensure that managers are motivated to act this way?**

Shareholders can do the following.

- i. Ensure that employees are paid with company stock and/or stock options.
- ii. Ensure that underperforming managers are fired.
- iii. Write contracts that ensure that the interests of the managers and shareholders are closely aligned.
- iv. Mount hostile takeovers.

**1-11. Suppose you are considering renting an apartment. You, the renter, can be viewed as an agent while the company that owns the apartment can be viewed as the principal. What principal-agent conflicts do you anticipate? Suppose instead that you work for the apartment company. What features would you put into the lease agreement that would give the renter incentives to take good care of the apartment?**

The agent (renter) will not take the same care of the apartment as the principal (owner) because the renter does not share in the costs of repairing damage to the apartment. To mitigate this problem, having the renter pay a deposit should motivate the renter to keep damages to a minimum. The deposit forces the renter to share in the costs of repairing any problems that they cause.

**1-12. You are the CEO of a company and you are considering entering into an agreement to have your company buy another company. You think the price might be too high, but you will be the CEO of the combined, much larger, company. You know that when the company gets bigger, your pay and prestige will increase. What is the nature of the agency conflict here and how is it related to ethical considerations?**

There is an ethical dilemma when the CEO of a firm has the opposite incentives to those of the shareholders. In this case, you (as the CEO) have an incentive to potentially overpay for another company (which would be damaging to your shareholders) because your pay and prestige will improve.

**1-13. Are hostile takeovers necessarily bad for firms or their investors? Explain.**

No. They are a way to discipline managers who are not working in the interests of shareholders.