

Chapter 1 A Framework for Business Analysis Using Financial Statements

Question 1.

Matti, who has just completed his first finance course, is unsure whether he should take a course in business analysis and valuation using financial statements since he believes that financial analysis adds little value given the efficiency of capital markets. Explain to Matti when financial analysis can add value, even if capital markets are efficient.

The efficient market hypothesis states that security prices reflect all available information, as if such information could be costlessly digested and translated immediately into demands for buys or sells. The efficient market hypothesis implies that there is no further need for analysis involving a search for mispriced securities.

However, if all investors adopted this attitude, no equity analysis would be conducted, mispricing would go uncorrected, and markets would no longer be efficient. This is why there must be just enough mispricing to provide incentives for the investment of resources in security analysis. Even in an extremely efficient market, where information is fully impounded in prices within minutes of its revelation (i.e., where mispricing exists only for minutes), Matti can get rewards with strong financial analysis skills:

1. Matti can interpret the newly-announced financial data *faster* than others and trade on it within minutes; and
2. Financial analysis helps Matti to understand the firm better, placing him in a better position to interpret other news *more accurately* as it arrives.

Markets may be not efficient under certain circumstances. Mispricing of securities may exist even days or months after the public revelation of a financial statement when the following three conditions are satisfied:

1. Relative to investors, managers have superior information on their firms' business strategies and operation;
2. Managers' incentives are not perfectly aligned with all shareholders' interests; and
3. Accounting rules and auditing are imperfect.

When these conditions are met in reality, Matti could get profit by using trading strategies designed to exploit any systematic ways in which the publicly available data are ignored or discounted in the price-setting process.

Capital in market efficiency is not relevant in some areas. Matti can get benefits by using financial analysis skills in those areas. For example, he can assess how much value can be created through acquisition of target company, estimate the stock price of a company considering initial public offering, and predict the likelihood of a firm's future financial distress.

Question 2.

Accounting statements rarely report financial performance without error. List three types of errors that can arise in financial reporting.

Three types of potential errors in financial reporting include:

1. Error introduced by rigidity in accounting rules;
2. Random forecast errors; and

3. Systematic reporting choices made by corporate managers to achieve specific objectives.

Accounting Rules. Uniform accounting standards may introduce errors because they restrict management discretion of accounting choice, limiting the opportunity for managers' superior knowledge to be represented through accounting choice. For example, IAS 38 requires firms to expense all research expenditures when they are occurred. Note that some research expenditures have future economic value (thus, to be capitalized) while others do not (thus, to be expensed). IAS 38 does not allow managers, who know the firm better than outsiders, to distinguish between the two types of expenditures. Uniform accounting rules may restrict managers' discretion, forgo the opportunity to portray the economic reality of firm better and, thus, result in errors.

Forecast Errors. Random forecast errors may arise because managers cannot predict future consequences of current transactions perfectly. For example, when a firm sells products on credit, managers make an estimate of the proportion of receivables that will not be collected (allowance for doubtful accounts). Because managers do not have perfect foresight, actual defaults are likely to be different from estimated customer defaults, leading to a forecast error.

Managers' Accounting Choices. Managers may introduce errors into financial reporting through their own accounting decisions. Managers have many incentives to exercise their accounting discretion to achieve certain objectives, leading to systematic influences on their firms' reporting. For example, many top managers receive bonus compensation if they exceed certain prespecified profit targets. This provides motivation for managers to choose accounting policies and estimates to maximize their expected compensation.

Question 3.

A finance student states: "I don't understand why anyone pays any attention to accounting earnings numbers, given that a 'clean' number like cash from operations is readily available." Do you agree? Why or why not?

There are several reasons for why we should pay attention to accounting earnings numbers. First, net profit predicts a company's future cash flow better than current cash flow does. Net profit aids in predicting future cash flows by reporting transactions with cash consequences at the time when the transactions occur, rather than when the cash is received or paid. Net profit is computed on the basis of expected, not necessarily actual, cash receipts and payments.

Second, net profit is potentially informative when there is information asymmetry between corporate managers and outside investors. Note that corporate managers with superior information choose accounting methods and accrual estimates which determine the net profit number. Because accrual accounting requires managers to record past events and to make forecasts of future effects of these events, net profit can be used to convey managers' superior information. For example, a company's decision to capitalize some portion of current expenditure, which increases today's net profit, conveys potentially informative signals to outside investors about the company's ability to generate future cash flows to cover the capitalized costs.

Question 4.

Fred argues: "The standards that I like most are the ones that eliminate all management discretion in reporting—that way I get uniform numbers across all companies and don't have to worry about doing accounting analysis." Do you agree? Why or why not?

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We don't agree with Fred because the delegation of financial reporting decisions to corporate managers may provide an opportunity for managers to convey their superior information to investors. Corporate managers are typically better than outside investors at interpreting their firms' current condition and forecasting future performance. Since managers have better knowledge of the company, they have the potential to choose appropriate accounting methods and accruals which portray business transactions more accurately. Note that accrual accounting not only requires managers to record past events, but also to make forecasts of future effects of these events. If all discretion in accounting is eliminated, managers will be unable to reflect their superior information in their accounting choices.

When managers' incentives and investors' incentives are different and contracting mechanisms are incomplete, giving no accounting flexibility to managers may result in a costlier solution to investors. Further, if uniform accounting standards are required across all companies, corporate managers may expend economic resources to restructure business transactions to achieve a desired accounting result. Manipulation of real economic transactions is potentially more costly than manipulation of earnings.

Question 5.

Bill Simon says, "We should get rid of the IASB, IFRS, and E.U. Company Law Directives, since free market forces will make sure that companies report reliable information." Do you agree? Why or why not?

We partly agree with Bill on the point that corporate managers will disclose only reliable information when rational managers realize that disclosing unreliable information is costly in the long run. The long-term costs associated with losing reputation, such as incurring a higher capital cost when visiting a capital market to raise capital over time, can be greater than the short-term benefits from disclosing false information. However, free market forces may work for *some* companies but not *all* companies to disclose reliable information.

Note that Bill's argument is based on the assumption that there is no information asymmetry between corporate managers and outside investors. In reality, the outside investors' limitation in accessing the private information of the company makes it possible for corporate managers to report unreliable information without being detected immediately.

The E.U. and IASB standards attempt to reduce managers' ability to record similar economic transactions in dissimilar ways either over time or across firms. Compliance with these standards is enforced by external auditors, who attempt to ensure that managers' estimates are reasonable. Without the E.U., IASB standards, and auditors, the likelihood of disclosing unreliable information would be high.

Question 6.

Juan Perez argues that "learning how to do business analysis and valuation using financial statements is not very useful, unless you are interested in becoming a financial analyst." Comment.

Business analysis and valuation skills are useful not only for financial analysts but also for corporate managers and loan officers. Business analysis and valuation skills help corporate managers in several ways. First, by using business analysis for equity security valuation, corporate managers can assess whether the firm is properly valued by investors. With superior information on a firm's strategies, corporate managers can perform their own equity security analysis and compare their

estimated “fundamental value” of the firm with the current market price of share. If the firm is not properly valued by outside investors, corporate managers can help investors to understand the firm’s business strategy, accounting policies, and expected future performance, thereby ensuring that the stock price is not seriously undervalued.

Second, using business analysis for mergers and acquisitions, corporate managers (acquiring management) can identify a potential takeover target and assess how much value can be created through acquisition. Using business analysis, target management can also examine whether the acquirer’s offer is a reasonable one.

Loan officers can also benefit from business analysis, using it to assess the borrowing firm’s liquidity, solvency, and business risks. Business analysis techniques help loan officers to predict the likelihood of a borrowing firm’s financial distress. Commercial bankers with business analysis skills can examine whether or not to extend a loan to the borrowing firm, how the loan should be structured, and how it should be priced.

Question 7.

Four steps for business analysis are discussed in the chapter (strategy analysis, accounting analysis, financial analysis, and prospective analysis). As a financial analyst, explain why each of these steps is a critical part of your job and how they relate to one another.

Managers have better information on a firm’s strategies relative to the information that outside financial analysts have. Superior financial analysts attempt to discover “inside information” from analyzing financial statements. The four steps for business analysis help outside analysts to gain valuable insights about the firm’s current performance and future prospects.

- *Business strategy analysis* is an essential first step because it enables the analysts to frame the subsequent accounting, financial, and prospective analysis better. For example, identifying the key success factors and key business risks allows the identification of key accounting policies. Assessment of a firm’s competitive strategy facilitates evaluating whether current profitability is sustainable. Finally, business strategy analysis enables the analysts to make sound assumptions in forecasting a firm’s future performance.
- *Accounting analysis* enables the analysts to “undo” any accounting distortion by recasting a firm’s accounting numbers. Sound accounting analysis improves the reliability of conclusions from financial analysis.
- The goal of *financial analysis* is to use financial data to evaluate the performance of a firm. The outcome from financial analysis is incorporated into prospective analysis, the next step in financial statement analysis.
- *Prospective analysis* synthesizes the insights from business strategy analysis, accounting analysis, and financial analysis in order to make predictions about a firm’s future.

Problem 1. The Neuer Markt

1. *Do you think that exchange market segments such as the EuroNM markets can be a good alternative to venture capital? If not, what should be their function?*
2. *This chapter described four institutional features of accounting systems that affect the quality of financial statements. Which of these features may have been particularly important in reducing the quality of Neuer Markt companies' financial statements?*
3. *The decline of the Neuer Markt could be viewed as the result of a 'lemons problem.' Can you think of some mechanisms that might have prevented the market's collapse?*
4. *What could have been the Deutsche Börse's objective of introducing two new segments and letting Neuer Markt firms choose and apply for admission to one of these segments? When is this strategy most likely to be effective?*

1. In general, exchange market segments such as the EuroNM markets cannot effectively serve as an alternative to venture capital. Firms that obtain venture capital are typically firms with large information problems. That is, the degree of information asymmetry between these firms' insiders and potential investors is high because start-up firms' inside information is often highly proprietary (risk of other firms entering the same market) or their operating environment is highly uncertain and/or unstable. These information problems cannot be easily overcome by means of public reporting (because information is proprietary, the environment changes quickly, management has strong incentives to misreport, or management still needs to build a reputation etc.). Instead, venture capitalists obtain insider access to the firms' private information and use their expertise to separate good from bad business ideas.

The function of the EuroNM markets should be to offer venture capitalists the opportunity to cash in on their investments once the start-up firms have reached a more mature development phase and their business idea has proven successful (i.e., there are less information problems). If this opportunity is available, venture capitalists will have a stronger incentive to screen and finance (smaller) business ideas.

2. (Note that the four features are: *accrual accounting, accounting conventions and standards, auditing, reporting strategy*):
 - a. Accrual accounting: the large investments in intangibles (goodwill, R&D etc.) and tangibles (PP&E, inventories) made by fast-growing, innovative start-up companies tend to make the difference between cash accounting and accrual accounting more pronounced.
 - b. Accounting standards: Although International Accounting Standards (IAS/IFRS) and US GAAP tend to be considered high-quality standards, inexperience with these standards (both on the side of reporting firms and on the side of investors) might have reduced the usefulness of IFRA/US GAAP-based reports. Further, the IFRS were still under development during the late 1990s/early 2000s.
 - c. Auditing: European auditors' inexperience with international standards and the absence of strict enforcement in most countries may have reduced firms' compliance with the accounting standards.
 - d. Reporting strategy: the need for additional financing creates a strong incentive for management to overstate the value of its business idea.
3. Mechanisms that may have helped to prevent the collapse:
 - a. Stricter admission criteria (accept only the more mature firms);
 - b. Improve the enforcement of accounting standards (SEC-type enforcement);
 - c. Make management more liable for its actions (i.e., reduce incentives to overstate performance).
4. One of the main objectives might have been to separate the lemons from the high-quality firms. If this strategy works, "lemons" (lower quality firms) should choose for a listing on the General

Standard segment; high-quality firms should differentiate themselves from the lemons by voluntarily choosing for a more strict regime (i.e., apply for a listing on the Prime Standard segment). Of course, this signaling game only works if a listing on the Prime Standard segment is more costly for low-quality firms than it is for high-quality firms. This is likely to be the case when the enforcement of the admission, listing and accounting standards is strict, both in expectation and practice.

Problem 2. Fair Value Accounting for Financial Instruments

- 1. Discuss how the changes in the reclassification rules affect the balance between noise introduced in accounting data by rigidity in accounting rules and bias introduced in accounting data by managers' systematic accounting choices.*
 - 2. The move from marking to market to marking to model during the credit crisis increased managers' accounting flexibility. Managers of financial institutions may have incentives to bias their valuations of financial instruments. Summarize the main incentives that may affect these managers' accounting choices.*
 - 3. Some politicians argued that fair value accounting needed to be suspended and replaced by historical cost accounting. What is the risk of allowing financial institutions to report their financial securities such as asset-backed securities at historical cost?*
1. The reclassification rules intend to prevent that managers abuse their reporting discretion, that is, move financial instruments back and forth between categories to strategically time the recognition of gains or losses on these instruments. In doing so, however, the rules also prevent managers from making perfectly justified reclassifications. One could therefore argue that the rules are too rigid and, as such, introduce noise in banks' accounting performance. Allowing reclassifications would reduce the noise caused by the rigidity of the rules but, at the same time, potentially increase the strategic bias in managers' accounting decisions.
 2. Managers of financial institutions may have (at least) the following incentives:
 - a. Management compensation. Performance-related bonuses have been common practice in the financial industry. Managers of financial institutions may therefore be inclined to overstate the values of assets under their control in order to overstate their investment performance.
 - b. Regulatory considerations. Banks are strongly regulated and need to meet strict capital requirements that are typically enforced by a central bank supervisor. Especially during economic downturns, bank managers have the incentive to overstate the value of assets to avoid violating capital requirements.
 - c. Stakeholder considerations. An important group of stakeholders of a bank are the bank's account holders. Strong declines in the bank's asset values could create uncertainty among such account holders, increasing withdrawals, and in the worst case scenario cause a bank run. To avoid this, managers may be inclined to overstate assets.
 3. Two potential drawbacks of historical cost accounting are:
 - a. If historical cost accounting allows managers to delay the recognition of asset value declines as long as such declines are perceived as temporary, managers may avoid recognizing losses on financial instruments by holding on to these assets, while selling financial instruments with unrealized gains. This would help managers to (temporarily) overstate performance.
 - b. The recognition of fair values of financial instruments on the balance sheet as well as fair value changes in the income statements improves the extent to which the balance sheet

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and income statement of financial institutions reflect the risk of the institutions' investments.

Chapter 10 Credit Analysis and Distress Prediction

Question 1.

What are the critical performance dimensions for (a) a retailer and (b) a financial services company that should be considered in credit analysis? What ratios would you suggest looking at for each of these dimensions?

The critical performance dimensions of a retailer are related to its inventories turnover and profit margins. Inventories turnover ratio is the cost of sales divided by average inventories balance. One measure of margins is net profit divided by sales.

The critical performance of a financial services company includes the quality of assets (e.g., default risks of loan portfolio), duration matching between assets and liabilities (i.e., its risk to interest rate change), and profitability. The quality of loans that financial institution holds can be measured as bad debt allowance divided by loans outstanding. Risk exposure can be measured by comparing the duration between assets and liabilities. Profitability can be measured as net profit divided by net worth.

Question 2.

Why would a company pay to have its public debt rated by a major rating agency (such as Moody's or Standard and Poor's)? Why might a firm decide not to have its debt rated?

The public debt rating influences the yield that must be offered to sell the debt instrument. Suppose that a company has information which is favorable in borrowing but confidential. It would disclose the confidential information to the rating agency on the condition that its confidentiality be maintained. The rating agency can work as an intermediary which will close the information gap between the company and public investors. A rating agency with credibility may help a company to get low cost financing.

Since debt ratings can be used as a mechanism to monitor management performance, corporate managers may not want debt rating, which is another monitoring tool. Since the downgrades of debt rating are greeted with drops in both bond and stock prices, both debt holders and shareholders will question corporate managers' performance in cases of downgrades.

Question 3.

Some have argued that the market for original-issue junk bonds developed in the U.S. in the late 1970s as a result of a failure in the rating process. Proponents of this argument suggest that rating agencies rated companies too harshly at the low end of the rating scale, denying investment grade status to some deserving companies. What are proponents of this argument effectively assuming were the incentives of rating agencies? What economic forces could give rise to this incentive?

Rating agencies are conservative, because the cost of incorrect rating is asymmetrically severe if the investment-grade firms go bankrupt. There are two types of errors in the rating decision: (1) rating below investment-grade when the firm is healthy; (2) rating investment-grade when the firm is not healthy (i.e., defaults in the future). Since the latter type of error is more damaging to the rating agency's reputation, the bond rating is likely to be conservative.

Commercial banks and many pension funds are allowed to invest only in investment-grade (a rating of BBB or higher) bonds. Shareholders of commercial banks and the ultimate owners of pension funds, who worry about fund managers' risky investment decisions but cannot monitor the fund managers' day-to-day investment decisions, may want bond rating agencies to be conservative in their investment-grade ratings.

Question 4.

Many debt agreements require borrowers to obtain the permission of the lender before undertaking a major acquisition or asset sale. Why would the lender want to include this type of restriction?

When the firm is in financial difficulty, conflicts may arise between debtors and stockholders. Managers who are likely to represent stockholders' interest may invest in riskier assets. Since the stock has an option value, a major acquisition of risky assets under financial distress can increase the value of stock but decrease the value of debt. To protect against the possibility of increased business risk, lenders establish debt covenants that borrowers obtain permission of the lender before making a major acquisition. Asset sales potentially reduce the security lenders have in the case of financial distress.

Question 5.

Betty Li, the Financial Director of a company applying for a new loan, argues: "I will never agree to a debt covenant that restricts my ability to pay dividends to my shareholders, because it reduces shareholder wealth." Do you agree with this argument?

Betty argues that restricting the flexibility of management decisions (such as dividend payout decisions) would reduce the shareholder wealth. However, if the dividend payout decisions are not restricted, management (or other agents of the shareholders) can liquidate the company by paying cash dividends to shareholders in the case of financial distress. Unless there is a restriction on dividend payout, rational lenders, concerned about the liquidation of the firm through cash dividend, will demand higher interest rates. Contrary to Betty's argument, shareholder wealth is reduced when there is no restriction on dividend payout, because no restriction would result in a higher cost of borrowing.

Question 6.

A bank extends three loans to the following companies: an Italy-based biotech firm; a France-based car manufacturer; and a U.K.-based food retailer. How may these three loans from each other in terms of loan maturity, required collateral, and loan amount?

Banks tend to extend loans with shorter maturities when a country's laws provide them less protection (in case of bankruptcy). By doing so they are able to regularly reevaluate the loan and adjust the terms of the loan if necessary. Consequently, the bank may be more inclined to extend loans with long maturities to U.K.-based companies than to Italy-based or France-based companies. Additionally, the bank may decide to extend only small loan amount to the Italy-based and France-based companies. This would force these companies to borrow from more than one bank, thereby making it more difficult (costly) for the borrowers to strategically default and spreading the risk of the total loan across a few banks.

In Italy and France the bank would typically also demand more collateral to reduce the risk of the loan than in the U.K. In the example, especially the French car manufacturer has assets that can serve as collateral. The biotech firm has mostly intangible assets that banks typically do not accept as collateral.

In summary, the three loans could have the following characteristics:

- Italy-based biotech firm: little collateral; short maturity; small amount
- France-based car manufacturer: much collateral; medium maturity; medium amount
- U.K.-based retailer: little collateral; long maturity; large amount

Question 7.

Cambridge Construction Plc follows the percentage-of-completion method for reporting long-term contract revenues. The percentage of completion is based on the cost of materials shipped to the project site as a percentage of total expected material costs. Cambridge's major debt agreement includes restrictions on net worth, interest coverage, and minimum working capital requirements. A leading analyst claims that "the company is buying its way out of these covenants by spending cash and buying materials, even when they are not needed." Explain how this may be possible.

Under the revenue recognition method of Cambridge Construction, the company can accelerate revenue (and net profit) recognition by purchasing materials. Suppose that the company purchased €70 of raw materials when its cost of sales is 70% of sales (or the gross margin of long-term contract is 30%) and its profit margin is 10%. The accounting journal entries for this purchasing transaction are as follows:

- 1) Inventories and Trade payables increase by 70%.
- 2) Trade receivables and Sales increase by €100 ($= €70/0.7$). Inventories decreases by €70 and Cost of sales increases by €70; Other expenses increase by €20 and Trade payables increases by €20.
- 3) Net profit and retained earnings both increase by €10 ($= €100 \times 0.1$).

Under Cambridge Construction's accounting policy, the €70 purchase of materials increases retained earnings by €10 and increases the interest coverage ratio by boosting up the EBIT (numerator in ratio). It also helps the company to meet the minimum working capital requirement by increasing net working capital by €10 or more. Note that current assets (trade receivables) increased by €100 whereas current liabilities increased by €90.

Question 8.

Can Cambridge improve its Z score by behaving as the analyst claims in Question 7? Is this change consistent with economic reality?

Cambridge can improve its Z score by accelerating revenue recognition even if this change is not consistent with economic reality. Accounting choice in Question 7 positively influences all of the five components of the Altman Z-score: net working capital/total assets; retained earnings/total assets; EBIT/total assets; shareholders' equity/total liabilities; sales/total assets. Question 6 shows why accounting analysis is important in credit analysis and distress prediction. Purely quantitative models, such as the Altman Z-score, cannot substitute for the hard work of financial analysis (business strategy analysis, accounting analysis, financial analysis, and prospective analysis).

Question 9.

A banker asserts: “I avoid lending to companies with negative cash from operations because they are too risky.” Is this a sensible lending policy?

No. A banker should decide whether the borrowing firm has the ability to service the debt at the scheduled rate. Current period negative cash flow from operations is one of the factors that the banker needs to consider but it is not the *only* factor. A banker should ask the following questions:

- Can the company turn around its cash flows in future periods? If the company can generate positive cash flow from operations in the future, lending to that company may not be risky.
- Can the bank secure the loan with sufficient collateral in lending to the company? When the amount of available security is sufficient to support the loan, the bank can minimize the risk of loss in case of default.
- Is there any third-party loan guarantee? If the borrower is the subsidiary and the parent presents some financial strength independent of the subsidiary, a guarantee of the parent will reduce the risk of loss.

Question 10.

A leading retailer finds itself in a financial bind. It doesn’t have sufficient cash flow from operations to finance its growth, and is close to violating the maximum debt-to-assets ratio allowed by its covenants. The Vice-President for Marketing suggests: “We can raise cash for our growth by selling the existing stores and leasing them back. This source of financing is cheap, since it avoids violating either the debt-to-assets or interest coverage ratios in our covenants.” Do you agree with his analysis? Why or why not? As the firm’s banker, how would you view this arrangement?

No, for several reasons. First, depending on the terms of the lease, accounting rules may ensure that there is no material change in the retailer’s debt ratio or coverage ratio. This will happen if the lease is recorded as a finance lease. Second, an operating lease arrangement may allow the company to reduce the debt, but it will also reduce the asset base. Therefore, the banker may find the firm to be more risky.

Chapter 11 Mergers and Acquisitions

Question 1.

Since the year 2000, there has been a noticeable increase in mergers and acquisitions between firms in different countries (termed cross-border acquisitions). What factors could explain this increase? What special issues can arise in executing a cross-border acquisition and in ultimately meeting your objectives for a successful combination?

Several factors could help explain the increase in merger and acquisition activity between firms in different countries. These factors may include:

Relaxation of foreign ownership laws. As countries have allowed greater foreign ownership of companies in certain industries (e.g., broadcasting, telephone, steel, automobile), foreign companies have undertaken mergers that were previously prevented due to governmental restrictions.

Expansion of regional free trade areas. Once a regional trading block is implemented, it can become more difficult for foreign firms to export its products to countries within the block. As a result, a foreign firm may purchase a company within the block to guarantee access to the block. For example, many American firms rushed to purchase European firms before January 1, 1996 to assure continued access to markets of European Union members as integration of the EU markets entered its next phase. Similarly, increased free trade can create new opportunities for firms within the block to expand their markets. Acquisitions can provide a way of taking advantage of these opportunities. For example, the integration of markets in Europe may provide opportunities for, say, German and U.K. banks to use cross-border acquisitions to develop into a European bank.

Globalization of certain industries. Once a company has reached the maximum production in its home market, it may seek greater economies of scale and scope by purchasing competitors in foreign markets. By expanding its production to the greatest extent possible, the firm hopes to achieve the most efficient cost structure. This globalization forces the remaining companies to consolidate to achieve the same level of scale and scope economies.

Search for new markets. Once domestic markets for a specific product have matured, a domestic firm will often try to continue its expansion in foreign markets. Often, the easiest way to enter a foreign market is to purchase a company already operating in that market. It guarantees immediate market share and instant name recognition with local consumers.

International mergers will create special issues that will ultimately affect the success of the merger. These special issues may include valuing a foreign company that operates and prepares its financial reports under different accounting rules. Differences in accounting rules may include:

- Treatment of intangibles, such as research and development expenses, brand names, goodwill, patents, etc.
- Treatment of inflation.
- Foreign exchange exposure.
- Hedging acquisition price.
- Hedging future cash flows from the foreign firm.
- Regulatory considerations.
- Foreign government investment approvals.

- Foreign government antitrust approvals.
- Ability to expatriate earnings from the foreign country.
- Differences in laws, regulations, and rules governing personnel and human resources areas.
- Differences in the operations of foreign markets and companies, including differences in management practices, worker norms and expectations, roles of government in the economy, and corruption in the business and political environments of the economy.
- Management and coordination of domestic and foreign operations.

Question 2.

Private equity firms have become an important player in the acquisition market. These private investment groups offer to buy a target firm, often with the cooperation of management, and then take the firm private. Private equity buyers tend to finance a significant portion of the acquisition with debt.

- a. What types of firms would make ideal candidates for a private equity buyout? Why?*
- b. How might the acquirer add sufficient value to the target to justify a high buyout premium?*

Ideal target firms are those that:

- Generate relatively stable cash flows to repay the debt that has been used to finance the acquisition.
- Have relatively low tax shields prior to the buyout, so that the leveraged buyout can create new value through interest tax shields.
- Have assets in place, versus growth options or intangible assets. If buyout firms have high growth opportunities, any financial distress due to high leverage will probably reduce their ability to fund the new opportunities. Buyout firms with intangible assets (such as star research personnel) will also be affected by financial distress since these highly-valued assets can leave, whereas assets in place cannot.
- Opportunities for better management of the firm's operations. Debt financing imposes fiscal discipline on a firm's managers and employees. The firm is required to make large debt payments on a regular basis; otherwise the firm could be in default and taken over by its creditors. Management and employees alike would probably lose their jobs. In order to make debt payments, management and employees are forced to eliminate any wasted expenditures, reduce the firm's cost structure, and increase the firm's efficiency.

Question 3.

Kim Silverman, Finance Director of the First Public Bank, notes: "We are fortunate to have a cost of capital of only 10 percent. We want to leverage this advantage by acquiring other banks that have a higher cost of funds. I believe that we can add significant value to these banks by using our lower cost financing." Do you agree with Silverman's analysis? Why or why not?

Disagree. In general, a company's cost of capital is related to the riskiness of its underlying assets. As long as the risk of the assets does not change, then the cost of capital related to those assets will remain the same, regardless of who owns the assets. If a firm with a low cost of capital buys a firm with a higher cost of capital, the purchasing firm's cost of capital will increase accordingly.

One exception, however, is if there are capital market imperfections that make external financing more expensive. These imperfections could arise from information asymmetries between managers and outside investors. This type of information problem is likely to occur for newly-formed, high-

growth companies. The rapid changes in the business and growth prospects of these firms are often difficult to communicate adequately to outside investors. Because outside investors have incomplete information about the company, they require additional compensation, increasing the cost of capital.

It is unlikely that the First Public Bank will be able to find any other banks with a higher cost of capital, due to capital market imperfections. Banks are not typically newly-formed, high-growth companies. The banking industry in Western Europe and the U.S. is a relatively stable and mature industry. As a result, banks are unlikely to have the types of information asymmetries that are associated with capital market imperfections. Banks will have higher capital costs due to riskier assets rather than to information asymmetries. Unless the First Public Bank changes the risk of the portfolio of assets held by a bank it purchases, the other bank's cost of capital will not change. Consequently, First Public Bank will not be able to take advantage of its lower cost of capital to generate value by merging with a bank with a higher cost of capital.

Question 4.

The Munich Beer Company plans to acquire Liverpool Beer Co. for £60 per share, a 50 percent premium over current market price. Jan Höppe, the Financial Director of Munich Beer, argues that this valuation can easily be justified, using a price-earnings analysis. Munich Beer has a price-earnings ratio of 15, and we expect that we will be able to generate long-term earnings for Liverpool Beer of £5 per share. This implies that Liverpool Beer is worth £75 to us, well below our £60 offer price." Do you agree with this analysis? What are Höppe's key assumptions?

Disagree. Höppe has made two key assumptions, each of which is questionable and could lead to the Munich Beer Company paying too much for Liverpool Beer. First, he assumes that Liverpool Beer will have long-term earnings of £5 per share beginning almost immediately after purchase. It may take several years for Liverpool Beer's earnings to reach £5 per share once changes in management and operations have been put into place. If earnings of £5 per share are not immediately attainable, Höppe will have to adjust the expected earnings downward. Otherwise, using £5 per share with the given P/E multiple will generate a price for Liverpool Beer that is too high.

Second, Höppe assumes that the market will value earnings from Liverpool Beer using the Munich Beer Company's P/E multiple. Just because the Munich Beer Company owns Liverpool Beer does not mean that the two companies will have the same earnings multiples. Firms are likely to have the same P/E multiple if their growth and risk characteristics are similar, but Höppe has not given us any reasons to expect that this is the case for Liverpool Beer and the Munich Beer Company. Instead of using the Munich Beer Company's P/E multiple, Höppe should have used a multiple based on that of firms similar to Liverpool Beer to obtain a more accurate value for Liverpool Beer. Hence, Höppe's estimation of Liverpool Beer's value is likely to be wrong, and a successful bid for Liverpool Beer using his valuation could cause the Munich Beer Company to overpay.

Question 5.

You have been hired by GS Investment Bank to work in the merger department. The analysis required for all potential acquisitions includes an examination of the target for any off-balance-sheet assets or liabilities that have to be factored into the valuation. Prepare a checklist for your examination.

Off-Balance Sheet Liabilities

- Executory contracts
- Contingent obligations

- Operating leases
- Liabilities under environmental regulations

Off-Balance Sheet Assets—Depending on the specific circumstance, these assets may already be included on the balance sheet. These assets are either valued (e.g., intangible assets) or revalued (e.g., land held for sale) once they have been purchased by another company.

- Research (and possibly development) expenditures
- Patents, trademarks, and other intellectual property
- Brand names
- Goodwill
- Land held for sale

Question 6.

A target company is currently valued at €50 in the market. A potential acquirer believes that it can add value in two ways: €15 of value can be added through better working capital management, and an additional €10 of value can be generated by making available a unique technology to expand the target's new product offerings. In a competitive bidding contest, how much of this additional value will A have to pay out to the target's shareholders to emerge as the winner?

There are two sources of value in Firm A's bid for Company T. One source of value is €15 per share due to improved working capital management. Firm A, however, is not the only firm that can make the necessary management changes to generate this value. Any new owners of Company T could generate €15 in value through better working capital management. Hence, Firm T is worth €65 per share in the hands of any outside management that can make the necessary changes to working capital. A second source of value, proprietary technology, is unique to Firm A and will generate an additional €10 in value per share, but only if the company is purchased by Firm A. As a result, Company T is worth €75 per share to Firm A and a maximum of €65 per share to any other firms that would bid. Because Company T is worth more than €65 to Firm A, Firm A could bid slightly higher than €65, acquire Company T, and keep the difference between the purchase price and €75. Hence, Firm A should be able to keep most of the unique value that it can generate for Company T.

Question 7.

A leading oil exploration company decides to acquire an electronics company at a 50 percent premium. The acquirer argues that this move creates value for its own stockholders because it can use its excess cash flows from the oil business to help finance growth in the new electronics segment. Evaluate the economic merits of this claim.

The oil company is arguing that a merger could create value by providing low-cost financing to a financially-constrained electronics firm. This argument is based on the idea that capital market imperfections have prevented the electronics company from investing in all of its growth opportunities. These imperfections may have developed as a result of information asymmetries between management and outside investors. If the electronics firm has to rely on outside investors to finance its growth, capital market constraints could prevent it from undertaking worthwhile projects because public capital markets would probably be a costly source of funds for the firm. However, by purchasing the electronics company, the oil company can help it overcome the capital market imperfections and enable the electronics firm to invest in all of its growth opportunities.

The merits of the oil company's argument for buying the electronics company depend on two conditions. First, financial constraints must be preventing the electronics firm from undertaking some profitable projects. If the electronics firm is not financially-constrained or does not have a set of unfunded but profitable projects, then having access to the additional capital of the oil company will not create value. The only projects the firm would have left would be unprofitable ones. Second, the financial constraints must be due to capital market imperfections. It is plausible that the electronics firm could face capital market imperfections due to information asymmetries. Information problems are likely to be severe for newly-formed, high-growth companies, a description typical of many electronics firms. If information problems make it difficult for outside investors to value the electronics firm because of its short track record or because its financial statements provide little insight about the value of its growth opportunities, then outside investors could be an expensive source of funds.

However, there should be some doubts about the value of this acquisition by the oil firm. First, why does an oil company have a comparative advantage assessing the merits of future investments in the electronics industry than the financial market at large or than other investors that specialize in electronics? Management's lack of expertise in electronics is likely to lead it to over-estimate the value of the target's investments and therefore to overpay for the firm. Consequently, it seems that the oil company's stockholders would be better served if its management paid out the surplus cash intended for the acquisition and subsequent investment in electronics. Second, will the acquisition divert the oil company's management's attention away from managing the oil business effectively, by requiring them to also develop expertise in electronics, thereby reducing the value of the core business? Recently, many diversified businesses have actually been divesting unrelated businesses primarily to refocus on their core activities.

Question 8.

Under current International Financial Reporting standards, acquirers are required to capitalize goodwill and report any subsequent declines in value as an impairment charge. What performance metrics would you use to judge whether goodwill is impaired?

Examples of performance metrics that can be used as indicators of goodwill impairment are:

- changes in value added of the industry in which the acquired firm operates;
- operating performance or share price performance of the acquired firm's industry peers;
- operating performance of the product segment in which the acquired firm operates.

Chapter 2 Strategy Analysis

Question 1.

Judith, an accounting major, states: “Strategy analysis seems to be an unnecessary detour in doing financial statement analysis. Why can’t we just get straight to the accounting issues?” Explain to Judith why she might be wrong.

Strategy analysis enables the analyst to understand the underlying economics of the firm and the industry in which the firm competes. There are a number of benefits to developing this knowledge before performing any financial statement analysis.

1. *Strategy understanding* provides a context for evaluating a firm’s choice of accounting policies and hence the information reflected in its financial statements. For example, accounting policies (such as revenue recognition and cost capitalization) can differ across firms either because of differences in business economics or because of differences in management’s financial reporting incentives. Only by understanding differences in firms’ business strategies is it possible to assess how much to rely on a firm’s accounting information.
2. *Strategy analysis* highlights the firm’s profit drivers and major areas of risk. An analyst can then use this information to evaluate current firm performance and to assess the firm’s likelihood of maintaining or changing this performance based on its business strategy.
3. *Strategy analysis* also makes it possible to understand a firm’s financial policies and whether they make sense. As discussed later in the book, the firm’s business economics is an important driver of its capital structure and dividend policy decisions.

In summary, understanding a firm’s business, the factors that are critical to the success of that business, and its key risks is critical to effective financial statement analysis.

Question 2.

What are the critical drivers of industry profitability?

Rivalry Among Existing Firms. The greater the degree of competition among firms in an industry, the lower average profitability is likely to be. The factors that influence existing firm rivalry are industry growth rate, concentration and balance of competitors, degree of differentiation and switching costs, scale/learning economies and the ratio of fixed to variable costs, and excess capacity and exit barriers.

Threat of New Entrants. The threat of new entry can force firms to set prices to keep industry profits low. The threat of new entry can be mitigated by economies of scale, first mover advantages to incumbents, greater access to channels of distribution and existing customer relationships, and legal barriers to entry.

Threat of Substitute Products. The threat of substitute products can force firms to set lower prices, reducing industry profitability. The importance of substitutes will depend on the price sensitivity of buyers and the degree of substitutability among the products.

Bargaining Power of Buyers. The greater the bargaining power of buyers, the lower the industry's profitability. Bargaining power of buyers will be determined by the buyers' price sensitivity and their importance to the individual firm. As the volume of purchases of a single buyer increases, its bargaining power with the supplier increases.

Bargaining Power of Suppliers. The greater the bargaining power of suppliers, the lower the industry's profitability. Suppliers' bargaining ability increases as the number of suppliers declines when there are few substitutes available.

Question 3.

One of the fastest growing industries in the last twenty years is the memory chip industry, which supplies memory chips for personal computers and other electronic devices. Yet the average profitability has been very low. Using the industry analysis framework, list all the potential factors that might explain this apparent contradiction.

Concentration and Balance of Competitors. The concentration of the memory chip market is relatively low. There are many players that compete on a global basis, none of which has a dominant share of the market. Due to this high degree of fragmentation, price wars are frequent as individual firms lower prices to gain market share.

Degree of Differentiation and Switching Costs. In general, memory chips are a commodity product characterized by little product differentiation. While some product differentiation occurs as chip makers squeeze more memory on a single chip or design specific memory chips to meet manufacturers' specific power and/or size requirements, these differences are typically short-lived and have not significantly reduced the level of competition within the industry. Furthermore, because memory chips are typically interchangeable, switching costs for users of memory chips (computer assemblers and computer owners) encouraging buyers to look for the lowest price for memory chips.

Scale/Learning Economies and the Ratio of Fixed to Variable Costs. Scale and learning economies are both important to the memory chip market. Memory chip production requires significant investment in "clean" production environments. Consequently, it is less expensive to build larger manufacturing facilities than to build additional ones to satisfy additional demand. Moreover, the yield of acceptable chips goes up as employees learn the intricacies of the extremely complicated and sensitive manufacturing process. Finally, while investments in memory chip manufacturing plants are typically very high, the variable costs of materials and labor are relatively low, providing an incentive for manufacturers to reduce prices to fully utilize their plant's capacity.

Excess Capacity. Historically, memory chip plants tend to be built in waves, so that several plants will open at about the same time. Consequently, the industry is characterized by periods of significant excess capacity where manufacturers will cut prices to use their productive capacity (see above).

Threat of Substitute Products. There are several alternatives to memory chips including other information storage media (e.g., hard drives and disk drives) and memory management software that "creates" additional memory through more efficient use of computer system resources.

Price Sensitivity. There are two main groups of buyers: computer manufacturers and computer owners. Faced with an undifferentiated product and low switching costs, buyers are very price sensitive.

All the above factors cause returns for memory chip manufacturers to be relatively low.

Question 4.

Joe argues: “Your analysis of the five forces that affect industry profitability is incomplete. For example, in the banking industry, I can think of at least three other factors that are also important; namely, government regulation, demographic trends, and cultural factors.” His classmate Jane disagrees and says, “These three factors are important only to the extent that they influence one of the five forces.” Explain how, if at all, the three factors discussed by Joe affect the five forces for the banking industry.

Government regulation, demographic trends, and cultural factors will each impact the analysis of the banking industry. While these may be important, they can each be recast using the five forces framework to provide a deeper understanding of the industry. The power of the five forces framework is its ability to incorporate industry-specific characteristics into analysis for any industry. To see how government regulation, demographic trends, and cultural factors are important in the banking industry, we can apply the five forces framework as follows:

Rivalry Among Existing Firms. Government regulation has played a central role in promoting, maintaining, and limiting competition among banks. Banks are regulated at the national and European levels. In the past, national regulations restricted banks from operating across (some European) borders. The government also regulates the riskiness of a bank’s portfolio in an effort to prevent banks from competing for new customers by taking on too many high-risk investments, loans, or other financial instruments. These regulations have limited the degree of competition among banks. However, European deregulation of the industry has made it easier for banks to expand into new geographic areas, increasing the level of competition.

Threat of New Entrants. Government regulations have limited the entry of new players into the banking industry. New banks must meet the requirements set by regulators before they can begin operation. However, as noted above, deregulation of some aspects of banking has made it easier for out-of-country banks to enter new markets. Further, it appears to be relatively easy for non-banking companies to successfully set up financial services units (e.g., car manufacturers). Finally, as consumers have become more comfortable with technology, “Internet banks” have formed. These “banks” provide the same services as traditional banks, but with a very different cost structure.

Threat of Substitute Products. The primary functions of banks are lending money and providing a place to invest money. Potential substitutes for these functions are provided by thrifts, credit unions, brokerage houses, mortgage companies, and the financing arms of companies such as car manufacturers. Government regulation of these entities varies dramatically, affecting how similar their products are to those of banks. In addition, consumers have become increasingly familiar with non-bank options for investing money. As another example, some brokerage houses provide money market accounts that function as checking accounts. As a result, the threat of substitutes for bank services has grown over time.

Bargaining Power of Buyers. Business and consumer buyers of credit have little direct bargaining power over banks and financial institutions. The buying power of customers is probably also stronger in relationship banking than under a transactions approach, where consumers seek the lowest-cost lender for each new loan. Because the use of these approaches varies across countries (due to legal differences; see chapter 10), the bargaining power of buyers may also vary.

Bargaining Power of Suppliers. Depositors have historically had little bargaining power.

In summary, bank regulations have historically had a very important role in determining bank profitability by restricting competition. However, deregulation in the industry as well as the emergence of non-bank substitutes has increased competition in the industry.

Question 5.

Examples of European firms that operate in the pharmaceutical industry are GlaxoSmithKline and Bayer. Examples of European firms that operate in the tour-operating industry are Thomas Cook and TUI. Rate the pharmaceutical and tour operating industries as high, medium, or low on the following dimensions of industry structure: (1) Rivalry; (2) Threat of new entrants; (3) Threat of substitute products; (4) Bargaining power of suppliers, and (5) Bargaining power of buyers. Given your ratings, which industry would you expect to earn the highest returns?

Pharmaceutical firms historically have had some of the highest rates of return in the economy, whereas tour operators have had moderate returns. The following analysis reveals why.

	Pharmaceutical Industry	Tour Operating Industry
Rivalry	<i>Medium</i> Firms compete fiercely to develop and patent drugs. However, once a drug is patented, a firm has a monopoly for that drug, dramatically reducing competition. Competitors can only enter the same market by developing a drug that does not infringe on the patent.	<i>High</i> In the 1990s the European tourism industry exhibited strong growth. After a slowdown in growth due to the 2001 terrorism attacks, growth has been steady in the 2000s. However, the trend towards short-term bookings and web-based bookings (in combination with high price transparency) has structurally changed the industry and increased competition.
Threat of New Entrants	<i>Low</i> Economies of scale and first mover advantages are very high for the industry. Patents deter new entrants. In addition, drug firms' sales forces have established relationships with doctors which act as a further deterrent for a new entrant. This distribution advantage is changing as managed-care firms have begun negotiating directly with drug companies on behalf of the doctors in their network.	<i>Medium to high</i> "Tourism e-mediaries" such as expedia.com can relatively easily enter the market. In addition, suppliers of accommodation and travel services (such as Ryanair) start bypassing tour operators by offering their products online.
Threat of Substitute Products	<i>Low</i> New drugs are protected by patents giving manufacturers a monopoly position. Competitors are forced either to invent around the patent or to wait until the patent expires. Once the patent expires, a company will reduce prices as other manufacturers enter the market.	

	The threat of substitute products, however, is likely to increase as biotech products enter the market.	
Bargaining Power of Buyers	<i>Low</i> Historically, doctors have had little buying power. However, in some countries managed-care providers have become more powerful recently, and have begun negotiating substantial discounts for drug purchases.	<i>High</i> The online offering of accommodation, flight services, car rentals etc. has increased price transparency and, consequently, increased buyers' bargaining power.
Bargaining Power of Suppliers	<i>Low</i> The chemical ingredients for drugs can be obtained from a variety of chemical suppliers.	<i>Medium</i> Tour operators are large and concentrated relative to the suppliers of accommodation and other services. However, suppliers have the ability to "bypass" tour operators by selling their accommodation directly through the internet. Tour operators respond to this threat by means of vertically integrating their activities (e.g., owning their own hotels and airlines).

Question 6.

In 2011, Puma was a very profitable sportswear company. Puma did not produce most of the shoes, apparel and accessories that it sold. Instead, the company entered into contracts with independent manufacturers, primarily in Asia. Puma also licensed independent companies throughout the world to design, develop, produce and distribute a selected range of products under its brand name. Use the five forces framework and your knowledge of the sportswear industry to explain Puma's high profitability in 2011.

While consumers perceive an intensely competitive relationship between companies such as Puma Adidas, these major players in the sportswear industry have structured their businesses to retain most of the profits in the industry by concentrating operations in its least competitive segments. Puma competes primarily on brand image rather than on price. The company sources the manufacturing of its sports products to smaller independent manufacturers, located in Asia and Eastern Europe, over which the company has significant bargaining power.

The threat of new entrants is restricted by limited access to adequate distribution channels, (even more) by the valuable brand name that has been created by Puma, and Puma's expertise in development and design. While sportswear is relatively inexpensive and easy to make (also given the large number of independent manufacturers), a sportswear manufacturer would have difficulty finding a distributor that could get its products to retail stores and placed in desirable shelf space. The high levels of advertising by Puma (including sponsoring contracts with celebrity athletes) have created a highly valued, universally recognized brand, which would be difficult for a potential competitor to replicate.

Puma's valuable brand name and the great demand for the company's products improve the company's bargaining power over its distributors (retail stores). To reduce the power of distributors/retail stores even more, the company has started to open own stores in an increasingly

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number of large cities around the world (such as in Amsterdam, Stockholm, Frankfurt, London, Rome, Milan, Melbourne, Tokyo, Boston, Seattle, Sydney, Osaka, Philadelphia, and Las Vegas).

Puma also makes money by licensing other companies to produce and distributes products under the Puma brand name. The sports licensing business tends to be highly competitive, which makes that Puma has substantial bargaining power over licensees.

Potential threats to Puma's competitive position are the following:

- Puma needs to continue investing substantial amounts in advertising, sponsoring, design and innovation in order to sustain its brand image.
- Some of the companies to which Puma sources its production are by no means small, powerless production companies. For example, in 2005, one of Puma's suppliers was Hong-Kong-based Yue Yuen. This supplier employed 252,000 people, had production plants in China, Vietnam and Indonesia with in total 3.4 million square meters of floor space, and produced 167.2 million pairs of shoes per year for most of the larger athletic shoe sellers.

Question 7.

In response to the deregulation of the European airline industry during the 1980s and 1990s, European airlines followed their U.S. peers in starting frequent flier programs as a way to differentiate themselves from others. Industry analysts, however, believe that frequent flyer programs had only mixed success. Use the competitive advantage concepts to explain why.

Initially, frequent flier programs had only limited success in creating differentiation among airlines. Airlines tried to bundle frequent flier mileage programs with regular airline transportation to increase customer loyalty and to create a differentiated product. Furthermore, the airlines anticipated that the programs would fill seats that would otherwise have been empty and would, so they believed, have had a low marginal cost. However, because the costs of implementing a program were low, there were very few barriers to other airlines starting their own frequent flier programs. Before long, every airline had a frequent flier program with roughly the same requirements for earning free air travel. Simply having a frequent flier program no longer differentiated airlines.

Airlines have had some success in differentiating frequent flier programs by creating additional ways to earn frequent flier mileage and increasing the number of destinations covered. Airlines have developed "tie-ins" with credit card companies, car rental companies, hotels, etc. to allow members of a particular frequent flier program more ways to earn frequent flier mileage. They have also reached agreements with foreign airlines (within alliances) so that frequent flier mileage can be redeemed for travel to locations not served by the carrier. Finally, the programs have provided additional services for their best customers, including special lines for check-in and better flight upgrade opportunities. As a result of these efforts, airline programs have been somewhat successful in increasing customer loyalty.

Question 8.

What are the ways that a firm can create barriers to entry to deter competition in its business? What factors determine whether these barriers are likely to be enduring?

Barriers to entry allow a firm to earn profits while at the same time preventing other firms from entering the market. The primary sources of barriers to entry include economies of scale, absolute

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costs advantages, product differentiation advantages, and government restrictions on entry of competitors. Firms can create these barriers through a variety of means.

1. A firm can engineer and design its products, processes, and services to create economies of scale. Because of economies of scale, larger plants can produce goods at a lower cost than smaller plants. Hence, a firm considering entering the existing firm's market must be able to take advantage of the same scale economies or be forced to charge a higher price for its products and services.
2. Cost leaders have absolute cost advantages over rivals. Through the development of superior production techniques, investment in research and development, accumulation of greater operating experience or special access to raw materials, or exclusive contracts with distributors or suppliers, cost leaders operate at a lower cost than any potential new entrants to the market.
3. Differentiation of the firm's products and services may also help create barriers to entry for other firms. Firms often spend considerable resources to differentiate their products or services. Soft drink makers, for example, invest in advertising designed to differentiate their products from other products in the market. Other competitors that would like to enter the market will be forced to make similar investments in any new products.
4. Firms often try to persuade governments to impose entry restrictions through patents, regulations, and licenses. In the U.S., AT&T fought with the government for many years to prevent other providers of long distance telephone service from entering the market. Similarly, the local Bell operating companies have lobbied the federal government to write laws to make it difficult for other firms to provide local phone service.

Several factors influence how long specific barriers to entry are effective at preventing the entry of competitors into an industry.

- Economies of scale depend on the size and growth of the market. If a market is growing quickly, a competitor could build a larger plant capable of producing at a cost lower than the incumbent. If a market is flat, there may not be enough demand to support additional production at the efficient scale, which forces new entrants to have higher costs.
- Absolute cost advantages depend on competitors' difficulty in designing better processes. Some processes receive legal protection from patents. Entrants must either wait for the patent to expire or bear the expense of trying to invest around the patent. Similarly, differentiation advantages last only so long as a firm continues to invest in differentiation and it is difficult for other firms to replicate the same differentiated product or service.
- Incumbent firms and potential entrants can both lobby the government. If potential entrants launch intensive lobbying and public interest campaigns, laws, regulations, and rules can change to ease entry into a once-protected industry. Several recent examples in Europe are deregulation of the airline and banking industries.

Question 9.

Explain why you agree or disagree with each of the following statements.

- a. It's better to be a differentiator than a cost leader, since you can then charge premium prices.

Disagree. While it is true that differentiators can charge higher prices compared to cost leaders, both strategies can be equally profitable. Differentiation is expensive to develop and maintain. It often requires significant company investment in research and development, engineering, training, and marketing. Consequently, it is more expensive for companies to provide goods and services under a differentiated strategy. Thus, profitability of a firm using the differentiated

strategy depends on being able to produce differentiated products or services at a cost lower than the premium price. On the other hand, the cost leadership strategy can be very profitable for companies. A cost leader will often be able to maintain larger margins and higher turnover than its nearest competitors. If a company's competitors have higher costs but match the cost leader's prices, the competitors will be forced to have lower margins. Competitors that choose to keep prices higher and maintain margins will lose market share. Hence, being a cost leader can be just as profitable as being a differentiator.

- b. It's more profitable to be in a high-technology than a low-technology industry.

Disagree. There are highly profitable firms in both high technology and low technology industries. The argument presumes that high technology always creates barriers to entry. However, high technology is not always an effective entry barrier and can be associated with high levels of competition among existing firms, high threat of new entrants, substitute products, and high bargaining power of buyers and/or sellers. For example, the personal computer industry is a high-technology business, yet is highly competitive. There are very low costs of entering the industry, little product differentiation in terms of quality, and two very powerful suppliers (Microsoft and Intel). Consequently, firms in the PC business typically struggle to earn a normal return on their capital. In contrast, Aldi is a cost leader in a very low-tech industry, and is one of the most profitable retailers in Europe.

- c. The reason why industries with large investments have high barriers to entry is because it is costly to raise capital.

Disagree. The cost of raising capital is generally related to risk of the project rather than the size of the project. As long as the risks of the project are understood, the costs of raising the necessary capital will be fairly priced. However, large investments can act as high entry barriers in several other ways. First, where large investments are necessary to achieve scale economies, if additional capacity will not be fully used, it may make it unprofitable for entrants to invest in new plant. Second, a new firm may be at an initial cost disadvantage as it begins to learn how to use the new assets in the most efficient manner. Third, existing firms may have excess capacity in reserve that they could use to flood the market if potential competitors attempt to enter the market.

Question 10.

There are very few companies that are able to be both cost leaders and differentiators. Why? Can you think of a company that has been successful at both?

Cost leadership and differentiation strategies typically require a different set of core competencies and a different value chain structure. Cost leadership depends on the firm's ability to capture economies of scale, scope, and learning in its operations. These economies are complemented by efficient production, simpler design, lower input costs, and more efficient organizational structures. Together, these core competencies allow the firm to be the low cost producer in the market. On the other hand, differentiation tends to be expensive. Firms differentiate their products and services through superior quality, variety, service, delivery, timing, image, appearance, or reputation. Firms achieve this differentiation through investment in research and development, engineering, training, or marketing. Thus, it is the rare firm that can provide differentiated products at the lowest cost. Companies that attempt to implement both strategies often do neither well and as a result suffer in the marketplace. Differentiation exerts upward pressure on firm costs while one of the easiest

sources of cost reduction is reducing product or service complexity which leads to less differentiation.

Question 11.

Many consultants are advising diversified companies in emerging markets, such as India, Korea, Mexico, and Turkey, to adopt corporate strategies proven to be of value in advanced economies, like the U.S. and Western Europe. What are the pros and cons of this advice?

Economic theory suggests that the optimal level of diversification depends on the relative transaction costs of performing activities inside or outside the firm. A focus on core businesses, as is popular in advanced economies, is economically efficient if markets, such as capital, product, and labor markets, work well. However, market failures in emerging economies are a good reason to choose for diversification. For example, in some emerging economies, information problems prevent companies from raising capital at economically efficient rates in public capital markets. Instead, these companies rely strongly on internal sources of financing. Because subsidiaries of diversified companies can cross-subsidize each other, diversification is necessary in emerging markets to create and benefit from internal capital markets. Similarly, large diversified companies in emerging economies can benefit from having internal labor markets.

Problem 1. The European Airline Industry

1. *Evaluate how the rivalry among existing firms has developed after 2004.*
 2. *Evaluate the influence of rising fuel prices on the AEA airlines' profitability between 2003 and 2006. If fuel prices had not increased after 2003, what would have been the pre-interest breakeven load factor in 2006 (assuming all other factors constant)?*
 3. *During the period examined, some airlines started to charge fuel surcharges to their customers. For example, late 2007 KLM charged its customers €27 on European flights and €80 on intercontinental flights. Other airlines had similar surcharges. How do such practices affect your answer to question 2?*
 4. *The operating margins of the AEA airlines became positive, on average, in 2004 and gradually improved thereafter. What do you think are the most important drivers behind this development? (Also consider your answers to questions 2 and 3.)*
-
1. As described in the chapter, the primary drivers of rivalry among existing airlines are (a) industry growth, (b) concentration, (c) differentiation and switching costs, and (d) excess capacity. The AEA statistics illustrate that during the period 2002 – 2007, these drivers developed as follows:
 - a. Industry growth. During 1995 – 2004, industry growth averaged 5 percent. The average growth in revenue passenger kilometers between 2004 and 2007 was 7 percent. This growth rate is similar to the industry growth rate prior to 2001, a period in which the rivalry among European airlines was intense. In 2006/2007, the growth in revenue passenger and cargo tonne kilometers approached rates of 5 and 3 percent, respectively, suggesting that industry growth has not led to a reduction in rivalry.
 - b. Concentration. The market share of the four (eight) largest AEA airlines changed only slightly during 2004 – 2007, suggesting that industry concentration has neither increased nor decreased.
 - c. Differentiation and switching costs. The statistics do not directly indicate how differentiation and switching costs have developed during the period 2004 – 2007. However, the statistics do show that operating margins of the AEA airlines are very close

to zero, leaving little opportunity for the airlines to compete on anything other than price. The improvement in operating margins observed at the end of the period may suggest that airlines have found ways to differentiate and reduce price competition. However, these margin improvements are more likely to be the result of efficiency improvements (see e.g., the increase in passenger load factor and the small increase in cost per kilometer despite the substantial increase in fuel costs). The growth in revenue per kilometer does not exceed typical inflation rates (and is also affected by fuel surcharges; see question 3).

- d. Excess capacity. Whereas the passenger load factor has increased, the cargo load factor has decreased, resulting in a close to constant overall load factor. The growth in available seat and tonne kilometers parallels the growth in RPKs and CTGs, thereby preventing airlines from substantially reducing their excess capacity.

In sum, the rivalry among European airlines appears not to have changed substantially since 2004.

2. Fuel costs represent an increasingly bigger portion of total costs. The European airlines have been able to keep their costs per kilometer close to constant by achieving efficiency improvements that offset the increase in fuel costs. The change in the (adjusted) pre-interest break-even factor nicely illustrates this. This factor is defined as cost per kilometer / revenue per kilometer. In 2006, fuel costs per kilometer were 13€/k (22.8% x 56.9€/k); in 2003, these costs were 6.5€/k. If fuel prices had not increased after 2003, the pre-interest breakeven load factor in 2006 would have been: $(56.9 - [13 - 6.5]) / 84.5 = 59.3\%$ versus the actual percentage of 69.7%. In other words, in the absence of fuel cost increases, airlines would have needed close to 10 percent less passengers to break even.
3. These surcharges increase the revenue per kilometer ratio by, presumably, 2 – 3 €cents per kilometer. The adjusted pre-interest breakeven factor would be: $(56.9 - [13 - 6.5]) / (84.5 - 3) = 61.8\%$ versus the actual percentage of 69.7%. Even after (crudely) adjusting the factor for fuel surcharges, it appears that the European airlines have become more efficient during the period 2004 – 2007.
4. The previous analysis showed that during 2004 – 2007, the rivalry among existing airlines remained relatively constant. The airlines have become more efficient, possibly as the result of mergers among airlines. The effects of these efficiency improvements have, however, been partly (though not fully) offset by a substantial increase in fuel costs. Airlines have also slightly reduced their excess capacity, thereby increasing their load factors. In sum, capacity and cost reductions, rather than changes in the structure of the industry, are the most likely drivers of the airlines' improvements in margins.