Part 1  
Introduction to Managerial Finance

**Chapters in This Part**

Chapter 1 The Role of Managerial Finance

Chapter 2 The Financial Market Environment

Integrative Case 1: Merit Enterprise Corp.

Chapter 1  
The Role of Managerial Finance

* Instructor’s Resources

Chapter Overview

This chapter introduces the field of finance through building-block terms and concepts. The discussion starts by defining “firm” and stressing its principal goal—maximizing shareholder wealth. The importance of focusing on shareholders rather than stakeholders broadly and stock price rather than current profits is explained. The managerial-finance function is then described and differentiated from economics and accounting, with special attention to the role ethics play in a financial manager’s efforts to maximize the firm’s stock price. Next, the three basic legal forms of business organization (sole proprietorship, partnership, and corporation) are discussed and the strengths and weaknesses of each form noted. The chapter concludes with an exploration of the agency problem—the conflict arising when the managers and owners of the firm are not the same people—and the private- and public-sector tools available to focus managerial attention on shareholder wealth.

This chapter and the ones to follow stress the important role finance vocabulary, concepts, and tools will play in the professional and personal lives of students—even those choosing other majors, such as accounting, economics information systems, management, marketing, or operations. Whenever possible, personal-finance applications are provided to motivate and illustrate topics. This pedagogical approach should inspire students to master chapter content quickly and easily.

* Suggested Answer to *Opener-in-Review*

Students learned the stock price of Brookdale Senior Living tumbled 36% in 2016 to $12.35 per share, prompting Land and Buildings (a prominent stockholder) to urge the firm sell its real-estate holdings, distribute the anticipated net sales proceeds ($21 cash) to shareholders, and then focus on managing its senior living facilities. Students were asked whether the proposal would make Brookdale’s shareholders better off if the expected cash proceeds were realized, but stock price dipped to $5 per share.

Before restructuring, an investor with one Brookdale share had $12.35 in total wealth. Afterward, that same investor had a share worth $5 and $21 in cash—total wealth of $26. The hypothetical shareholder reaped a gain of $13.65 per share or 110.5%. Before the asset sale, with 185.45 million shares outstanding and a share price of $12.35, total shareholder wealth was $2.29 billion. After the sale, with same shares outstanding and wealth per share now $26, shareholder wealth rose to $4.82 billion– a net gain of $2.53 *billion*.

Here is a discussion question for the class to motivate future exploration of CEO compensation: Suppose Brookdale’s CEO came up with the asset-sale idea rather than a prominent shareholder, and Brookdale’s board rewarded him with a $1 million dollar bonus—a figure alone that would easily vault the CEO into the top 1% of U.S. income earners. Is the CEO’s compensation excessive?

* Answers to Review Questions
  1. The goal of a firm, and therefore of all financial managers, is maximizing shareholder wealth. The proper metric for this goal is the price of the firm’s stock. Other things equal, an increasing price per share of common stock relative to the stock market as a whole indicates achievement of this goal.

1-2Actions that maximize the firm’s current profit may not produce the highest stock price because (1) some firm activities that result in slightly lower profit today generate much larger profits in the future periods (i.e., focusing on current profit overlooks the time value of money); (2) activities that generate higher accounting profits today may not result in higher cash flows to stockholders; and (3) activities that lead to high profits today may involve higher risk, which could result in significant future losses.

1-3 Risk is the chance actual outcomes may differ from expected outcomes. Financial managers must consider risk and return because the two factors tend to have an opposite effect on share price. That is, other things equal, an increase in the risk of cash flows to shareholders will depress firm stock price while higher average cash flows to shareholders will increase stock price.

1-4 Maximizing shareholder wealth does not mean overlooking or minimizing the welfare of other firm stakeholders. Firms with satisfied employees, customers, and suppliers tend to produce higher (or less risky) cash flows for their shareholders compared with companies that neglect non-owner stakeholders. That said, customers prefer lower prices for firm output, firm employees prefer higher wages, and firm suppliers prefer higher prices for the input goods and services they provide. So actions that produce the highest price of the firm’s stock cannot simultaneously maximize customer, employee, and supplier satisfaction.

1-5 Broadly speaking, the decisions made by financial managers fall under three headings: (i) investment, (ii) capital budgeting, and (iii) working capital. Investment decisions involve the firm’s long-term projects while financing decisions concern the funding of those projects. Working-capital decisions, in contrast are related to the firm’s management of short-term financial resources.

1-6 Financial managers must recognize the tradeoff between risk and return because shareholders prefer higher cash flows but dislike large swings in cash flows. And, as a general rule, actions that boost the firm’s average cash flows also result in greater cash-flow greater volatility. Viewed another way, firm actions to reduce the chance cash flows will be low or negative also tend to reduce average cash flows over time. Understanding this tradeoff is important because shareholders are risk averse. That is, they will only accept larger swings in a firm’s cash flows only if compensated over time with higher average cash flows.

1-7 Finance is often considered applied economics. One reason is firms operate within the larger economy. More importantly, the bedrock concept in economics—marginal benefit-marginal cost analysis—is also central to managerial finance. Marginal benefit-marginal cost analysis is the notion a firm (or any other economic actor) should take only those actions for which the extra benefits exceed the extra costs. Nearly, all financial decisions ultimately turn on an assessment of their marginal benefits and marginal costs.

1-8 Accountants and financial managers perform separate but equally important functions for the firm. Accountants primarily collect and present financial data according to generally accepted financial principles while financial managers make investment, capital-budgeting, and working-capital decisions with financial data. In part because of their different functions, accountants and financial managers log firm revenues and expenses using different conventions. Accountants operate on an accrual basis, recognizing revenues as firm output is sold (whether or not payment is actually received) and firm expenses as incurred. Financial managers, in contrast, focus on actual inflows and outflows of cash, recognizing revenues when physically received and expenses when actually paid.

1-9 Like any economic actor, managers respond to incentives. Managers have a fiduciary duty to maximize shareholder wealth, but as humans, they also have personal goals—such as maximizing their own income, wealth, reputation, and quality of life. If the personal benefits of delivering for shareholders (or the costs of slighting them) are small, a financial manager might opt to further his own interest at the expense of shareholders. For example, CEOs of large firms—those with more sales, assets, employees, etc.—tend to receive more compensation than CEOs of smaller firms. If a CEO has to choose between two operating strategies—one that produces modest growth for his firm but a large jump in current stock price and another that generates rapid growth but a more modest rise in share price—and the firm’s board is not closely monitoring the CEO, she might pursue the high-growth strategy to boost her future compensation. A partial solution to such a problem is a compensation closely linking CEO compensation to firm stock price.

1-10 Sole proprietorships are the most common form of business organization, while corporations tend to be the largest. Large firms tend to organize as corporations to insulate owners from losses (limit liability) and facilitate acquisition of financial capital to fund growth.

1-11 Stockholders are the owners of a corporation. Their ownership (equity) takes the form of common stock or, less frequently, preferred stock. Stockholders elect the board of directors, which has ultimate responsibility for guiding corporate affairs and setting general policy. The board usually comprises key corporate personnel and outside directors. The corporation’s president or chief executive officer (CEO) reports to the board. He or she oversees day-to-day operations subject to the general policies established by the board. The corporation’s owners (shareholders) do not have a direct relationship with management; they provide input by electing board members and voting on major charter issues. Shareholders receive compensation in two forms: (i) dividends paid on their stock (from corporate earnings) and (ii) capital gains from increases in the price of their shares (which reflect market expectations about future dividends).

1-12 Generally speaking, income from sole proprietorships and partnerships is taxed only once at the individual level; the owner or owners pay personal income tax on their share of firm’s profits. In contrast, corporate income is taxed first at the firm level (via the corporate income tax paid on firm profits) and then again at the personal level (via personal income tax paid on dividends or capital gains enjoyed by shareholders).

1-13 Agency problems arise when managers place personal goals ahead of their duty to shareholders to maximize stock price. The attendant costs are called agency costs. Agency costs can be implicit or explicit; either way they reduce shareholder wealth. An example of an “implicit” agency cost is the dividends or capital gains shareholders miss out on because the firm’s management team pursued a personal interest (like maximizing sales to boost future compensation) rather than maximizing shareholder wealth. Of course, if shareholders sense stock price is not what it should be, they will start monitoring management more closely (as in the chapter opener with Brookdale Senior Living). The expenses associated with greater monitoring are an example of an “explicit” agency cost. Agency problems in a firm can be reduced with a properly constructed and followed corporate-governance structure. Such a structure will feature checks and balances that reduce management’s interest in and ability to deviate from shareholder-wealth maximization. Like all corporate decisions, reducing agency costs is subject to marginal benefit–marginal cost analysis. In other words, the firm should invest in policies to align the incentives of management and shareholders as long as the marginal benefits exceed the marginal costs.

1-14 Firms most commonly try to mitigate agency problems by linking pay to metrics connected with shareholder wealth. Incentive plans tie compensation to share price. For example, the CEO might receive options offering the right to purchase stock at a set price (say current price) any time in the next few years. If the CEO takes actions that subsequently boost share price, she can profit personally by exercising the option—purchasing stock at the set price—and reselling at the higher market price. The higher the firm’s stock price, the more money the CEO can make, so options create a powerful incentive to focus laser-like on shareholder wealth. There is a downside, however. Sometimes general market trends swamp all the good done by management, so even though the CEO obsessed over shareholder wealth, her options proved worthless because a bear market hammered the firm’s stock price. This problem has made performance plans more popular. These plans link compensation with performance measures related to stock price that management can more closely control—such as earnings per share (EPS) and EPS growth. When targets for the performance metrics are attained, managers receive rewards likeperformance shares and/or cash bonuses.

1-15 If the board of directors fails to keep management focused on shareholder wealth, market forces can apply the necessary pressure. Two such forces are activism by institutional investors (such as Land and Buildings in the chapter opener) and the threat of hostile takeovers. Institutions typically hold large quantities of shares in many corporations. Because of their large stakes, these investors actively monitor management and vote their shares for the benefit of all shareholders. Large institutional investors reduce agency problems by using their voting clout to elect new directors that will make the changes in policies and personnel necessary to get underperforming stock to its highest possible price. The threat of hostile takeover can also keep management focused on shareholders. Say a firm has a stock price of $15, but that price could be $20 with bold action management is reluctant to take. The lure of a $5 capital gain per share could tempt an outside individual, group of investors or firm not supported by existing management to purchase controlling interest and force the necessary changes. Incumbent management knows “necessary changes” means unemployment, so the threat of takeover could be enough to align their interests with those of the owners.

* Suggested Answer to *Focus on Ethics* Box:   
  Do Corporate Executives Have a Social Responsibility?

*How would Friedman view a sole proprietor’s use of firm resources to pursue social goals?*

In a sole proprietorship, the owner and manager are one in the same. So a manager using firm resources to support social goals would be doing exactly what the owner wanted. Put another way, Friedman would not see a conflict. He did not oppose pursuit of social goals by a firm or individual; he opposed doing so with someone else’s money.

* Suggested Answer to *Focus on Practice* Box:   
  Must Search Engines Screen Out Fake News?

*Is the goal of maximizing shareholder wealth necessarily ethical or unethical?*

The “end” of maximizing shareholder wealth is neither ethical nor unethical; it is neutral. But the means employed to pursue the end can be ethical or unethical. For example, taking actions to raise share price in clear violation of U.S. law is unethical—that is to say, wrong even if the violations are not uncovered.

*What responsibility, if any, does Google have to help users assess the veracity of online content?*

Management’s overriding concern should be shareholder wealth. Knowingly posting content a reasonable person could see is fake harms shareholders by damaging the Google brand, so some due diligence is warranted. How much Google should invest in validating online content depends on the marginal benefits and costs. Specifically, Google should verify as long as the marginal benefit to shareholders exceeds the marginal cost—that is, only as long as the net effect on stock price is positive.

* Answers to Warm-Up Exercises

E1-1. ***Advantages and disadvantages of partnership versus incorporation*****(LG 5)**

Answer: Each form of business organization has advantages and disadvantages. One advantage of a simple partnership is that each partner’s income is taxed only once as personal income (i.e., subject to the personal income tax). Corporate income, in contrast, is taxed twice—corporate profits will be subject to the corporate income tax, and the dividends and capital gains from each partner’s stock will be taxed as personal income.

Taxation is a key factor in choosing the form of business organization, but two other factors are also important. In a partnership, each partner has unlimited liability and may have to cover debts of other partners, while corporate owners have limited liability that guarantees they cannot lose more than they have invested in the corporation. The third major consideration is ease of transfer of the business. Partnerships are harder to transfer and technically dissolved when a partner dies, while a corporation has an infinite life (absent bankruptcy, merger, or acquisition) with ownership readily transferable through sale of existing shares.

If a third party were asked to decide which legal form of business A&J Tax Preparation should take, it would be useful to have the following information:

• Relevant specifics of current personal and corporate income tax codes (such as marginal rates, deductions, etc.)

* Expected future changes in tax law
* Expected longevity of firm

• Age of current owners

• Current succession plan

• Risk tolerance of owners

• Capital needs of firm

• Growth prospects of firm

• Reasons for each partner’s view on preferred form of ownership

E1-2 ***Timing of cash flows* (LG 4)**

Answer: Based on the information provided, the choice is not obvious. The CFO needs to take into account a number of factors and strategic aspects—associated risks, technological aspects, industry trends, and market conditions—in the decision making process in addition to projected cash flows and NPV. For example, even though the second option provides higher cash flows in the immediate future, it is likely to decrease from year 5 due to factors like the technology becoming outdated. So it is not clear whether the second project is actually preferable to the first.

E1-3. ***Cash flow vs. profits* (LG 4)**

Answer: It is not unusual for profitable firms to suffer a cash crunch. Profit is an accounting estimate of the surplus generated by a given firm in a given period and is subject to accounting rules and parameters. Cash, on the other hand, is an actual flow of money into and out of the business from various sources. This makes it quite common for the firm to have different cash-flow and profit figures. For example, the accrual accounting concept assigns the cost and revenue for the given period towards profit calculation and ignores any cash spent on long-term investments or for principal payment of any long-term debt obligations during the period. In the given scenario, if the firm can manage short-term finance, it should go ahead with the bonus payments to its employees; however, if such cash shortages are a recurring issue, there might be larger issues that need to be addressed, in which case such bonus payments need to be delayed or dropped.

E1-4. ***Sunk costs* (LG 5)**

Answer: Marginal benefit-marginal cost analysis ignores sunk costs and only takes into account future cash flows from the proposed decision. So, the £1.5 million spent in the past is a sunk cost and should be ignored for the current decision. At this point, the primary consideration should be the returns that the firm will get by investing the proposed £45,000. Only if the present value (PV) of future returns exceeds the current cost of £45,000, must the project be considered further to confirm that this is the most profitable use of the available capital. The information provided does not shed light on the expected profits or the commercial viability of the navigation system based on Xtor. It can be concluded that the project should meet the two-step decision criteria. First, there should still be commercial demand for a navigation system based on Xtor, and the expected future revenue should amount to a positive NPV for the given investment of £45,000. Second, there should not be any other possible projects that may provide a higher return than the said project for the given investment of £45,000. Only if both these criteria are met, should the project be taken up.

E1-5. ***Agency costs*****(LG 6)**

Answer: Agency costs are the costs borne by stakeholders to maintain a system of control on agents who act on their behalf and run the day-to-day business. For Premier Baking Ltd., the employees working on the shop floor can be considered as agents working on behalf of the firm (principal). The incentive scheme was an agency cost that incentivized the agents to make every possible effort to attain better efficiency and quality standards. Once this incentive was dropped, the staff assumed that they will get only their due salary—no matter how well or timely they run the production line. This may have led to demotivation among employees, leading to a more lax attitude towards work and processes.

To address the given situation, it is important for the management to provide incentives to workers in a way that their interests (monetary rewards) align with the organizational objectives (timely, high-quality output). For example, a new bonus structure could be announced, which determines bonus based on number of orders fulfilled without any customer complaints related to time, quality, or service.

E1-6. ***Corporate tax liability* (LG 5)**

Answer: In the increasingly globalized markets, where trade barriers across countries are being removed, a smart business structure can significantly reduce tax liability. A business registered in Ireland or Britain can trade in almost all of Eurozone with no restrictions. However, the tax liability will differ based on where the business is registered. If this business is registered in Britain, it will be subject to U.K. Corporate Tax, paying 19% of €250,000 or €47,500 as tax. However, if registered in Ireland, the same business will pay only 12.5% or €31,250 as corporate tax for the same level of taxable profit.

* Solutions to Problems

P1-1. ***Liability comparisons* (LG 5; Basic)**

a. John has unlimited personal liability, so he is liable for the firm’s $120,000 in outstanding debt.

b. Initially, John is liable for $60,000 (50% of total unpaid debts), but if his partner cannot cover half the debt, he is liable for the full amount.

c. John has limited liability; he cannot lose more than his $50,000 investment.

P1-2. ***Accrual income vs. cash flow for a period* (LG 4; Basic)**

a. Sales $500,000

Cost of goods sold 400,000

Net profit $100,000

b. Cash receipts $150,000

Cost of goods sold 400,000

Net cash flow −$390,000

c. Accountant: The firm made a profit of $100,000, which the accountant will find more useful. Financial manager: Since the firm has negative cash flows, it will not be useful to the financial manager.

P1-3. ***Personal finance: cash flows* (LG 4; Intermediate)**

a. Total cash inflow: $500 + $5,500 = $6,000

Total cash inflow: $1,550 + $850 + $200 + $310 = $2,910

b. Net cash flow: Total cash inflows − Total cash outflows = $6,000 − $2,910 = $3,090. The term “net cash flow” here suggests that Sheldon’s total cash inflow exceeds his total cash outflow by $3,090.

c. If there is a surplus of funds, Sheldon may invest the funds in some form of short-term investment.

d. If Sheldon is facing a shortage of funds, he could either borrow or withdraw the required amount from his savings (short-term investments). Alternatively, Sheldon could even reduce his expenses by spending less on discretionary items such as clothing, gas, etc.

P1-4. ***Marginal benefit-marginal cost analysis* *and goal of the firm* (LG 2 and LG 4; Challenging)**

a. Marginal cost-benefit analysis: the Economic principle that states that financial decisions should be made and actions taken only when the marginal benefits exceed the marginal costs.

b. Marginal benefits of proposed warehouse system = Marginal benefits of new warehouse system − Marginal benefits of original warehouse system = $325,000 − $125,000 = $200,000

c. Marginal cost of proposed warehouse system = Marginal cost of new system – Sales price of current system = $250,000 – $55,000 = $195,000

d. Provided cash flows from new and existing warehouse system are equally risky and either (i) cash flows from each option have the same timing or (ii) the discount (interest rate) is zero, Wendy should recommend new robotics because the marginal benefits exceed marginal cost.

e. Yes, the firm will achieve the primary financial goal if the new system is implemented, as it is expected to increase the stock price leading to an increase in shareholder wealth.

P1-5. ***Identifying agency problems, costs, and resolutions* (LG 6; Intermediate)**

The goal of the Nelson Corporation management is to increase the stock price to maximize shareholder wealth. If the management team believes that it can improve the profitability of the firm and that the share price will exceed $38.60, then the management should fight the hostile takeover. If the management team believes that company B will pay more than $38.60 to acquire the company, then the management team should still fight the offer. However, if the current management team cannot increase the value of the firm beyond the bid price ($38.60), then the management team is not acting in the best interest of the stockholders by fighting the offer. Another conflict of interest is that the existing management often loses their jobs when acquired by another company. Hence, the management team may use this as an incentive to fight takeovers.

P1-6 ***Corporate taxes* (LG 5; Basic)**

a. The firm’s total tax liability: 20% × SGD 112,000 = SGD 22,400.

The applicable tax rebate will be 50% × SGD 22,400 = SGD 11,200.

However, as this is capped to SGD 10,000, the total tax liability will be

Total Tax – Rebate = SGD 22,400 – SGD 10,000 = SGD 12,400.

b. The firm’s after-tax earnings: SGD 112,000 – SGD 12,400 = SGD 99,600

c. Average tax rate: 12,400 ÷ 112,000 = 11.07%

P1-7 ***Average corporate tax rates* (LG 6; Basic)**

a.

|  |  |  |
| --- | --- | --- |
| **Earnings** | **Tax Liability** | **Average Tax Rate** |
| 20,000 | 3,000 | 15% |
| 70,000 | 12,500 | 17.85% |
| 300,000 | 100,250 | 33.42% |
| 700,000 | 238,000 | 34% |
| 1,200,000 | 408,000 | 34% |
| 16,000,000 | 5,530,000 | 34.56% |
| 22,000,000 | 7,700,000 | 35% |

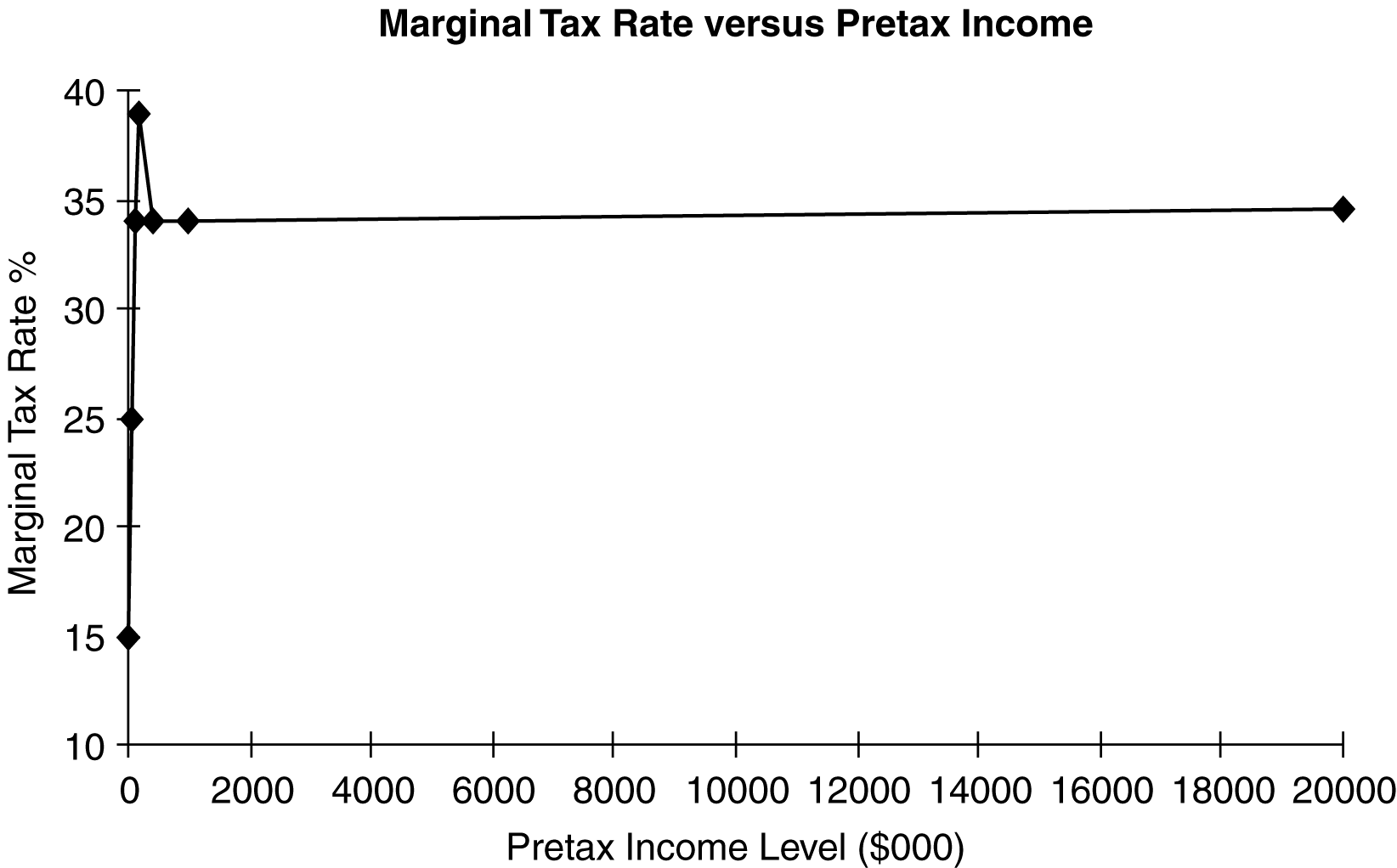
b. The graph derived will suggest that as the level of taxable profits grows the average tax rate also increases until it reaches 35%.

P1-8 ***Marginal corporate tax rates* (LG 6; Basic)**

a.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pre-Tax Income ($)** | **Base Tax ($)** | **+** | **%** | **×** | **Amount Over Base** | **=** | **Total Tax ($)** | **Marginal Rate** |
| 12,000 | 0 | + | (0.15 | **×** | 12,000) | = | 1,800 | 15.0% |
| 40,000 | 0 | + | (0.15 | **×** | 10,000) | = | 1,500 | 15.0% |
| 70,000 | 7,500 | + | (0.25 | **×** | 20,000) | = | 12,500 | 25.0% |
| 90,000 | 13,750 | + | (0.34 | **×** | 15,000) | = | 18,850 | 34.0% |
| 300,000 | 22,250 | + | (0.39 | **×** | 200,000) | = | 100,250 | 39.0% |
| 550,000 | 113,900 | + | (0.34 | **×** | 215,000) | = | 187,000 | 34.0% |
| 1,300,000 | 113,900 | + | (0.34 | **×** | 965,000) | = | 442,000 | 34.0% |
| 22,000,000 | 6,416,667 | + | (0.35 | **×** | 3,666,667) | = | 7,700,000 | 35.0% |
|  |  |  |  |  |  |  |  |  |

1. As income rises to $335,000, the marginal tax rate approaches a peak of 39%. For income above $335,000, the marginal rate first dips to 34%, and then edges up to 35% after $10 million.



P1-9 ***Interest vs. dividend income* (LG 6; Intermediate)**

a. Tax on operating earnings: $560,000 × 0.30 tax rate $168,000

b., c.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **(b) Interest Income** | **(c) Dividend Income** |  |
| Before-tax amount | $40,000 | $40,000 |  |
| Less: Applicable exclusion | 0 | 28,000 | (0.70 × $40,000) |
| Taxable amount | 40,000 | 12,000 |  |
| Tax (30%) | 12,000 | 3,600 |  |
| After-tax amount | 28,000 | 36,400 |  |

d. The after-tax dividends ($36,400) exceed after-tax interest ($28,000). This is due to 70% corporate dividend exclusion. Such measures by the government, of exclusions increases, make purchasing the stock of other corporations more attractive relative to purchases of corporate bonds.

e. Total tax liability:

|  |  |
| --- | --- |
| Taxes on operating earnings (from a.) | $168,000 |
|  Taxes on interest income (from b) | 12,000 |
|  Taxes on dividend income (from c) | 3,600 |
| Total tax liability | $183,600 |

P1-10 ***Interest vs. dividend expense* (LG 6; Intermediate)**

|  |  |  |
| --- | --- | --- |
| a. | EBIT | £300,000 |
|  | Less: Interest expense | 70,000 |
|  | Earnings before taxes | £230,000 |
|  | Less: Taxes (35%) | 69,000 |
|  | Earnings after taxes\* | £161,000 |

\*This is also earnings available to common stockholders.

|  |  |  |
| --- | --- | --- |
| b. | EBIT | £300,000 |
|  | Less: Taxes (30%) | 90,000 |
|  | Earnings after taxes | £210,000 |
|  | Less: Preferred dividends | 70,000 |
|  | Earnings available for common stockholders | £140,000 |
|  |  |  |

P1-11. ***Reducing tax exposure—Hemingway Corporation* (LG 5; Intermediate)**

1. With pre-tax income currently of $200,000, Hemingway’s current tax liability (using the tax rates in Table 1.2) is $22,250 + 0.39 **×** ($200,000 – $100,000) = $22,250 + $39,000 = $61,250. Or using the newer tax code reflecting the Tax Cuts and Jobs Act, the company faces a 21% flat tax, so its tax bill is currently 21% × $200,000 = $42,000.
2. The current average tax rate equals taxes paid divided by taxable income—that is, $61,250 / $200,000 = 0.306 or 30.6%. Under the new tax law, however, because the tax is a flat tax, the average tax rate and the marginal tax rate are the same, 21%.
3. If expansion is financed with cash reserves, then taxable income will be $350,000 with a corresponding tax liability of $22,250 + 0.39 **×** ($350,000 – $100,000) = $119,750. The average tax rate would be $119,750 ÷ $350,000 = 34.2%, higher than in part b. Or under the new tax law with a 21% flat tax, the tax liability will be 21% × $350,000 = $73,500. The average tax rate and the marginal tax rate are both 21%.
4. If expansion is financed with debt financing, taxable income will be $350,000 – $70,000 = $280,000. Taxes owed will equal $22,250 + 0.39 **×** (280,000 – $100,000) = $92,450. The new average tax rate will be $92,450 / $280,000 = 0.330 or 33.0%. The average tax rate is higher than in part b, again because added income from expansion is taxed at the marginal rate of 39%. However, the average tax rate here is lower than in part c because Hemingway’s interest payments reduce its overall tax bill and, hence, its average tax rate. Put another way, with debt financing, less of the additional income is taxed at 39% than when the expansion is funded with internal cash. The previous answer is correct under the old tax law. Under the new tax law, the corporate tax is a flat 21%. Thus, Hemingway’s tax will be 21% × ($350,000 – $70,000) = $58,800. Again, the average tax rate and the marginal tax rate are the same (21%) no matter what the income level is under a flat tax.
5. Student answers might vary here. Under the old tax law, using debt lowers the average tax rate. Under the new law that average tax rate is always 21%. Students might say (regardless of the tax law), that income is lower when the company uses debt. That’s true, but again regardless of the tax law, the amount of taxes paid is lower when debt is used. If the value of the company depends on the cash flow that it distributes to ALL investors (not just shareholders), then financing the expansion with debt might be optimal. However, there may be offsetting effects (not mentioned in this chapter) that would negate the tax benefits of debt.

P1-12. ***Ethics problem* (LG 2)**

The financial implications of any ethical failing can be quite severe for any given firm. The United Kingdom’s Serious Fraud Office conducted a four-year long investigation on Rolls Royce (one of the biggest engineering firms in the country), leading to imposition of a fine of £671 million in total. In another incident, the alleged role of Oxfam (a large humanitarian charity organization based in the United Kingdom) employee(s) in Haiti during a relief operation after a natural disaster had been reported in February 2018. This led to cancellation of donations by around 7,000 donors, who were donating regularly to the charity, in the United Kingdom alone.

Poor management of ethical risks may lead to a situation that may significantly affect the business and its share value. The impact of such unethical behaviors has been intensified due to the emergence of social media, which can circulate such news very quickly across the population.

* Case

*Case studies are available on* [www.pearson.com/mylab/finance](http://www.pearson.com/mylab/finance)*.*

Assessing the Goal of Sports Products, Inc.

a. The primary goal of Sports Products, Inc. should be maximizing shareholder wealth, which means taking all legal and ethical actions to get firm stock price to the highest possible level. Unlike profit maximization, maximizing stock price requires consideration of the level of cash flows (which, unlike profits, can be used to meet firm obligations) as well as the timing and riskiness of those flows.

b. Yes, there appears to be an agency problem. In this case, the stockholders (owners) of Sports Products are the principals, and company management the agents. Stockholders want the highest possible stock price, but management compensation is directly tied to profits, not share price. So, predictably, company executives have focused on obtaining the highest possible profit, and stock price has languished.

c. Sports Products’ approach to pollution control is ethically questionable and harmful to shareholders. It is unclear whether polluting the stream was intentional or accidental; what is clear from the state-and-local-government lawsuits is the firm violated the law. In the near term, litigation and judgment costs will reduce firm stock price (other things equal). Over the longer term, the related bad publicity could damage Sports Products’ relationships with customers, employees and suppliers—putting further downward pressure on share price. Had the firm been more concerned about shareholder wealth, it would have seen the wisdom in sacrificing some near-term profits to avoid sustained damage to stock price.

d. The corporate governance system at Sports Products appears weak. A management-compensation system focused on profits, rather than stock price, indicates shareholder welfare is not a firm priority. Another sign of weak governance is management’s willingness to risk an environmental disaster—and the accompanying damage to shareholder wealth—to avoid higher pollution-control costs (and somewhat lower profits).

e. Recommendations to Sports Products could include:

• Overhauling management compensation to strengthen incentives to focus on shareholder interests. Specifically, Sports Products should consider distributing stock options to executives or awarding large bonuses based on performance-based metrics related to share price (like earnings per share or growth in earnings per share).

• Introducing an explicit system of “carrots and stocks” to reward ongoing management/employee compliance with federal and state laws (particularly those pollution related) and punish transgressions.

• Establishing a corporate ethics policy, to be read and signed by all employees, along with a system of “carrots and stocks” to reward ongoing management/employee compliance and punish transgressions.

• Recruiting new board members to enact policies to change the corporate culture to focus on shareholder wealth and good corporate citizenship.

* Spreadsheet Exercise

Answers to Chapter 1 spreadsheet problem (Monsanto) are available on <www.pearson.com/mylab/finance>.

* Group Exercise

*Group exercises are available on* [www.pearson.com/mylab/finance](http://www.pearson.com/mylab/finance)*.*

Notes for Adopters

Group exercises offer students an opportunity to apply chapter topics in a real-world setting using one fictional and one actual company. Apart from reinforcing learning goals, this approach gives students valuable experience working in teams—as both leader and follower. Assignments can be easily modified to fit an adopter’s course goals. Students should enjoy these exercises; they have less structure than traditional homework and compellingly answer the age-old question: “Why must I learn this?”

The first practical issue is assembling groups—should the instructor assign students to groups or let students form their own? This project is semester-long, so group members must work well together for months. If students choose, they are more likely to get along—but at the cost of less intragroup diversity. A hybrid strategy is asking students to pair-off and then randomly combining student-selected pairs into larger groups.

The next issue is determining group size and leaders. Exercises generate workloads suitable for three or more students. Larger groups reduce individual workloads but facilitate “slacking.” Apart from missing a learning opportunity, slackers create resentment over unequal contributions to team output. Managing larger groups can also be a challenge for students with little leadership experience. For these reasons, group size should be capped at five. As for selecting CEOs, rotation inside the group gives each student an opportunity to lead.

One final note—exercises were designed to give students the freedom to work largely independent of the instructor. Accordingly, instructions for each assignment are self-explanatory.

Chapter 1

This first chapter asks students to name and describe their fictional firm. They must then justify the decision to go public and discuss different managerial roles within their firm. The group must select a publicly held peer (shadow firm) in a related industry with a wealth of online information (including detailed financials).

The instructor should stress the importance of laboring over initial decisions because later work builds on them. For example, the choice of shadow firm should be weighed carefully because students will apply real-world information about their shadow firm to their fictitious firm. A good first step in narrowing candidates is starting with a familiar industry.