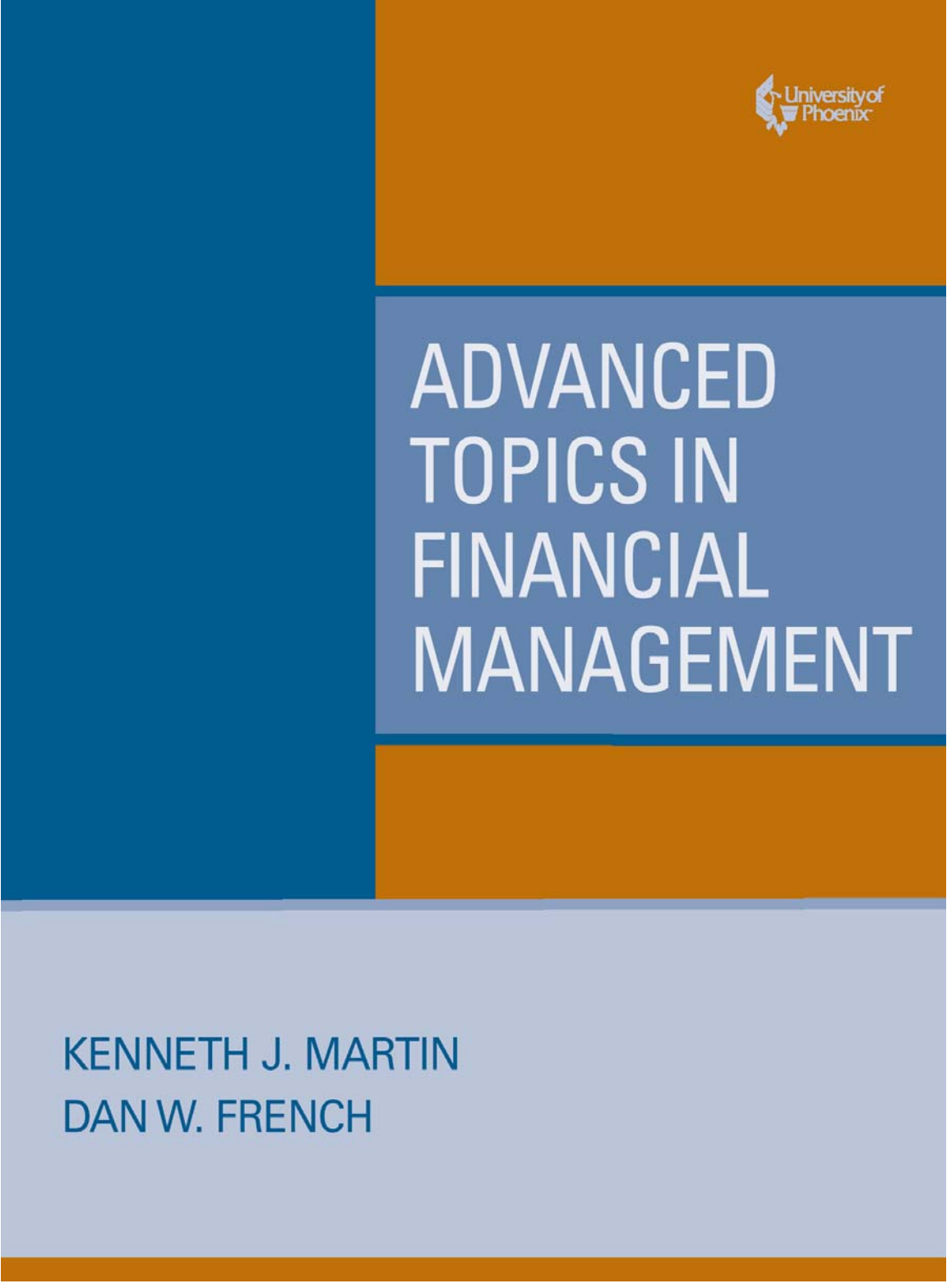

VIEW SECTION 1

Advanced Topics in Financial Management

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DEDICATION

This text is dedicated to our families and to our current and former students.

PREFACE

We are pleased to present *Advanced Topics in Financial Management*. This text represents the culminating course in the Finance major for undergraduate students at the University of Phoenix. The text integrates financial and accounting concepts and practice using contemporary case analysis. The goal of the text is to examine real-world financial management practices and to apply them so that firm value increases.

Advanced Topics in Financial Management focuses on decision making that a financial manager would make in the course of growing a business. Thus, the first step is an understanding of financial planning. Good managers recognize where the business has come from, but, more importantly, focus on where the business is going. Therefore, they need to translate their vision into practical terms as presented in the financial statements. Following the development of a financial plan, the manager next must evaluate the plan to determine if it meets the organization's goals and objectives. If not, then the plan must be altered. The decisions that define the plan involve both short-term and long-term investing and financing decisions. We present techniques to analyze working capital decisions, capital budgeting decisions, and capital structure decisions. Finally, we discuss techniques to better communicate financial information within the firm. An important aspect of the

text is a cumulative case study of Desert Coffee Roasters, Inc., a wholesale coffee roaster and distributor. After each section, students are presented with a challenge faced by the company and are asked to apply the analytical techniques presented in the section to construct a possible solution. Extensive spreadsheets are provided to help students.

The text is comprised of the following five sections:

- Section 1: Overview of Advanced Financial Planning
- Section 2: Financial Plan Implementation and Evaluation
- Section 3: Cash Flow and Capital Management
- Section 4: Optimal Capital Structure
- Section 5: Financial Communication and Planning Within the Organization

Features

Several features are found in each section of the text, in addition to the pedagogy of topics and information presented. These features include Learning Objectives, Section Summary, Glossary, Questions and Problems, Mini-Case Studies, and the Cumulative Case Study.

Learning Objectives

Each section opens with a statement of its action-oriented learning objectives. This statement enhances learning by previewing and guiding the reader's understanding of the materials that will be encountered in the section.

Section Summary

At the conclusion of each section is a summary of the important concepts, ideas, and techniques discussed in the section.

Glossary

Glossaries, appearing at the end of each section, define all the key terms appearing in the text.

Questions and Problems

A variety of realistic end-of-section questions and problems offer practice in applying the concepts and techniques being taught.

Mini-Case Studies

These case studies expand on the techniques presented in the sections and illustrated through the problems. Spreadsheets are provided to help guide the student.

Cumulative Case Study

The cumulative case study is intended to be a realistic portrayal of decisions faced by Desert Coffee Roasters, Inc. It is cumulative in the sense that the students' solutions in the early part of the case will affect their analysis in later parts of the case. Spreadsheets are provided for each part of the case.

Acknowledgements

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Thanks to our families for their sacrifices of our time and energy on behalf of this project.

—Dan French

—Kenneth J. Martin

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His broad research interests are in areas of investments and financial management. Specifically, his research has covered the topics of investment valuation, options pricing, stock splits, corporate governance, risk measurement, and the Mexican stock market. He has written more than thirty articles that have appeared in professional and scholarly publications such as the *Journal of Financial Economics*, the *Journal of Financial Research*, the *Journal of Portfolio Management*, the *Journal of Investing*, the *Journal of Banking and Finance*, the *Financial Review*, and the *Journal of Economic Issues*.

His teaching interests include investments, portfolio analysis, financial management, financial statement analysis, and management of financial institutions. His international experience includes teaching for the Instituto de Posgrado de Administración de Negocios in Guayaquil, Ecuador, the Universidad de Puerto Rico, Mayagüez, and the Instituto Tecnológico y de Estudios Superiores de Monterrey, Monterrey and Ciudad Juárez, Mexico.

Dr. Kenneth J. Martin is Professor of Finance in the College of Business Administration and Economics at New Mexico State University and is a past holder of the Bank of America Distinguished Professorship. He received his Ph.D. in finance from Purdue University in 1987 and his BS in accounting and MBA degrees from Oklahoma State University. Professor Martin's research interests include issues involving executive compensation and corporate governance as well as the impact of mergers and acquisitions on shareholder wealth. He has published fifteen research articles in professional Finance and Law journals such as the *Journal of Financial Economics, The Journal of Finance,* the *Journal of Corporate Finance*, *Financial Management*, the *Journal of Accounting and Economics*, *Managerial Decision and Economics, Wake Forest Law Review, University of Cincinnati Law Review, Securities Law Review, International Review of Law and Economics,* and *Financial Practice and Education.* He actively presents and discusses research papers at professional conferences. In addition to New Mexico State, Professor Martin has taught corporate finance, investment analysis, and banking at the University of Iowa and Oklahoma State University.

Table of Contents

SECTION ONE: OVERVIEW OF ADVANCED FINANCIAL PLANNING

❖ Learning Objectives

- Define the purposes of financial planning.
- Describe sources and appropriate uses of macroeconomic data.
- Explain the factors affecting industry profitability.
- Contrast different strategies business may use and their impact on financial planning.
- Develop a sales forecast.
- Construct pro forma financial statements.
- Evaluate pro forma financial statements.
- Determine appropriate actions based on pro forma financial statements.

❖ Introduction

This section is about the application and analysis of financial planning for business and financial managers. Financial planning spans the spectrum of issues from forecasting financial statements and planning for future financing needs to determining which capital expenditures to make to deciding on the appropriate mix of debt and equity for the firm.

This section presents an overview of financial planning from the total firm perspective. This type of planning involves understanding the economic environment in which the firm

operates, both globally and industry-wide. It also involves determining how the firm's strategy will influence the planning process. The planning process as presented in this section results in a set of forecasted financial statements—called **pro forma financial statements** that are based on consistent and realistic assumptions. But simply generating a set of pro-formas is not the end of the story. The plans must be tested for sensitivities in the assumptions and then evaluated against companywide goals while taking into consideration both legal and ethical dimensions. In the end, a financial plan should lead to specific, actionable recommendations that can be implemented by operating and financial managers.

❖ Purpose of Financial Planning

Why Do Financial Planning?

When asked how he got to be such a great hockey player, Wayne Gretzky is reported to have said, "I don't skate to where the puck is. I skate to where the puck is going to be." In a similar way, knowledge of where a business is today may be valuable, but anticipating where the business is going to be one, two, or even five years from now is even more valuable.

However, as baseball great Yogi Berra is reported to have said, "It's hard to predict, especially about the future." While forecasts based on the techniques presented in this text may turn out to be erroneous, the process by which such forecasts

are developed can help managers anticipate possible future outcomes and prepare for them. Studies have documented that managers value highly the notion of *financial flexibility*, the ability to change direction if conditions warrant. If the future turns out to be bleaker than originally forecast, managers desire the flexibility to scale down production plans or alter financing arrangements to ensure the survival of the firm. Alternatively, if the future turns out to be more robust than managers currently think, their ability to increase production—and having the financing to do so—is critical to the firm's performance. The process of developing financial forecasts increases managerial ability to build flexibility into those forecasts.

Three Types of Planning

There are three types of interrelated planning in which firms engage that lead to an overall financial plan:

- Strategic planning
- Operational planning
- Financial planning

Strategic Planning

Strategic planning is the process of determining the businesses in which the firm should compete and how it should go about competing in them. Strategies vary widely across

firms in the economy. For example, General Electric Co. is widely diversified and competes in industries ranging from turbines to broadcast television to financial services to light bulbs. Starbucks is more narrowly focused on gourmet coffee retailing. However, even though it is less diversified than General Electric, strategic planning at Starbucks involves a whole host of issues such as the quality of coffee beans the firm will sell, where to locate new stores, which specialty products to sell in their stores, and even which services to offer. By the end of its 2002 fiscal year, Starbucks had enabled more than 1,500 of its stores to offer high-speed Internet access using wireless technology. This decision is the result of strategic planning and has implications for operational planning and financial planning.

Operational Planning

Operational planning is the process of implementing the strategy conceived by the firm's managers. For Starbucks to offer wireless Internet access to its customers, the firm had to construct plans for obtaining the necessary equipment, installing and testing it, and then maintaining it. Presumably, the benefits to Starbucks exceed the costs, resulting in an increase in firm value. Starbucks' decision to use high-quality coffee beans rather than lower quality beans is another example where the implementation decision stems from its strategy and ultimately has an effect on its financial plans.

Financial Planning

Financial planning is the process of using the firm's strategic and implementation plans to determine how they will affect the financial performance of the firm. This process involves making assumptions about the future state of the economic variables that will affect the firm, variables such as prices to be received for products and services, costs paid to suppliers, the firm's business model, and the response by competitors to the firm's strategy. A firm's **business model** is simply another way of describing a firm's strategy, or, how it competes within its industry segment. Therefore, financial planning takes as inputs the strategic and operational plans and yields as outputs the financial statement and financial performance forecasts. These forecasts can range from naïve forecasts based solely on historical performance to business model forecasts that rely on an in-depth understanding of the economy, industry, and company. In the process, the firm's managers can determine the financial feasibility and desirability of the strategic and operational plans. Thus, the financial plan is important in that it can shed light on the need for external financing, if any, to implement strategic and operational plans.

❖ Selecting Data

Data versus Information

When preparing forecasts, you have to be able to distinguish between data and information. You must make the distinction between relevant data and irrelevant data, as well as the significance of the data you have collected or desire to collect.

Relevant versus Irrelevant Data

It is relatively easy to collect data, particularly with the advent of the Internet. Data series of all types abound. Some data are collected by government agencies, whereas other data are gathered by private forecasting services. Some data are freely available on the Internet and other data are quite costly to purchase. As a manager or analyst, it is important for you to be able to sift through the enormous amount of available data to determine the data items that are relevant for your task and the items that are irrelevant. For example, most people in the United States are unconcerned with weather conditions in Central American countries. However, for Starbucks, the large retailer and wholesaler of coffee, weather conditions in Central and South America are vital because a hard freeze at the wrong time of year may have important implications for the year's coffee crop. Although it is hard to generalize about the types of data that are relevant and irrelevant, keep in mind that each industry has its own unique data requirements.

Significance of Data

A good manager or analyst not only knows the data that are required for financial planning, but also knows the importance of the data to the forecast. In the oil industry, for example, a manager involved with financial planning should know the impact on the financial plans of a given change in crude oil prices on world markets. Suppose crude oil prices change by $5 per barrel. An astute manager should know the resulting impact on earnings and on the firm's financial plans. Therefore, a manager should have a solid understanding of the significance of the data being collected for financial planning.

Types of Information

One of the first steps a manager should take when preparing for planning is to engage in an analysis of the *macroeconomic* situation. This process involves understanding the general trends in the overall economy and how they might affect supply and demand characteristics of the firm's product or service. If the economy was weak or in a recession, it could have an entirely different effect on a company's financial plans than if the economy were robust and growing.

Sources of Economic Data

There are numerous sources of macroeconomic data. By far the largest provider of economic data is the U.S. federal government. Through its various bureaus and agencies, the

federal government tracks a multitude of economic series ranging from Gross Domestic Product to Consumer Inflation. These series are released on a fairly regular schedule during a month or quarter, depending on the frequency of the series. The Federal Reserve Board and the banks making up the Federal Reserve System maintain research staffs and economic data on the Web. Some of the Web sites containing the data or interpretation of the data are as follow:

- www.federalreserve.gov—The Board of Governors of the Federal Reserve System
- http://research.stlouisfed.org/fred2/—Federal Reserve Economic Data (FRED®) maintained by the Federal Reserve Bank of St. Louis
- http://www.ny.frb.org/—Federal Reserve Bank of New York

Many large private banks and brokerage firms maintain research staffs to help their clients understand the implications of macroeconomic data for their businesses or investments. Large banks and brokerage firms also have Web sites, such as these:

- http://www.citigroup.com/citigroup/homepage/—Citigroup
- http://www.bankofamerica.com/—Bank of America
- http://www.prudential.com/index/—Prudential Financial

- http://www.ml.com/—Merrill Lynch
- Additionally, private companies and business periodicals provide economic analysis or coverage of important economic trends on their Web sites:
- http://www.briefing.com/—Briefing.com
- http://www.economy.com/dismal/—The Dismal Scientist from Economy.com
- http://www.businesscycle.com/—The Economic Cycle Research Institute
- http://online.wsj.com/public/us—The Wall Street Journal
- http://www.businessweek.com/—BusinessWeek Online

No matter where the economic data come from, managers need to understand how well the economy is doing, how well or poorly it is likely to do in the future, and how it will affect the future financial prospects of the firm.

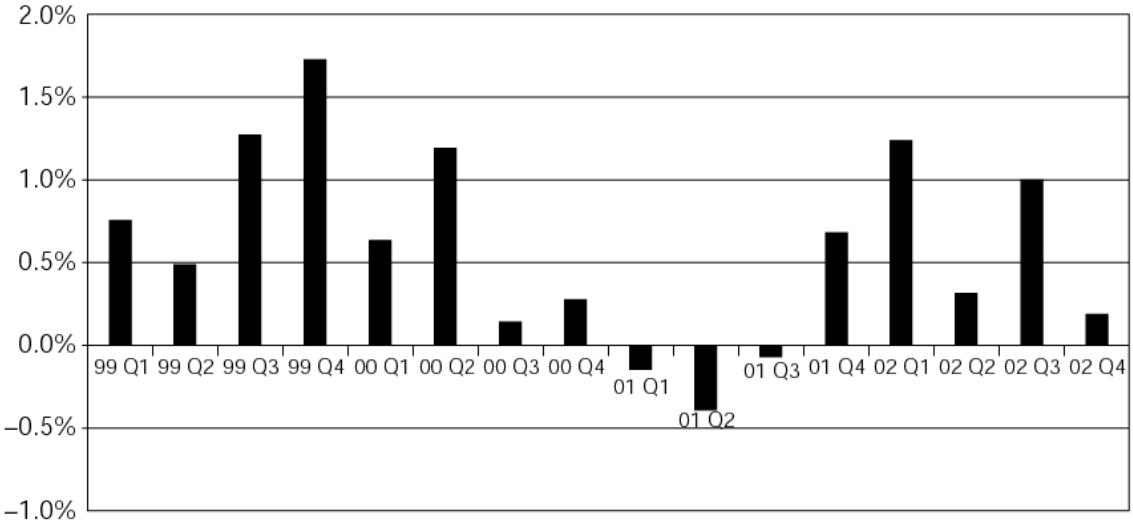
Using Economic Data

The years 2001–2003 provide a good illustration of the importance of looking at a variety of economic indicators to understand the shape of the overall U.S. economy. To set the stage, on November 26, 2001, the National Bureau of Economic Research's Business Cycle Dating Committee officially declared that a peak in business activity occurred in March 2001. The implication of this declaration is that a recession began in that

month. Figure 1-1 shows that real Gross Domestic Product declined on a quarter-over-quarter basis in the first three quarters of 2001, eked out a small gain in the fourth quarter, and posted gains in each quarter of 2002. Nevertheless, by early 2003, the NBER committee had not announced an end to the decline in business activity. Further analysis may indicate the reasons.

FIGURE 1-1:

Economic Activity Peaked in March 2001
(% Change in Real GDP: Quarter over Quarter)



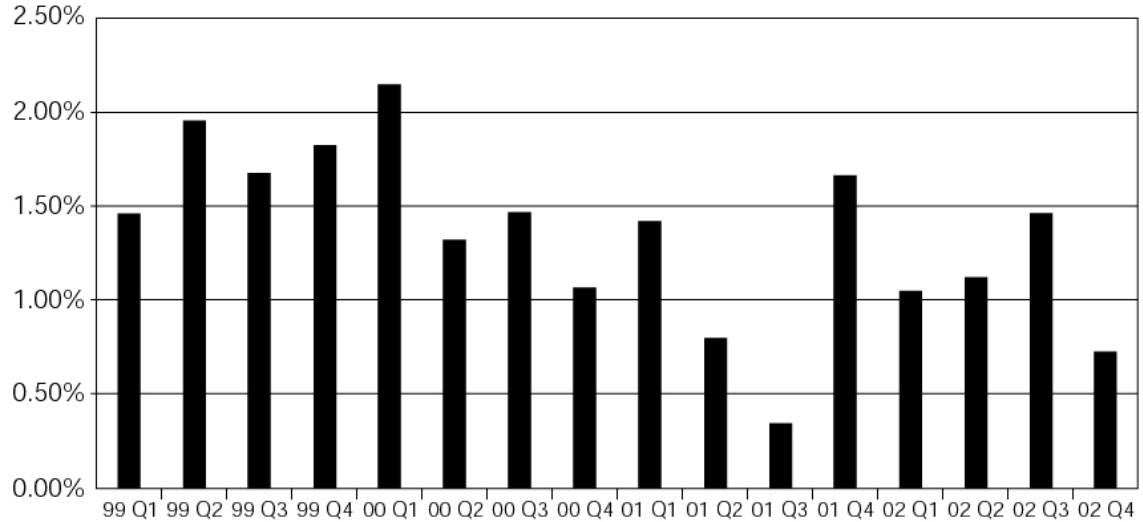
Source: http://research.stlouisfed.org/fred2.

On the one hand, the consumer was still spending, as shown in Figure 1-2. This was due to a number of factors, including record-low interest rates that provided cheap financing for large purchases such as automobiles as well as the ability to refinance existing home mortgages and to finance new homes. Figure 1-3 shows that housing starts remained near record highs as the interest rate on 30-year conventional fixed-rate first mortgages fell.

FIGURE 1-2:

But, Consumers Still Spend

(% Change in Personal Spending: Quarter over Quarter)



Source: http://research.stlouisfed.org/fred2.

FIGURE 1-3:

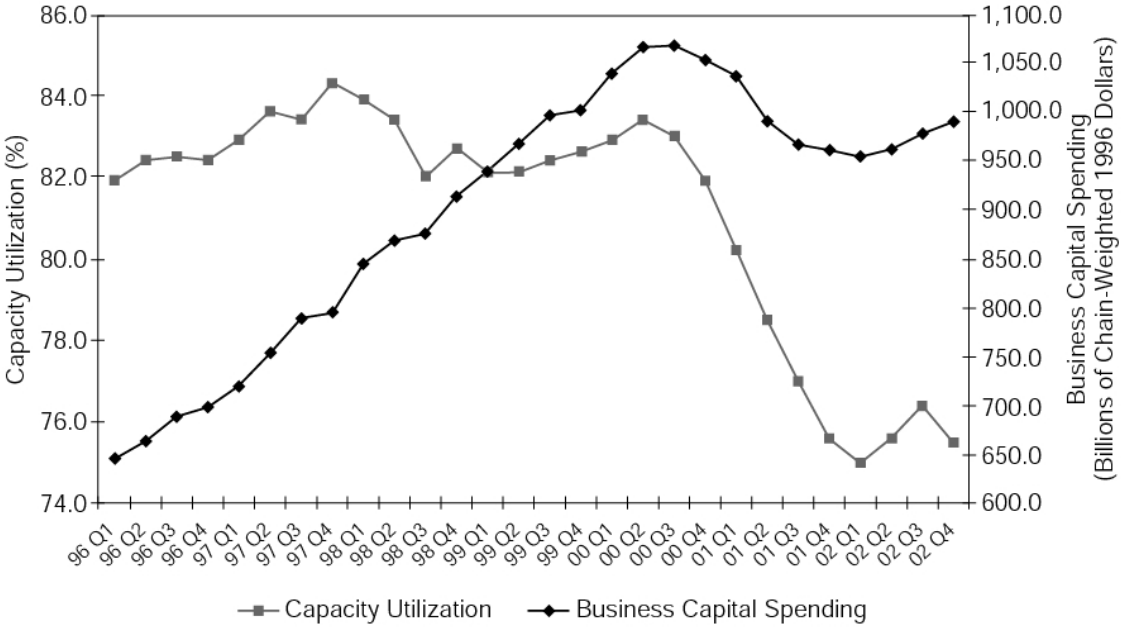
And Housing Remains Robust as Mortgage Rates Fall

Source: http://research.stlouisfed.org/fred2.

Even though consumer spending remains strong, excess capital spending from the late 1990s, and the subsequent recession, led to excess capacity in the economy, as shown in Figure 1-4. This fact meant that business capital spending only modestly turned up in late 2002, and early 2003 and was well below its pre-recession peak.

FIGURE 1-4:

Capacity Utilization Falls and Business Capital Spending Remains Anemic



Source: http://research.stlouisfed.org.

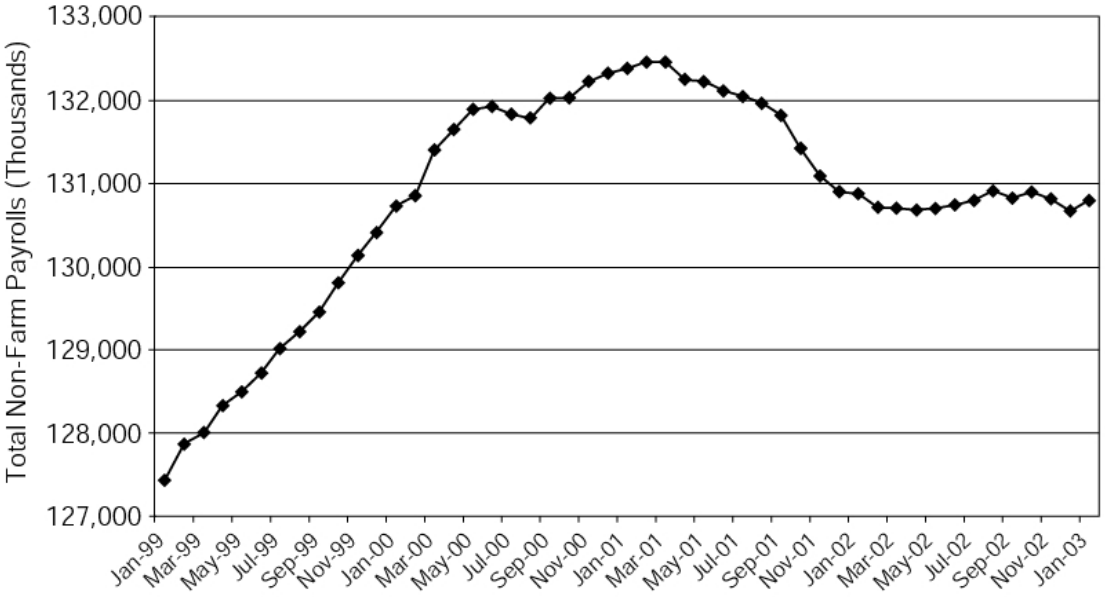
Finally, businesses still weren't hiring, as evidenced by the decline and then flattening of nonfarm payrolls shown in Figure 1-5. The economic recovery in early 2003 remained tepid.

Therefore, the consensus view in early 2003 was that the U.S. economy was not in a robust recovery from the downturn in 2001. A business owner or manager needs to know where the economy is in terms of its overall strength as well as which parts of the economy are doing well or poorly in order to plan

for future financial needs. The manager must focus on the most relevant parts of the economy. For example, a firm in the home construction industry would view the data much differently than would a firm in the business construction industry based on housing starts vis-à-vis industry capacity utilization figures.

FIGURE 1-5:

And Businesses Still Aren't Hiring



Source: http://research.stlouisfed.org/fed2.

Industry Analysis

After gaining an understanding of the overall economy's strengths and weaknesses, the manager then focuses on the industry in which the firm competes. It is important to have a good understanding of the industry when performing financial planning because strategies and financial performance are not static. Rather, they are very dynamic. When forecasting performance over any extended period of time, the manager or analyst must consider the state of the industry, including likely changes based on factors affecting profitability. The assumptions that go into financial forecasts must be grounded in reality and seasoned with the expectation that things in the industry will change over the forecast period.

Sources of Industry Data

There are many sources of industry data, although they are not as freely available as the macroeconomic data collected and distributed by the federal government. Most industries have industry associations that collect and disseminate common industry data. For example, the Food Marketing Institute provides services to the food distribution industry, including supermarkets and grocery wholesalers (see http://www.fmi.org).

A good source for references to industry information is the Web site maintained by Valuation Resources.com at http://www.valuationresources.com/IndustryReport.htm. This Web site maintains links to many different reports or other Web sites pertaining to specific industries.

Many large brokerage firms maintain research staffs of financial analysts typically organized along industry lines. Part of an analyst's job is to understand an industry from top to bottom, who the various competitors are, and how the different players in the industry are positioned to compete in that industry. These analysts will typically produce industry reports with an eye toward the firms that have the best investment prospects.

A good overall view of an industry is given by Standard & Poor's, the firm that produces the widely followed S & P 500 stock index. S & P's Industry Surveys provide information on the current environment in the industry, industry trends, how the industry operates, key industry ratios and statistics, a glossary of industry-specific terminology, industry references, and comparative industry data. More information about Standard & Poor's can be found at http://www.standardandpoors.com.

Factors Affecting Industry Profitability

Financial planning begins with strategic planning. Strategic planning begins with an understanding of how the industry functions and how profitable firms in the industry can be. Therefore, managers and analysts need to come to grips with the factors that affect profitability. There is a substantial body of literature on strategic analysis. Palepu, Healy, and Barnard (2000) summarize this literature by focusing on the five forces of competitive behavior. These forces reflect the intensity of competition within an industry that drive the potential for "above-normal" profit in the industry and also reflect whether the profit is retained by firms in the industry or is kept by suppliers or customers of the firms in the industry. *Above-normal* profits are those profits that exceed what would be earned if the industry was in a competitive equilibrium.

These five forces are:

1. Rivalry among existing firms
2. Threat of new entrants
3. Threat of substitute products
4. Bargaining power of buyers
5. Bargaining power of suppliers

These forces are explained next.

Rivalry Among Existing Firms

Factors affecting the rivalry among existing firms include the growth rate in the industry, the concentration of competitors within the industry, the degree of differentiation of the industry's products and/or services, the economies of scale needed to compete in the industry, and how much excess capacity exists in the industry. For example, for department and discount store retailers, such as Wal-Mart Stores, Inc., the growth rate in the industry is fairly slow. The retailing industry is very mature and grows about as fast as the population grows. A slow growth rate implies that existing retailers compete with each other for market share. This, in turn, implies that pricing is very important, and hence, the potential for above-normal profits is reduced. In an industry with a rapid growth rate (e.g., personal computers in the 1980s and 1990s), the potential for above-normal profits is higher because firms in the industry are able to charge higher prices because of the increased demand for the products. A fragmented industry means that competition among existing firms is lower and the potential for profitability is higher.

Commodity products or services with little differentiation increases the intensity of competition among firms, reduces the ability to charger higher prices, and reduces the potential for profitability. Industries in which products or services are differentiated among firms can increase pricing power and hence increase potential profitability.

Excess capacity in an industry can lead to greater competition among existing firms and lowers the profit potential in the industry. For example, in the United States, general merchandise retailers compete in what has been referred to as an *over-stored* environment, meaning that too many retail stores exist. When shopping for clothing, for example, consumers have numerous retail outlets from which to choose. Competition is fierce, thus holding down prices and potential for above-normal profits.

Threat of New Entrants

If high barriers to entry exist in an industry, the potential for above-normal profits is higher. When easy entry exists, potential profitability is lower. One factor affecting barriers to entry is economies of scale. If a large investment is needed to begin operations, then entry barriers are high. For example, a new pharmaceutical company would require a massive investment in factories, machines, equipment, and research and development in order to begin the process of drug discovery and production. On the other hand, a restaurant needs a relatively modest investment to get started. All else equal, high entry barriers keep out potential competitors, allowing existing firms a better chance at earning above-normal profits.

Another factor affecting barriers to entry is the access to channels of distribution. In the emerging Internet retailing industry, just as in non-Internet retailing, location plays a large role. Google, a popular search engine on the Internet, has become the Web's "gatekeeper" in the sense of providing links to other Web sites. The ability to be one of the first Web links to appear after a consumer uses Google is highly valued. If the retailer's Web site is not among the first sites listed, the retailer risks losing sales.

Finally, there are legal barriers to entry. Pharmaceutical companies enjoy patent protection for a specified number of years on their proprietary drugs and processes to produce drugs. This may lead to these companies earning above-normal profits, although given the uncertainties in the drug discovery and approval process, it is not clear that this happens.

Threat of Substitute Products or Services

Potential competition is lower, and potential profitability higher, when customers cannot readily substitute another product or service for the industry's product. For example, the personal computer has, for years, been designed around the Windows operating system by Microsoft and the microprocessor produced by Intel Corporation. The threat of substitute products, other operating systems, or other computer chips, has, for whatever reason, been fairly low. Over the years, this has led to Microsoft's dominance in PC operating systems and

Intel's dominance in PC microprocessors. For this and other reasons, both companies have, historically, enjoyed very high profit margins.

However, other operating systems, such as Linux, continue to make headway against Windows, particularly in the computer server market, thus increasing the threat of a substitute product. If this continues, one could expect, all else equal, Microsoft's profitability to decline. But in order for this to happen, the Linux operating system would have to be of the same or higher quality and customers would have to be willing to shift to the new operating system.

Bargaining Power of Buyers

Whether the profits are kept inside the industry depends, in part, on the bargaining power of the customers of firms in the industry. If there are a small number of buyers, if one or a few buyers make most of the purchases, or if buyers have choices among alternative product or service suppliers, then buyers will have more bargaining power. More bargaining power leads to buyers being able to extract price concessions from the industry and lower industry profitability. For example, if there are only a few wholesale food distributors in the country, then, relative to the many food suppliers such as bread bakeries, the distributors would have greater bargaining power. Therefore, any potential for above-normal profitability in the bread-baking industry would be lost to the distributors. This does not mean

that bread bakers would not earn a profit, just that their ability to earn profits in excess of their cost of capital would be greatly reduced.

Bargaining Power of Suppliers

The view from the other side of the coin, the supplier's side, is just the opposite of the buyer's side. When there are few suppliers, or the volume by any one supplier dominates, or when it is expensive for customers to switch to new suppliers, then suppliers in the industry will have more bargaining power and will be able to charge higher prices, thus increasing their chances of earning above-normal profits. By this logic, Microsoft and Intel, for example, are dominant suppliers relative to PC manufacturers. Their historically high profit margins have been a testament to their bargaining power.

Business Strategy Analysis

After gaining an understanding of the economy and the industry in which the firm operates, the next step in the preparation to do financial planning is to have an understanding of the firm's business strategy, or business model. The analyst is trying to determine answers to questions such as the following: How does the firm compete in its industry? What kind of strategy does it adopt to set itself apart from other companies in order to increase value to its owners? How does this strategy impact the financial statements and the likely need for external financing in the future?

Low-Cost Strategy

In general, there are two types of strategies firms may follow. The first, a low-cost strategy, seeks to provide the same product or service as their competitors but at a lower cost. They would then be able to charge the same price as their competition and thereby earn above-normal profits. Consider Wal-Mart, for example. In recent years, it has entered the grocery industry in a major way with a cost leadership strategy. It provides products of similar quality as its competition but at significantly lower prices, while still maintaining relatively high profitability. How is it able to do this? Among other ways, Wal-Mart can achieve these results by a focus on tight inventory controls, by utilizing its bargaining power with suppliers, and by being very efficient in its operations.

High-Quality/High-Price Strategy

The second business strategy is based on providing higher-quality products or services and then charging a higher price for that increased quality. As long as buyers are willing to pay higher prices and the prices more than cover any increased cost associated with higher quality, the firm can earn above-normal profits. For example, Target competes with Wal-Mart in the general merchandise industry by providing a different shopping experience that includes wider aisles, designer-label products, and higher-quality apparel. Target generally has higher prices than Wal-Mart to compensate for the higher

costs. Whether Target's or Wal-Mart's strategy is ultimately successful depends in part on the economy and the consumer. If the economy is poor and consumer confidence is low, consumers may gravitate to the low-cost producer. When the economy is robust, the higher-price/higher-quality strategy may be more successful.

Organizational Financial Goals

To gain the best understanding about a firm's performance and needs for financing over a forecast horizon, the analyst must gain an understanding of the economy, the industry, and the individual firm's business strategy. But, to be meaningful for managers and operating personnel, the resulting financial plans have to be compared with the goals of the organization. For example, in its 1993 Annual Meeting Report to its shareholders, the CEO of 3M Company stated four financial goals:

1. Annual growth in earnings per share of 10 percent or better, on average.
2. Return on capital employed of at least 27 percent.
3. Return on stockholders' equity of between 20 and 25 percent.
4. At least 30 percent of sales from products new in the last four years.

The firm's financial plan should be able to incorporate these goals and be measured against these financial goals. From a broad perspective, how the firm gets to the goals depends, in part, on the state of the economy, the industries in which 3M competes, the strategies it pursues in its different businesses, and how well it executes on those strategies.

❖ Preparing Pro Forma Financial Statements

Purpose of Pro Forma Financial Statements

Pro forma financial statements have many purposes, ranging from planning for future financing needs to understanding the drivers of firm valuation. In this section, we will focus on planning for future financing needs. This brings to mind the saying, "Planning is the substitution of error for chaos." Managers formulate financial plans, not because they are going to be necessarily correct—they probably won't be—but because they can prevent a situation from becoming chaotic. Based on their financial plans, managers should have a good understanding of the kinds of scenarios that may arise and what to do in the event a particular scenario unfolds.

The process of preparing pro forma statements can be extremely useful for managers. By thoughtfully considering the economy, the industry, the firm's strategy, and history through the eyes of the financial statements, the manager can construct a vision of the impact of different decisions on the financing

needs of the firm. For example, if the manager decides to change the firm's pricing strategy, the impact will reveal itself through the financial statements.

General Guidelines

In general, we will forecast future financing needs by looking at the accounting equation: Assets = Liabilities + Owners' Equity. **Assets** represent resources that will provide future benefits to the firm and, according to **Generally Accepted Accounting Principles (GAAP),** are recorded at historical cost. Therefore, we have to forecast asset needs by answering questions such as these:

- How much cash does the firm need to have on hand?
- What kind of accounts receivable policy will the firm employ?
- How is inventory managed?
- How much capital expenditures will the firm have in the forecast period?
- How long will the capital assets provide benefits to the firm, and how will these investments be depreciated over time?
- Answers to these questions come from carefully analyzing the industry and business strategy employed by the firm. For example, if the industry standard is to allow

customers 30 days to pay their bills, then the firm will likely use a 30-day collection period. Using a 10-day period may seriously undercut the sales potential for the firm.

Likewise, we have to forecast sources of financing from liabilities and owners' equity. **Liabilities** are obligations of the firm. Some liabilities, such as notes payable and long-term debt, carry explicit interest payments. Other liabilities, such as accounts payable and accrued wages, arise in the normal course of doing business. **Owners' equity** represents both the capital contributed to the firm by the owners as well as the accumulation of earnings that have been reinvested in the firm over time. These earnings are called **retained earnings.** As a manager or analyst, you have to provide answers to these questions:

- How soon will you pay off your accounts payable? Will your suppliers extend credit to you?
- How much debt will you carry on your balance sheet relative to equity?
- How much of that debt will be short-term debt and how much will be long-term debt?
- How much of your earnings will be paid out as dividends, and how much will be retained in the firm?

Part of the answer to the financing question is tied up in the income statement and the amount of earnings you expect the firm to generate over the forecast period. The amount of earnings the firm generates is determined by industry conditions and by strategy decisions made by managers. Therefore, you have to seek answers to these questions:

- What is the firm's pricing policy for its products or services?
- What quantity of products or level of service do we expect to sell?
- How much does the product cost the firm to produce?
- What kind of selling efforts should the firm pursue?
- How large should the administrative staff be, and what should be the compensation policy?

After forecasting the income statement and balance sheet, we will construct a forecasted **cash flow statement.** The cash flow statement can be one of two types: a direct cash flow statement or an indirect cash flow statement. Since most companies use the indirect statement in their published financial statements, we will also adopt that approach. The cash flow statement summarizes the changes in financial position of the firm into three sections:

- Cash flow from operating activities
- Cash flow from investing activities
- Cash flow from financing activities

By organizing the cash flow statement into these three categories, users can tell at a glance where the cash is coming from and to where it is going. Therefore, while net income is certainly an important number, especially for external users of financial statements, the cash flow statement is more revealing. Often, issues that may have been obscured on the income statement or balance sheet become apparent upon examining the cash flow statement. For example, some analysts tend to focus on an earnings figure called *EBITDA*, which stands for Earnings Before Interest, Taxes, Depreciation, and Amortization. But, focusing on EBITDA does not make sense because it ignores the investment required to give rise to EBITDA. In reality, it is cash flows that are important because cash is used to pay workers their wages, pay suppliers for their raw materials, pay the government its taxes, and pay dividends to shareholders. Therefore, the cash flow statement is a very important financial statement.

❖ Forecasting Methodology

The general procedure for preparing pro forma financial statements is to begin with a forecast of sales. Many of the income statement and balance sheet items can then be forecast based on their relationship to sales. Thus, a common way to forecast is called the **percent of sales method.** This simply means using the following three-step approach:

1. Calculate and examine the historical relationship between accounts on the income statement and balance sheet to sales. Decide on the ratio to be used in the forecast period between each account and projected sales.
2. Forecast sales.
3. Apply the forecasted ratio to forecasted sales in each future period.

As long as the relationships are constant, the percent of sales method can give a good estimate of future financial performance. But if the industry economics change, strategies of firms within an industry change, or if the firm's strategy changes, then the relationships may not be constant and the forecast will be off.

Income Statement Forecasting

Let's now turn our attention to forecasting the financial statements of Starbucks' Corporation, the specialty coffee retailer. Tables 1-1 and 1-2 contain Starbucks' historical income

statements and balance sheets as presented in their 10-K annual report filed with the Securities and Exchange Commission for the year ending September 2002. The financial statements in Tables 1-1 and 1-2 are somewhat simplified as compared to the statements that actually appear in the 10-K. The purpose for the simplification is to abstract away from specific accounting issues and concentrate on the issues at hand— namely, forecasting the financial statements and future financing needs. Also notice that Table 1-1 contains three years of income statements but Table 1-2 contains only two years of balance sheets, consistent with their appearance in the 10-K annual report. For simplicity, throughout this example, we will just refer to the years rather than specifically to months, days, and years. For example, we will take "2002" to mean "the fiscal year ending September 29, 2002." In addition, we use the term *revenues* synonymously with the term *sales*.

Starbucks purchases and roasts whole-bean coffees and sells them in both company-operated retail stores, along with fresh-brewed coffees, Italian-style espresso beverages, cold blended beverages, pastries, and coffee-related accessories. Revenues from these sources make up about 85 percent of total revenues. The other 15 percent of revenues come from what are termed *specialty operations*, which involve nonretail sales of whole-bean coffees, teas, other coffee-related products, and a line of premium ice cream. Starbucks' retail sales mix is approximately 77 percent beverages, 13 percent food items, 6

percent whole-bean coffees, and 4 percent coffee-making equipment and accessories. The task before us is to prepare a set of pro forma financial statements for 2003.

TABLE 1-1

Starbucks Corporation: Historical Income Statements

Income Statement (millions)	**2000**	**2001**	**2002**
Net revenues:			
Retail	$1,823.6	$2,229.6	$2,792.9
Specialty	$354.0	$419.4	$496.0
Total net revenues	$2,177.6	$2,649.0	$3,288.9
Cost of sales	$961.9	$1,112.8	$1,350.0
Store operating expenses	$704.9	$875.5	$1,121.1
Other operating expenses	$78.4	$93.3	$127.1
Depreciation expense	$130.2	$163.5	$205.6
General and administrative expenses	$110.2	$151.4	$202.2
Income from equity investees	$20.3	$28.6	$35.8
Operating income	***$212.3***	***$281.1***	***$318.7***
Interest income	$8.1	$8.2	$7.1
Interest expense	$4.5	$2.7	$1.8
Other income, net	($55.4)	$2.4	$17.4
Pre-tax income	***$160.5***	***$289.0***	***$341.4***
Income taxes	$65.9	$107.8	$126.3
Net income	**$94.6**	**$181.2**	**$215.1**
Dividends	***$0.0***	***$0.0***	***$0.0***

Source: Starbucks Corporation 10-K for fiscal year ending September 29, 2002

TABLE 1-2

Starbucks Corporation: Historical Balance Sheets

Balance Sheet (millions)	2001	2002
Assets		
Cash and equivalents	$113.2	$174.6
Short-term investments	$107.3	$227.6
Accounts receivable	$90.4	$97.6
Inventories	$221.3	$263.2
Other current assets	$61.7	$84.5
Total current assets	***$593.9***	***$847.5***
Gross property, plant, and equipment	$1,741.0	$2,080.2
Accumulated Depreciation	$605.2	$814.4
Net property, plant, and equipment	***$1,135.8***	***$1,265.8***
Other non-current assets	$116.8	$179.4
Total Assets	**$1,846.5**	**$2,292.7**
Liabilities & Owners' Equity		
Accounts payable	$127.9	$136.0
Notes payable	$62.0	$74.9
Current maturities of long-term debt	$0.7	$0.7
Other current liabilities	$254.7	$325.9
Total current liabilities	***$445.3***	***$537.5***
Long-term debt	$5.8	$5.1
Other non-current liabilities	$19.5	$23.5
Total liabilities	***$470.6***	***$566.1***
Common stock	$791.6	$930.4
Retained earnings	$584.3	$796.2
Total equity	***$1,375.9***	***$1,726.6***
Total liabilities and owners' equity	**$1,846.5**	**$2,292.7**

Source: Starbucks Corporation 10-K for fiscal year ending September 29, 2002

Forecasting Sales

The most important number to forecast when using the percent of sales method to generate pro forma financial statements is sales, because most other figures will be derived from it. On the one hand, sales forecasts could be generated by the marketing department and so could be seen as out of the control of the financial analyst or manager doing the forecasting. On the other hand, the manager or analyst responsible for the financial plan should understand the assumptions behind the forecast. We will discuss two possible methods of forecasting sales; a business model approach and a more naïve forecasting approach.

As discussed previously in the context of business strategy, in a business model approach, the analyst uses fundamental characteristics of the firm and the industry, as well as the firm's business strategy, to guide the forecasting process. There are many different ways to apply a business model forecast. For example, for Starbucks, revenues are generated from two broad categories: retail and specialty operations. Therefore, a business model approach to forecasting Starbucks' revenues could begin by forecasting retail revenues separately from specialty revenues. Furthermore, total retail revenues are driven by two sources; revenues from existing stores and revenues from new stores. Retailers typically focus on the growth rate in "comparable store sales" to gauge the

performance of their retail network. Comparable stores refer to stores that were open in both the current accounting period and the same accounting period one year ago.

Therefore, the manager needs a number of assumptions to generate a business model forecast based on numbers of stores:

- Sales per store
- Growth in “comparable store sales”
- Sales per new store versus sales for comparable stores
- Number of new stores to be opened
- Timing of opening of new stores

Alternatively, the manager could use a relatively naïve approach to forecasting sales by simply extrapolating the past into the future. Note that the growth rates in total sales for 2001 and 2002 are 22.12 percent and 24.16 percent, respectively. One might naively assume that the growth rate for the next fiscal year would be 23.14 percent, the average of the two previous years. Thus, Starbucks could forecast sales (in millions) for 2003 as $3,288.9 x (1 + Forecast Sales Growth Rate) = $3,288.9 x (1.2314) = $4,050.0.

For companies like Starbucks that have had very consistent sales growth in excess of 20 percent per year and continued prospects of sales growth of that magnitude, a naïve sales forecast based on historical sales growth will probably work

fairly well. But, eventually, even Starbucks will run out of places to put new stores. And, as Starbucks grows larger and larger, new stores will drive a smaller and smaller percentage of growth. Furthermore, a manager or financial analyst typically needs more detail to get a better perspective on just where the growth is occurring.

An alternative naïve forecast, and the one we use in this section, is to first compute growth rates in retail revenues and in specialty revenues, determine forecast growth rates for both sources of revenues, and then apply those forecasts to calculate the dollar amount of revenues. Thus, as shown in Table 1-3, the annual growth rates in retail revenues were 22.26 percent and 25.26 percent in 2001 and 2002, respectively. Assuming the growth rate for 2003 will be the average of those growth rates, we calculate the forecast retail revenue growth rate for 2003 as 23.76 percent. The forecast for retail revenues for 2003 is $2,792.9 million x (1.2376) = $3,456.5 million.

Similarly for specialty revenues, the historical growth rates for 2001 and 2002, respectively, are 18.47 percent and 18.26 percent. Our forecast for 2003 is the average of those two figures, or 18.37 percent. Applying this figure to 2002's specialty revenue number gives us a forecast of $496.0 million x (1.1837) = $587.1 million. Together, 2003's forecasted total net revenues amount to $4,043.6 million.

TABLE 1-3

Starbucks Corporation: Historical Ratios and Assumptions

	2000	2001	2002	2003 est.
Revenue growth rate: Retail		22.26%	25.26%	23.76%
Revenue growth rate: Specialty		18.47%	18.26%	18.37%
Cost of sales / Total net revenues	44.17%	42.01%	41.05%	41.00%
Store operating expenses / Retail revenues	38.65%	39.27%	40.14%	40.20%
Other operating expenses / Specialty revenues	22.15%	22.25%	25.63%	26.00%
Depreciation / Total net revenues	5.98%	6.17%	6.25%	6.35%
G & A expenses / Total net revenues	5.06%	5.72%	6.15%	5.70%
Income from equity investees / Total net revenues	0.93%	1.08%	1.09%	1.10%
Interest rate on short-term investments				1.27%
Interest rate on notes payable				1.76%
Interest rate on long-term debt				2.00%
Income taxes / Pre-tax income	41.06%	37.30%	36.99%	37.00%
Dividends / Net income		0.00%	0.00%	0.00%
Cash / Total net revenues		4.27%	5.31%	5.50%
Accounts receivables / Specialty revenues		21.55%	19.68%	20.00%
Inventory / Cost of sales		19.89%	19.50%	19.75%
Other current assets / Total net revenues		2.33%	2.57%	2.60%
Capital expenditures				$425
Other non-current assets / Total net revenues		4.41%	5.45%	5.50%
Accounts payable / Cost of sales		4.83%	4.14%	4.20%
Current maturities of long-term debt				$0.7
Other current liabilities / Total net revenues		9.61%	9.91%	10.00%
Other non-current liabilities / Total net revenues		0.74%	0.71%	1.00%

Clearly, business model forecasting takes a good deal of effort and assumptions compared to a naïve forecast. At the same time, the process of forecasting based on a business model forces the analyst to consider more factors and more fundamentals of the business than does a naïve forecast. Also, it is clear that the business model discussion related to Starbucks is just one way of creating a forecast. A manager could go down to the level of each individual product that is sold in stores, forecast revenues generated from each item, and then aggregate them to determine a retail revenues forecast. The tradeoffs in choosing how to perform a forecast involve time, effort, and the importance of a specific, detailed forecast versus a broader-brush approach.

Forecasting Operating Expenses

The next step in preparing pro forma income statements is to analyze historical relationships between income statement accounts and revenues. This analysis will give us an idea about how the accounts vary with different revenue items. We will use this analysis to forecast the income statement for the coming year. Accounts such as interest income and interest expense will be dealt with separately because their connection to sales is only indirect. Table 1-3 shows the result of this analysis, together with forecast assumptions for 2003. All percentages are rounded to the nearest .01 percent.

You can see in Table 1-3 that cost of sales as a percentage of total net revenues has decreased by more than three percentage points over the past three years, from 44.17 percent in 2000 to 41.05 percent in 2002. According to the Management Discussion and Analysis (MD&A) section of Starbucks' 10-K report, this decline occurred because of a change in sales mix to higher margin products, such as "hand crafted products," as well as lower green coffee prices. *Green coffee* refers to the whole beans that Starbucks purchases from coffee growers. Starbucks' management notes that it does not expect green coffee prices to continue to fall in the future because of a change in its purchase contracts with growers. Additionally, Starbucks points out that its occupancy costs, included in cost of sales, continue to increase because of higher repair and maintenance costs and higher rent. Let's assume that the trend of lower cost of sales to sales ratio stops in 2003 so that the forecast ratio is 41.00%.

Store operating expenses are the costs of staffing and running company-operated retail stores. Therefore, these expenses should logically be compared with retail revenues. Table 1-3 shows that the ratio of store operating expenses to retail revenues has steadily increased over the past three years, from 38.65 percent in 2000 to 40.14 percent in 2002. According to the MD&A in the 10-K, this increase is due to an increase in the restaurant portion of retail revenues, which is composed of made-to-order beverages and fresh food. This shift resulted in higher payroll expenses and higher average wage rates.

Other operating expenses are associated with nonretail, or specialty, revenues. As a percent of specialty revenues, other operating expenses were relatively stable at about 22.20 percent in 2000 and 2001, but increased to 25.63 percent in 2002. The MD&A section explains that this increase was because of continued investment by Starbucks in its international operations, which includes regional offices and employees devoted to its global expansion. Additionally, Starbucks increased its advertising expenses in 2002. Let's assume that these higher expenses remain in 2003 so that the forecast ratio of other operating expenses to specialty revenues is 26.00 percent.

Depreciation expense is the systematic writing off over time of capital expenditures. One common depreciation technique is the *straight-line method,* in which the depreciable cost of an asset is expensed in equal amounts each year until the end of the asset's useful life. Other depreciation methods use techniques to accelerate the depreciation deductions so that more of the asset is written off in the early part of its life and less is written off later in its life.

There are various methods you can use to forecast depreciation expense. From within the company, you would have access to depreciation schedules and so you could forecast depreciation fairly accurately. From outside the company, you must rely on estimates. One way of forecasting

is to use the ratio of depreciation expense to sales. Table 1-3 shows that Starbucks' historical ratios of depreciation to total net revenues has steadily increased over the past three years—from 5.98 percent in 2000 to 6.25 percent in 2002. Assuming this trend will continue, we forecast the ratio to be 6.35 percent for 2003.

General and administrative expenses include, among other items, salaries and benefits of employees at Starbucks' headquarters. The ratio of G&A expenses to total net revenues increased from 5.06 percent in 2000 to 5.72 percent in 2001 and 6.15 percent in 2002. According to the MD&A section of the 10-K, the increased amount of G&A expenses in 2002 resulted from higher payroll expenses and an $18 million settlement of a lawsuit. Without the $18 million payment, the ratio of G&A expenses to total net revenues would have been 5.60 percent. Therefore, we forecast the ratio to be 5.70 percent in 2003.

The final item before operating income is an account called *income from equity investees*. This item is the result of income earned by Starbucks from their ownership positions in entities that operate licensed Starbucks retail stores. The ratio of income from equity investees to total net revenues has been fairly stable in the past two years at 1.08 percent and 1.09 percent in 2001 and 2002, respectively. Therefore, we forecast the ratio to be 1.10 percent in 2003.

Forecasting Nonoperating Income and Expenses

The next two accounts just below operating income on the income statement are interest income and interest expense. These accounts are a bit different from what you would find if you looked at Starbucks' actual 10-K. We have intentionally changed these account names to illustrate the issues involved with these accounts.

With respect to forecasting interest income and interest expense, we are faced with a dilemma. Recall that the purpose of forecasting the financial statements is to determine whether the firm needs additional financing or if it will generate cash beyond its needs. Before you can determine the financing needs or excess cash generation, you need to know interest income and interest expense. However, you can't figure out what those accounts are until you know whether you need financing or are generating excess cash.

Probably the easiest way out of this situation, and the one used in this example, is to take the simple approach that interest income and interest expense are calculated on *beginning-of-period* account balances. For interest income, that means using the beginning-of-year cash and equivalents account and the short-term investments account. From the footnotes to the financial statements in the 10-K, Starbucks explains that cash and equivalents are invested in very short-term securities, typically with maturities of less than three

months. The account *short-term investments* involves investments of slightly longer duration, from three months to one year. For simplicity, we assume that these accounts will earn interest at the same rate of 1.27 percent, which is approximately the six-month certificate of deposit rate in early 2003.

For interest expense, we also simplify and use the beginning-of-year balances (end of 2002 balances) in notes payable and long-term debt. We assume that notes payable accrue interest at 1.76 percent, which is an approximate three-month interest rate as of early 2003. Long-term debt typically carries a fixed interest rate. From the footnotes to the financial statements in the 10-K, we find that Starbucks' long-term debt arose in connection with the purchase of the land and buildings housing a roasting plant and distribution facility from a county industrial development corporation. Starbucks states that the interest rates on these bonds range from 0.0 percent to 2.0 percent. We take a conservative position and assume that the interest rate on all the long-term debt is 2.0 percent.

The final nonoperating expense is *net other income*. Again, if you look at Starbucks' actual 10-K, you will not find this account. We changed the account name for simplicity. Net other income relates to the gain on sale of assets or investments or income or losses related to Starbucks' Internet ventures. Because we cannot predict when asset sales will be

made, and gains or losses booked, we will not forecast any amounts for net other income for 2003.

Forecasting Taxes and Dividends

The final accounts we forecast on the income statement are income taxes and cash dividends. We calculate the **effective income tax rate** as the ratio of income taxes to pre-tax income. This ratio was about 41 percent in 2000 and dropped to about 37 percent in 2001 and 2002. We anticipate the tax rate to be 37 percent in 2003.

Dividends are not exclusively an income statement item, but we include them here because many firms consider the **dividend payout ratio** when deciding on the amount of dividends to pay. You will notice that Starbucks did not pay a dividend in 2001 or in 2002. This behavior is typical of a rapidly growing firm that wants to re-invest all of its internally generated cash flow in its business. Since Starbucks anticipates a continuation of its growth path with the opening of 600 new stores in 2003, we do not include a dividend in our forecast.

❖ Forecasting the Income Statement

Now that we have forecasted the ratios for 2003, let's apply those ratios to the income statement. Table 1-4 repeats the historical income statement and includes the forecast for 2003. As discussed above, retail revenues are forecasted to be $3,456.5 million and specialty revenues are forecasted to be $587.1 million for total net revenues of $4,043.6 million. All dollar figures are rounded to the nearest $0.1 million.

- **Cost of sales:** Cost of sales are forecasted to be 41.00 percent of total net revenues, or $4,043.6 x .41 = $1,657.9 million.
- **Store operating expenses:** Store operating expenses are a function of retail revenues with the forecasted ratio being 40.20 percent. Thus, 2003's store operating expenses are forecasted to be $3,456.5 x .402 = $1,389.5 million.
- **Other operating expenses:** Other operating expenses are assumed to be based on specialty revenues. The forecast ratio is 26.00 percent. Therefore, the forecast for 2003 is $587.1 million x .26 = $152.6 million.
- **Depreciation expense:** Depreciation is forecast to be 6.35 percent of total net revenues. Thus, depreciation expense is forecast to be $4.043.6 million x .0635 = $256.8 million.

TABLE 1-4

Starbucks Corporation: Historical and Pro Forma Income Statements: 2000 – 2003

Income Statement (millions)	2000	2001	2002	2003 est.
Net revenues:				
Retail	$1,823.6	$2,229.6	$2,792.9	$3,456.5
Specialty	$354.0	$419.4	$496.0	$587.1
Total net revenues	$2,177.6	$2,649.0	$3,288.9	$4,043.6
Cost of sales	$961.9	$1,112.8	$1,350.0	$1,657.9
Store operating expenses	$704.9	$875.5	$1,121.1	$1,389.5
Other operating expenses	$78.4	$93.3	$127.1	$152.6
Depreciation expense	$130.2	$163.5	$205.6	$256.8
General and administrative expenses	$110.2	$151.4	$202.2	$230.5
Income from equity investees	$20.3	$28.6	$35.8	$44.5
Operating income	***$212.3***	***$281.1***	***$318.7***	***$400.8***
Interest income	$8.1	$8.2	$7.1	$5.1
Interest expense	$4.5	$2.7	$1.8	$1.4
Other income, net	($55.4)	$2.4	$17.4	
Pre-tax income	***$160.5***	***$289.0***	***$341.4***	***$404.5***
Income taxes	$65.9	$107.8	$126.3	$149.7
Net income	**$94.6**	**$181.2**	**$215.1**	**$254.8**
Dividends	***$0.0***	***$0.0***	***$0.0***	***$0.0***

Source: Starbucks Corporation 10-K for fiscal year ending September 29, 2002 and author's estimates.

- **General and administrative expenses:** General and administrative expenses are forecast to be 5.70 percent of total net revenues, thus leading to a forecast of G&A expenses of $4,043.6 million x .057 = $230.5 million.

- **Income from equity investees:** Income from equity investees is forecast to be 1.10 percent of total net revenues. Thus, this account is forecast to be $4,043.6 million x .011 = $44.5 million.

Operating income is calculated as total net revenues minus operating expenses plus income from equity investees. For 2003, the forecast for operating income is $400.8 million.

The forecasts for nonoperating income and expenses are explained below. These accounts use balance sheet accounts that are shown in Table 1-5.

- **Interest income:** Interest income is based on 2002's balance of cash and equivalents, $174.6 million plus short-term investments of $227.6 million, for a total of $402.2 million. Using a forecasted interest rate of 1.27 percent, interest income is calculated to be $5.1 million for 2003.

TABLE 1-5

Starbucks Corporation: Historical and Pro Forma Balance Sheets: 2000 – 2003

Balance Sheet (millions)	2001	2002	2003 est.
Assets			
Cash and equivalents	$113.2	$174.6	$222.4
Short-term investments	$107.3	$227.6	$158.3
Accounts receivable	$90.4	$97.6	$117.4
Inventories	$221.3	$263.2	$327.4
Other current assets	$61.7	$84.5	$105.1
Total current assets	***$593.9***	***$847.5***	***$930.6***
Gross property, plant, and equipment	$1,741.0	$2,080.2	$2,505.2
Accumulated depreciation	$605.2	$814.4	$1,071.2
Net property, plant, and equipment	***$1,135.8***	***$1,265.8***	***$1,434.0***
Other non-current assets	$116.8	$179.4	$222.4
Total Assets	**$1,846.5**	**$2,292.7**	**$2,587.0**
Liabilities & Owners' Equity			
Accounts payable	$127.9	$136.0	$165.8
Notes payable	$62.0	$74.9	$0.0
Current maturities of long-term debt	$0.7	$0.7	$0.7
Other current liabilities	$254.7	$325.9	$404.4
Total current liabilities	***$445.3***	***$537.5***	***$570.9***
Long-term debt	$5.8	$5.1	$4.4
Other non-current liabilities	$19.5	$23.5	$30.3
Total liabilities	***$470.6***	***$566.1***	***$605.6***
Common stock	$791.6	$930.4	$930.4
Retained earnings	$584.3	$796.2	$1,051.0
Total equity	***$1,375.9***	***$1,726.6***	***$1,981.4***
Total liabilities and owners' equity	**$1,846.5**	**$2,292.7**	**$2,587.0**
Projected assets (excluding ST investments)			**$2,428.7**
Proj. liabilities & equity (excluding notes payable)			**$2,587.0**
Additional Funds Needed (Generated)			**($158.3)**

Source: Starbucks Corporation 10-K for fiscal year ending September 29, 2002 and author's estimates.

- **Interest expense:** Interest expense is based on both notes payable and long-term debt. First, the notes payable balance for 2002 is $74.9 million. At a forecasted interest rate of 1.76 percent, the interest expense associated with this short-term borrowing is $1.3 million. Long-term debt consists of both the current maturities of long-term debt, $0.7 million, and the portion remaining in the long-term debt account, $5.1 million. Using an interest rate of 2.0 percent, the interest expense associated with long-term debt is forecast to be ($0.7 + $5.1) x .02 = $0.1 million. Thus, total interest expense is forecast to be $1.3 million + $0.1 million, or $1.4 million.
- **Other income, net:** As explained above, net other income is not forecasted for 2003 because we have no knowledge of impending asset sales or other nonoperating sources of gains or losses.

Pretax income is calculated as operating income of $400.8 million plus interest income of $5.1 million less interest expense of $1.4 million, or $404.5 million. Taxes are forecasted to be 37 percent of pre-tax income, or $404.5 million x .37 = $149.7 million. Thus, net income for 2003 is forecasted to be $404.5 million – $149.7 million, or $254.8 million. As discussed previously, we assume Starbucks will pay no dividend in 2003.

❖ Balance Sheet Forecasting

We now turn our attention to the balance sheet and its forecast for 2003. As shown in Table 1-2 and again in Table 1-5, the balance sheet accounts are condensed and simplified from their presentation in Starbucks' 10-K report in order to facilitate a discussion of financial statement forecasting. We begin by going back to Table 1-3 that contains the historical ratios for 2001 and 2002 and the forecast ratios for 2003. Like the income statement, we assume that most accounts are directly connected to revenues. We discuss each account in turn.

Forecasting Assets

Cash and Equivalents

The account cash and equivalents as a percent of total net revenues have increased each of the past two years from 4.27 percent in 2001 to 5.31 percent in 2002. This is because of Starbucks' past profitability and its ability to fund its expansion from internally generated sources of cash flow. We will return to this idea later in this section. We forecast that the ratio will continue to increase in 2003 to 5.50 percent. Given that total net revenues are forecast to be $4,043.6 million in 2003, we forecast the cash and equivalents balance to be $4,043.6 million x .055 = $222.4 million.

Short-term Investments

Pro forma balance sheets must balance, just as historical balance sheets balance. That is, assets equal liabilities plus owners' equity. The problem is that at this point in the process, we do not know if Starbucks will be forecasted to have more asset needs than it has financing available or if it will be forecasted to have more financing than it has asset needs. If the former situation prevails, then Starbucks will need additional financing. If the latter situation occurs, Starbucks will have generated excess cash that it is assumed to invest in short-term securities. The account *short-term investments* is on the asset side of the balance sheet, and we will assume it is the "plug figure" if Starbucks is forecasted to generate excess cash flow. Please keep in mind that "excess cash flow" means cash flow beyond what Starbucks is reasonably expected to need to fund its assets. We defer discussion of the specific account balance shown in Table 1-5 until we have forecast all of the other accounts and are ready to balance the balance sheet.

Accounts Receivable

Accounts receivable are assumed to be generated only from specialty revenues. Recall that retail revenues are generated for Starbucks from their retail stores in which customers pay cash for their beverages, food, and other products. Specialty revenues arise from sales to grocery stores, wholesale clubs, and so on. We assume that credit is granted to these

customers. The ratio of accounts receivable to specialty revenues was 21.55 percent in 2001 and 19.68 percent in 2002. Therefore, we estimate the ratio to be 20 percent in 2003 and the balance sheet account will be $587.1 million x .20 = $117.4 million.

Inventories

Inventories arise as a result of both retail and specialty operations. But, since inventory balances are at wholesale prices and do not include the markup that is included in revenues, we use the ratio of inventories to cost of sales to forecast the account. In 2001, the ratio was 19.89 percent, whereas it fell slightly to 19.50 percent in 2002. We assume the ratio of inventories to cost of sales will rise slightly to 19.75 percent in 2003. Thus, the balance in the inventories account is forecasted to be $1,657.9 million x .1975 = $327.4 million.

Other Current Assets

Other current assets may include a wide variety of short-term asset accounts, including prepaid expenses and deferred taxes. As a percent of total revenues, other current assets have increased from 2.33 percent in 2001 to 2.57 percent in 2002. We forecast the ratio to be 2.60 percent in 2003, implying a balance in the account of $4,043.6 million x .026 = $105.1 million.

At this point, current assets are the sum of cash and equivalents, accounts receivable, inventories, and other current assets. These accounts total $772.3 million. Again, at this point in the process, we do not know if Starbucks will generate excess cash flow and so our balance in short-term investments would be left blank.

Noncurrent Assets

- Three account categories are considered noncurrent assets: gross property, plant, and equipment, accumulated depreciation, and other noncurrent assets. We discuss each of these below.
- **Gross property, plant, and equipment:** Gross property, plant, and equipment is the accumulation over time of capital expenditures less asset sales recorded at historical cost. Since we do not know if Starbucks will have any asset sales, we will ignore that category. However, we are told in the 10-K report that the company intends to open 600 company-operated retail stores in 2003 and that it intends to spend about $425 million for capital expenditures on new stores and remodeling older stores. The $425 million estimate means that the balance in 2003 for gross property, plant, and equipment will be $2,080.2 million + $425 million = $2,505.2 million.

- **Accumulated depreciation:** Accumulated depreciation is also a cumulative account. It cumulates depreciation expense for all the assets since their purchase. For our purposes, we can compute accumulated depreciation for 2003 as the balance from 2002 plus the estimated depreciation expense for 2003, or $814.4 million + $256.8 million = $1,071.2 million.
- **Net property, plant, and equipment:** Net property, plant and equipment is simply the difference between gross property, plant, and equipment and accumulated depreciation. For 2003, this amounts to $2,505.2 million – $1,071.2 million = $1,434.0 million.
- **Other noncurrent assets:** Other noncurrent assets include items such as equity in other investments and goodwill arising from acquisitions. We assume that this account will also vary with total net revenues. In 2001, the ratio of other noncurrent assets to total net revenues was 4.41 percent, and it increased to 5.45 percent in 2002. We forecast the ratio to be 5.50 percent in 2003, which implies an account balance of $4,043.6 × .055 = $222.4 million.

Together with current assets of $772.3 million, the noncurrent assets of $1,656.4 million imply that we forecast Starbucks to need $2,428.7 million in assets for 2003 in order to carry out its strategic and operational plans. Next, we

forecast the financing of those needs—that is, the liability and equity portions of the balance sheet—to determine if Starbucks will need additional financing or if it will generate excess cash flow.

Forecasting Liabilities and Equity

The liability and equity accounts represent the financing of the projected assets. As in the forecasting of the assets, we will use one of the liability accounts as the plug figure so that the balance sheet will balance if asset needs exceed expected financing. Tied up in this decision to use a liability, specifically notes payable, as the plug figure is the question of how much debt Starbucks would be willing to carry and, of the debt they are willing to bear on their balance sheet, what proportion should be short-term and what proportion should be long-term. For our purposes, we will abstract away from these difficult questions by assuming that any additional funds needed to support assets will be raised as short-term notes payable. We discuss forecasting each of the balance sheet accounts as follows:

Accounts Payable

Accounts payable arise in the normal course of business in the form of trade credit granted by suppliers of Starbucks' inventories. Therefore, like inventories, accounts payable is assumed to be a function of cost of sales rather than net

revenues. The ratio of accounts payable to cost of sales declined from 11.49 percent in 2001 to 10.07 percent in 2002. We assume the ratio will be 10.00 percent in 2003. Therefore, the balance in the accounts payable account is forecast to be $1,657.9 million × .10 = $165.8 million.

Current Maturities of Long-term Debt

According to Starbucks' 10-K report, the schedule for repayment of their long-term debt calls for payments in 2003 of $0.7 million. Therefore, we simply enter that amount in Tables 1-3 and 1-5.

Other Current Liabilities

This account includes items such as accrued compensation, accrued occupancy costs, accrued taxes, and deferred revenue. As a percent of total net revenues, other current liabilities have increased slightly from 9.61 percent in 2001 to 9.91 percent in 2002. We assume the ratio will increase again in 2003 to 10.00 percent. Therefore, other current liabilities are forecasted to total $404.4 million in 2003.

Long-term Debt

We assume that long-term debt decreases each year by the amount stated in Starbucks' 10-K report and shown as current maturities of long-term debt on the balance sheet. Thus, long-term debt for 2003 is forecast to be 2002's balance in long-term debt, $5.1 million, less $0.7 million in current maturities of long-term debt, or $4.4 million.

Other Noncurrent Liabilities

This account consists mostly of net deferred income taxes as well as any other long-term liabilities the firm records. Because a discussion of deferred taxes is beyond the scope of this section, we simply forecast the account as a percent of total net revenues. The ratio was 0.74 percent in 2001 and 0.71 percent in 2002. We forecast the ratio to be 0.75 percent in 2003, leading to an account balance of $4,043.6 x .0075 = $30.3 million.

Common Stock

The common stock account increases when new shares are issued and decreases when shares are repurchased and placed in the treasury. In 2001 and 2002, both activities occurred according to Starbucks' 10-K report. New shares were issued from both the sale of stock to employees under the employee stock purchase plan and the exercise of employee stock options. In 2001, this activity amounted to $59.6 million and in

2002, it amounted to $107.4 million. Additionally, Starbucks repurchased common stock in the amounts of $49.8 million and $52.2 million for 2001 and 2002, respectively. Although you might reasonably expect such activity to continue in the future, for our purposes we will assume that the sales of stock and repurchase of stock will just cancel out and there will be no increase or decrease in the common stock account.

Retained Earnings

The retained earnings account represents the earnings that have been reinvested in the firm since its inception. Retained earnings do not represent a cash hoard out of which dividends may be paid. Cash dividends may only be paid with cash. However, the accounting for dividends is such that the retained earnings account for any one year is equal to the previous year's retained earnings plus net income minus cash dividends. Therefore, the forecasted retained earnings account for 2003 is equal to $796.2 million plus $254.8 million minus $0, since we assumed no dividends were to be paid. The 2003 retained earnings balance is therefore $1,051.0 million. While there may be other accounting reasons for retained earnings to increase or decrease, those reasons are beyond the scope of this section.

Balancing the Balance Sheet: Additional Funds Needed (Generated)

At this point, we can sum the projected liabilities and equity, excluding notes payable, as the plug figure on this side of the balance sheet. As Table 1-5 shows, we find that projected liabilities and equity total $2,587.0 million, which is $158.3 million higher than the projected assets of $2,428.7 million. According to our forecast, Starbucks will generate more cash flow that it needs to invest in its assets for 2003. The balance, $158.3 million, is the figure that must be plugged into the balance sheet to make it balance. Since the sum of liabilities and equity is greater than assets, the figure is plugged into the asset side of the balance sheet in the account short-term investments. Note that the notes payable account is forced to be zero. Whereas this treatment may not be strictly true, this manner of treating the plug figure vividly demonstrates the choices the firm's managers must make when confronting a situation where excess cash is being generated. We could have just as easily have forecast that notes payable would be maintained at some minimum balance—say $50 million. This assumption would have the effect of forcing the short-term investments account to be $50 million higher.

❖ The Forecasted Cash Flow Statement

Let's now turn our attention to Table 1-6, the cash flow statement for 2003 as derived from the forecasts for the income statement and balance sheet. The cash flow statement includes three sections: cash flow from operating activities, cash flow from investing activities, and cash flow from financing activities. The cash flow statement neatly summarizes the flow of cash from its sources to its uses. For this reason, sometimes the cash flow statement is called the *sources and uses of funds statement*. In general, the cash flow statement explains the change in the cash and equivalents account from one year to the next. In fact, the sum of net cash flows from operating, investing, and financing activities is equal to the change in the cash and equivalents account. If it's not, you know you have made a mistake somewhere. Let's take each section in turn.

TABLE 1-6

Starbucks Corporation: Pro Forma Cash Flow Statement: 2003

Cash Flow Statement (millions)	2003 est.
Cash flow from operating activities:	
Net income	$254.8
Depreciation	$256.8
(Increase) or Decrease in accounts receivable	($19.8)
(Increase) or Decrease in inventories	($64.2)
(Increase) or Decrease in other current assets	($20.6)
Increase or (Decrease) in accounts payable	$29.8
Increase or (Decrease) in other current liabilities	$78.5
Increase or (decrease) in other non-current liabilities	$6.8
Net Cash Flow from Operating Activities	***$522.1***
Cash flow from investing activities:	
(Purchase) or sale of short-term investments	$69.3
(Purchase) or sale of property, plant, & equipment	($425.0)
(Increase) or decrease in other non-current assets	($43.0)
Net Cash Flow from Investing Activities	***($398.7)***
Cash flow from financing activities:	
Issuance or (repayment) of notes payable	($74.9)
Issuance or (repayment) of long-term debt	($0.7)
Issuance or (repayment) of common stock	$0.0
(Payment) of cash dividends	$0.0
Net Cash Flow from Financing Activities	***($75.6)***
Change in Cash account	$47.8
Sum of CF from Operating + Investing + Financing	$47.8

Cash Flow from Operating Activities

There are actually two different versions of the cash flow statement that analysts or managers can produce. Their difference lies in their treatment of this section, cash flow from operating activities, although they both result in the same cash flow figure. One version is called the direct cash flow statement. It shows cash receipts from selling activities and cash disbursements for operating expenses.

The other version, and the one we show here, and that most corporations report, is called the indirect cash flow statement. It begins with net income and makes adjustments to it because of the use of accrual accounting. The adjustments are for depreciation, a non-cash tax deductible expense, changes in working capital accounts, and changes in other noncurrent liabilities. The working capital accounts are not the only short-term assets or liabilities on the balance sheet. Rather, they are the accounts that arise in the normal course of doing business—hence the name *operating activities*.

Starbucks' forecast net income for 2003 is $254.8 million, and depreciation expense is $256.8 million. Sometimes analysts or managers may refer to net income plus depreciation as *operating cash flow*. However, this definition falls short of being a true measure of cash flow from operations because it does not account for the net investment in working capital that is necessary to produce the net income. Therefore, you should be careful about your terminology when discussing cash flow.

Table 1-6 resembles, but does not exactly replicate, the cash flow statement as given in Starbucks' 10-K report. Table 1-6 is explicit in identifying which accounts cause an increase in cash flow and which accounts cause a decrease. The reason for being explicit is that it can be somewhat confusing to correctly identify increases and decreases in cash flows. Because we are dealing with cash flows, the signs on the numbers in the cash flow statement are very important. Positive numbers represent cash inflows, whereas negative numbers represent cash outflows. Negative numbers are enclosed in parentheses. Here is an easy way to remember whether an increase or decrease in a balance sheet account is a cash inflow or outflow:

- An increase in assets represents a cash outflow.
- A decrease in assets represents a cash inflow.
- An increase in a liability or equity account represents a cash inflow.
- A decrease in a liability or equity account represents a cash outflow.

Some accounts may be difficult to visualize. Take accounts receivable, for example. Suppose that $100 of goods are sold on credit in year 1. The goods cost you nothing to produce and there are no taxes. Net income would be $100 and you would create an account receivable in the amount of $100. Therefore, in the cash flow statement, net income of $100 would be adjusted downward by the increase in the accounts receivable

balance from $0 to $100. In this simple example, cash flow from operating activities would be zero.

Summing the net cash flow from operating activities for Starbucks, we see that it totals $522.1 million. With this cash, Starbucks can use it to fund capital expenditures, purchase short-term investments, pay down debt, pay cash dividends, or repurchase stock.

Cash Flow from Investing Activities

There are two principal investing activities that most companies engage in: spending on plant and equipment and spending on short-term investments. In addition, companies may make acquisitions and pay a price in excess of the acquired company's book value. This excess is termed *goodwill* and is reported in the other noncurrent assets account.

For Starbucks, balancing the balance sheet resulted in a decrease in the short-term investments account in the amount of $69.3 million. This drawdown of short-term investments is a cash inflow (a sale of assets) and so is reflected on the statement as a positive number.

As assumed earlier, Starbucks is forecast to have $425 million in capital expenditures for 2003. This increase in gross property, plant, and equipment is shown on the cash flow statement as a cash outflow. Finally, noncurrent assets increase by $43.0 million, shown as a cash outflow. The total cash outflow from investing activities is $398.7 million.

Cash Flow from Financing Activities

Finally, we account for financing activities in the last section of the cash flow statement. As a result of the cash flow generated from operating activities, Starbucks is forecast to be able to pay off all of its short-term debt, so notes payable decline by $74.9 million. Long-term debt falls by the prescribed payment of $0.7 million. No new common stock issues or repurchases are assumed and no dividends are paid. Thus, the cash outflow from financing activities is $75.6 million.

Summing up the net cash flows from operating, investing, and financing activities, we find that they total a positive $47.8 million. This is exactly the amount by which the cash and equivalents account increased in the balance sheet. Therefore, we know that our pro forma financial statements are internally consistent.

❖ Evaluating Pro Forma Financial Statements

Clearly, Starbucks is a well-run business and, according to our forecast, will continue to be well-run in 2003. How do we know this? By looking at the pro forma financial statements, and with a few calculations, we can tell the following:

- Total net revenues are forecasted to rise by nearly 23 percent.
- Net income is forecasted to increase by 18.5 percent.
- In spite of this anticipated growth, Starbucks will not have to seek external financing. Rather, even with capital expenditures totaling $425 million, it will continue to hold liquid resources of cash and equivalents plus short-term investments in the amount of $380.7 million.
- Net cash flow from operating activities more than covers anticipated cash outflows from investing and financing activities.

These results reflect what we call the **base case pro forma financial statements.** The *base case* reflects our best guess of the variables and assumptions that make up the pro formas. Next, we consider deviations from the base case.

Sensitivity Analysis

The future is, by definition, unknowable. Therefore, things may not go according to even the best-laid plans. Additionally, the results of the pro forma statements may not measure up to the organization's financial goals. Therefore, we need to perform **sensitivity analysis** on our pro forma financial statements to determine both the extent to which downside risk can influence projected financial results and the extent to which changes in strategic or operational plans can effect an improvement in financial results to be consistent with organizational financial goals.

Typically, when you conduct sensitivity analysis you are testing the pro forma financial statements by changing one variable at a time. For example, we might simply change the cost of sales to total net revenues assumption to determine the impact on the results. Sensitivity analysis, in this restricted sense, is useful if a particular variable is thought to change in isolation from all other variables. However, if economic events cause one variable to change, they are likely to cause other variables to change as well. For example, if the overall economy suffers through a recession, the impact will likely be reflected throughout a number of variables in the pro forma financials. Therefore, in a broader sense, the term *sensitivity analysis* can be used to reflect the change in results when a number of variables change. In this case, we use the term **scenario analysis.**

The Impact of Downside Risks

The first type of sensitivity analysis we will consider is the effect that downside risks have on the need for additional funds or the generation of excess cash. Starbucks' base case pro forma financial statements indicate that the firm will generate excess cash flow for 2003. However, Starbucks' 10-K reports several sources of risk as detailed as follows. We will use these risks to guide our discussion of sensitivity analysis. Table 1-7 reports the results of our sensitivity analysis.

TABLE 1-7

Starbucks Corporation: Summary of Sensitivity Analysis of Pro Forma Financial Statements

Risk Factor	Variable(s) to be Changed	New Assumption	% Change in Operating Income from Base Case	% Change in Additional Funds Needed (Generated) from Base Case
Increased price of green coffee beans	Cost of sales / Total net revenues	44%	-30%	-56%
Increased competition	Growth rate in retail revenues	21%	-19%	-29%
Decreased ability to find optimal store locations	Growth rate in retail revenues and Capital expenditures	20.18% and $280 million	-2%	+89%
Increased store operating expenses	Store operating expenses / Retail revenues	41.20%	-10%	-14%
All 4 factors occur simultaneously			-49%	+17%

Coffee Prices and Availability

Starbucks notes that both the supply and price of green coffee beans are subject to significant volatility based on multiple factors. These factors include weather, political, and economic conditions. A freeze at the wrong time of year in a major coffee-producing area may significantly reduce supply and increase the price of Starbucks' principal raw material. Additionally, some organizations or associations can attempt to establish export quotas or otherwise restrict supply thus increasing the commodity prices of coffee. If this happens, Starbucks' ability to pass these price increases through to their customers may be limited by competition. One important impact on the pro forma financial statements of this risk factor is that the ratio cost of sales to total net revenues could increase. Going back to Table 1-3, we see that this ratio was as high as 44.17 percent in 2000. Therefore, if we set this assumption to 44.00 percent for 2003, the result, as shown in Table 1-7, is that operating income falls to $279.5 million, a decrease of 30 percent. Net income falls to $178.4 million, a decrease of 30 percent. Starbucks will still generate excess cash flow, but just not as much. This is reflected in a decrease in short-term investments to $70.0 million, a decline of 56 percent from the base case. Clearly, coffee prices have a material impact on Starbucks' results and financial plans for the future.

Competition within the Specialty Coffee Industry

Starbucks also notes in its 10-K that increased competition within its industry may significantly impact their results. According to "Counting Beans: Despite Jitters, Most Coffeehouses Survive Starbucks" published in *The Wall Street Journal*, September 24, 2002, the conventional wisdom would have you believe that Starbucks is a dominating force in the industry. You would think that when Starbucks first enters a location, independent coffee houses would have trouble competing. The actual experience, however, contradicts that belief. Between 1996 and 2001, the number of coffeehouses in the United States doubled to 13,300. Moreover, most independent coffeehouses started during the 1982–2002 period have survived. This stands in stark contrast to sit-down, slow-food restaurants, where close to half are less than two years old as of 2002. Therefore, the *Journal* points out, Starbucks simply does not have the same competitive advantages enjoyed by, for example, large discount retailers—lower prices, longer hours, and wider selection. In fact, independent coffeehouses *and* Starbucks have thrived. Starbucks seems to educate the marketplace about specialty coffees, thereby increasing the market for all coffee retailers. The consequence, however, is that steep competition remains for Starbucks' products, and, in fact, it may increase.

One result of increased competition is that it will keep a lid on prices for Starbucks' products. This may show up in the pro forma financial statements as a reduction in the growth rate of revenues. Keep in mind that revenues are ultimately based on product prices times quantity of products sold. Increased competition may keep both factors—prices and quantities—below the base case forecast. In the pro formas developed here, we will simply reflect these factors in decreased growth rates for both retail revenues and specialty revenues. Since our pro formas are not sufficiently detailed to examine the impact of changes in specific product prices or quantities, we simply look at one example of decreased revenue growth rates to illustrate the issues.

Before discussing the results, we need to consider an important attribute of the expenses on the income statement. For each expense category, we need to make a judgment as to whether that expense is a **fixed cost** or a **variable cost.** A fixed cost is one that does not vary in the short run as sales rise or fall, within some reasonable range. For Starbucks, for example, depreciation expense is likely to be the same next year no matter whether retail revenues increase by 23.76 percent as indicated in the base case, or whether they increase by only 20 percent.

A variable cost is one that rises and falls as sales increase or decrease. For example, cost of sales is likely to contain more variable costs than fixed costs. Of course, in the long run, all costs vary. However, our planning horizon in this example is just the next year. Therefore, we might reasonably consider all expenses to be fixed for planning purposes, including cost of sales. We might make this assumption because we will assume that Starbucks is putting into place an operational plan consistent with its strategic plan. This means planning for 600 new stores and developing pricing, purchasing, and human resource strategies that we assume will be implemented over the coming year. With respect to its purchasing strategy, Starbucks' 10-K states that the company engages in fixed-price purchase commitments so that we can reasonably assume that its cost of sales will be fixed at its base case level even if demand falls due to unexpectedly higher competitive forces over the next year.

Table 1-7 shows the result of changing the growth rate in retail revenues from the base case of 23.76 percent to 21 percent while keeping all operating costs constant. Operating income decreases by 19 percent, and the short-term investments account, the *plug figure* for the balance sheet, declines by 29 percent. While not placing Starbucks in a precarious position financially, the results do indicate a deterioration in financial performance.

Ability to Find Optimal Store Locations

According to its 10-K, Starbucks has 3,880 company-operated retail stores in the United States as of fiscal year-end 2002. Therefore, it might be approaching the point of saturation domestically and might be looking toward international locations to fuel its continued growth. However, optimal store locations internationally may be harder to find than domestically. And, with saturation approaching in the United States, Starbucks will find it harder to locate desirable places to situate new Starbucks coffeehouses. The impact of this risk factor is to reduce the growth rate in revenues for new coffeehouses. However, given Starbucks' present size, 600 new company-operated coffeehouses represent about 15 percent growth in the number of stores. A reduction in the number of new stores will have a more muted impact than in, say 2000, when Starbucks had 2,135 company-operated stores at the beginning of the fiscal year.

In terms of the pro forma financial statements, let's examine the impact of a decrease in the number of new retail stores planned for 2003 on our results. This time, however, it is reasonable to expect that operating expenses will also decline because fewer stores are being opened. Specifically, suppose only 400 new stores are opened in 2003 rather than 600, as in the base case. We might expect that capital expenditures would fall by about two-thirds to $280 million. Furthermore, suppose the 200 fewer stores represent lost revenues of $100 million.

Therefore, retail revenues might be only $3,356.5 million rather than $3,456.5 million in the base case. This implies the retail revenue growth rate might fall to 20.18 percent. For the sake of simplicity, let's assume that the specialty revenue growth rate remains the same. And, let's assume that operating costs remain based on a percentage of revenues.

Table 1-7 shows the result of these changes. In this case, operating income falls to $393.0 million, a decline of just 2 percent. Because fewer resources are needed to open fewer stores, asset needs fall, implying that the additional funds generated actually *increase* to $298.9 million, a whopping 89 percent increase over the base case. This example illustrates both the importance of understanding which operating costs are fixed and which are variable and the importance of understanding capital expenditure commitments. Only by building such a model and understanding the sources of risk and sensitivity are you able to understand the important factors to examine when considering pro forma financial statements.

Store Operating Expenses

Finally, let's consider one more risk factor mentioned by Starbucks in its 10-K, store operating expenses. Starbucks notes that its success is based, in part, on its continued ability to hire, train, and retain qualified employees. In fact, according to "Planet Starbucks" in *BusinessWeek*, September 9, 2002, although Starbucks' workers are paid better than comparable

jobs elsewhere, there appears to be slumping morale and employee burnout among its store managers and employees. If, in fact, this trend continues, then store operating expenses as a percent of retail revenues may indeed rise. In our pro formas, suppose this ratio increases from 40.20 percent to 41.20 percent. The impact on the results, as shown in Table 1-7, is to decrease operating income by nearly 10 percent and to decrease the additional funds generated by nearly 14 percent.

Now let's consider the impact on the pro forma financial statements if all four risk factors occur simultaneously. Specifically, if this worst-case scenario develops, we assume the following variables to take on these values:

- Growth rate in retail revenues: 18 percent
- Operating expenses: Fixed at the base case level, except that store operating expenses increase to 41.20 percent of base case retail revenues
- Capital expenditures: $280 million

Table 1-7 again shows the results. Operating income falls by 49 percent to $205.3 million. However, the decline in operating performance is not enough to offset the decline in required capital expenditures, so the additional funds generated actually increase from $158.3 million in the base case to $184.8 million, an increase of almost 17 percent. Again, these results reflect the necessity of fully understanding the assumptions that go into pro forma financial statements, as well as understanding

the flexibility that firms might have in their planned capital spending. Finally, it is important to keep in mind that this example of sensitivity analysis includes only one year of results. The impact of reduced operating performance over a multiple-year period would almost certainly have a more damaging effect on the financial plans of any organization.

❖ Organizational Financial Goals

As mentioned earlier, organizations typically have several financial goals they may wish to achieve. These goals may range from targets on profitability growth to returns on equity or invested capital to targets on debt ratios. It is probably fair to say that many managers would rather plan for growth than plan for retrenchment or downsizing. Let's use Starbucks, a rapidly growing firm, as an example to illustrate the impact that just one financial goal may have on the pro forma financial statements.

Although Starbucks does not explicitly state its financial goals in public documents, the chairman states in his 2002 annual letter to shareholders that Starbucks' immediate goal is to have 10,000 stores in 60 countries by 2005 and to ultimately have at least 25,000 stores worldwide. At least 10,000 of these stores would be in North America and at least 15,000 would be in international markets. Furthermore, Starbucks' mission statement recognizes that profitability is essential to the company's future success. Therefore, for the sake of an

example using the pro forma financial statements developed here, let's assume that Starbucks desires to grow net income by 25 percent for 2003.

Given Starbucks' base case assumptions as shown in Table 1-4, net income is projected to grow to $254.8 million, an 18.46 percent growth rate over 2002's net income of $215.1 million. At this point, the question becomes one of determining what input variables to change so as to generate a 25 percent growth rate in earnings. Although we do not have enough specific information about Starbucks to make specific statements about changes in strategy or tactics to achieve the stated financial goal, by conducting this analysis, we are able to ask questions that may lead us to a greater understanding of whether the required changes are feasible. Building on what we've discussed so far, let's ask the question about how rapidly revenues must grow under various scenarios in order for Starbucks to meet its financial goal;

- By what percentage do retail revenues have to grow in order to achieve a 25 percent growth rate in net income? With a little bit of trial and error, we discover that retail revenues must grow by 33.91 percent to achieve a 25 percent growth rate in net income. Whether this is a reasonable growth rate depends on a number of assumptions, including the growth rate in comparable store sales and the pace of new store additions. Although

this is beyond the scope of the illustrated pro formas, you can easily imagine that Starbucks' managers would have a very good feel for how rapidly comparable stores can grow their sales and how soon new stores can be added to their system.

- By what percentage do retail revenues have to grow in order to achieve a 25 percent growth rate in net income, given that competition is not as fierce as believed and Starbucks is able to raise coffee prices to its customers? The impact of an increase in retail coffee prices relative to their wholesale price to Starbucks shows up in a decrease in the cost of sales to total net revenues ratio. Suppose this ratio falls to 40.50 percent. This implies that the growth rate in retail revenues must rise to 24.65 percent, not far above its base case assumption of 23.76 percent.
- Again, suppose that Starbucks is able to raise retail prices relative to wholesale prices so that the cost of sales to total net revenues ratio is 40.50 percent. But now, let's recognize that some expenses such as depreciation and G&A expenses are fixed in the short run. Now, by what percentage do retail revenues have to grow in order to achieve a 25 percent growth rate in net income? Now, retail revenues must grow only 24.15 percent in order to reach the stated financial goal.

As you can easily imagine, this type of analysis can continue indefinitely. But, as you can also probably see, with a detailed enough set of pro forma financial statements, you can answer numerous questions about the firm's financial plans and determine whether the financial goals are feasible given constraints imposed by either management or the marketplace.

Legal Requirements

Among other requirements, the Securities Act of 1933 requires that companies offering securities for sale to the public register those securities with the Securities and Exchange Commission. These registration documents include financial statements certified by independent auditors. The SEC was actually created by Congress with the Securities Exchange Act of 1934. This Act gives the SEC authority to require companies with publicly traded securities to file certain forms, including the 10-K report we have mentioned numerous times throughout this section. As mentioned earlier, the 10-K contains financial statements prepared by management and certified by independent auditors.

Forward-Looking Statements

The Securities Exchange Act of 1934 does not require companies with publicly traded securities to issue pro forma financial statements. However, companies routinely provide "guidance" to the investing public and publish selected

forecasts or objectives they think are attainable. For example, in its 10-K, Starbucks' management forecasts that capital expenditures are expected to be $425 million in 2003. The management states that they believe the company will open 525 domestic and 75 international company-operated stores during 2003. In their annual letter to shareholders, the chairman and president state that they foresee 10,000 retail stores by 2005. Furthermore, in press releases to the public, Starbucks' management may make statements that reflect revenue growth targets or income growth targets.

These statements by management regarding *earnings guidance*, revenue targets, and other selected forecasts are termed **forward looking statements.** These kinds of statements have become much more commonplace since the Private Securities Litigation Reform Act of 1995 was passed by the U.S. Congress and signed into law. Under this act, companies may make statements regarding expectations and trends in their businesses in reports such as their Form 10-K. They also disclose that these projections are just that, and they are subject to certain risks as we discussed above. Therefore, the actual results may differ materially from those that are forecast.

Sarbanes-Oxley Act of 2002

The Sarbanes-Oxley Act of 2002 was passed on July 30, 2002. The Act has direct implications for public companies, attorneys, auditors, investment management firms and investment advisors. While not directly affecting financial statement forecasts used for internal purposes, managers should be aware of provisions that may impinge on the process of generating pro forma numbers.

First, do not be confused about the term *pro formas*. As used throughout this section, pro forma financial statements mean forecasted financial statements based on a set of assumptions that are considered likely to occur. We have cast up the process in terms of financial planning for future financial needs. As often used in press releases of public companies, “pro forma” earnings are historical earnings calculated “as if” certain transactions did not occur. The reason companies release pro forma earnings is, supposedly, to provide better comparability of earnings from one reporting period to the next. And, until the Sarbanes-Oxley Act was passed, there were no regulations about how pro forma earnings were determined. Now, companies reporting pro forma historical earnings must provide a reconciliation between pro forma earnings and earnings calculated according to generally accepted accounting principles (GAAP).

Second, as mentioned above, managers use forecasted financial statements for internal planning purposes. However, suppose managers of a public company make false statements or commit fraud in preparing their financial statements in their published 10-K report filed with the SEC. An individual inside the company who brings truthful information to the police or federal authorities may become a *whistle-blower*. The Sarbanes-Oxley Act now provides greater protection for whistle-blowers. It is now a federal crime for anyone to knowingly retaliate against a whistle-blower.

Ethical Considerations

Beyond complying with legal requirements, managers may face ethical dilemmas in the preparation and use of pro forma financial statements. For example, companies may have a choice of suppliers for their raw material based on price and quality. A company seeking to maximize its short-run profits may desire to use suppliers that give it the lowest prices even if, in the long run, the strategy may prove less profitable. In 2002, the coffee-growing industry faced a crisis with green coffee prices pushed to 100-year lows, thus negatively impacting coffee growers. At the same time, the quality of coffee has declined. While this situation might lead to higher short-run profits, in the longer run, the gains may prove illusory. Starbucks, however, has chosen a strategy to focus on higher-quality gourmet coffees and has been able to take

market share away from producers of regular or instant coffee. The connection of this discussion to financial planning is to recognize that ratios such as cost of sales to total net revenues do not just appear out of thin air. They must be thoroughly grounded in the reality of the industry segment in which the firm has chosen to compete and the strategy it has chosen to implement. It is incumbent on the user of pro forma financial statements to understand and question all assumptions that go into their preparation. Thus, in the end, you should be prepared to justify the assumptions based on a business model forecast.

❖ Making Recommendations Based on Pro Forma Financial Statements

Generic versus Specific Recommendations

Depending on the level of detail of the pro forma financial statements, you can make recommendations to management that vary in their specificity. For example, given the level of detail in the Starbucks example developed above, you could make general recommendations with respect to the amount of additional funding needed to support its plans. Based on the general pro formas, you could tell Starbucks' management that it will likely remain profitable and generate more cash than it plans to employ in 2003.

With a detailed business model forecast, you could make recommendations that are more specific. For example, you might be able to tell Starbucks management that it should focus more attention in one or more particular geographic areas. Alternatively, you might be able to tell management that it should focus on some particular cost containment strategy if one or more of their operating expenses are getting out of line.

Realistic and Actionable Recommendations

When you deliver your recommendations to management, you want to be sure that they are realistic and actionable. In order to ensure their realism, the pro forma financial statements should be based on realistic forecasts of the economy, industry,

and company. This implies using a business model forecast with sufficient detail so that you include all the important factors a company may face.

Additionally, your recommendations should be actionable. That is, they should be specific enough so that after your presentation of the pro forma financials, management has a clear idea of what actions you think should be taken. While management likely retains the authority to make final decisions, as an analyst you should be prepared to suggest actions that lead to profitable decisions. For example, Starbucks likely evaluates each of their stores' profitability. As Starbucks continues to grow and the industry continues to evolve, it will likely face more decisions about which stores to keep open and which stores to close. If you were an analyst assigned to forecast store profitability, you should understand all the factors affecting profitability and be ready to state the actions that management should take with respect to its stores.

Financial Recommendations

An analyst or manager for a firm will likely have the opportunity to make different kinds of recommendations based on the pro forma financial statements. Financial recommendations have to do with the sourcing of funding for the asset needs and the deployment of cash as it is earned or raised. For example, Starbucks is forecast to generate more cash than it is planning to use in 2003. The question becomes one of what to do with

the cash. Broadly speaking, there are only a few things companies can do with excess cash flow.

First, they could simply save it for future needs. This would imply a build-up in short-term cash reserves such as the cash and equivalents account, in short-term investments, or even in longer-term securities. Some companies, particularly those in slower-growing but still profitable businesses, build up very large cash and investment balances.

Second, the company could pay down debt. In fact, in the Starbucks example, we see that the company is expected to generate enough cash flow to pay off all its debt if it so chooses. Whether it chooses to be debt-free or to maintain some target debt-to-equity ratio depends on a number of factors related to the capital structure decision, a topic that is beyond our current scope.

Third, the company could pay the excess cash flow out to shareholders in the form of cash dividends or a share buyback. Part of the decision to pay cash to shareholders is tied up in the capital structure decision and part is related to the company's growth plans. Since Starbucks still has large growth aspirations, it has chosen to keep the excess cash flow in cash and equivalents and short-term investments to invest at a future time in its business.

Operational Recommendations

Pro forma financial statements can also facilitate operational recommendations. These recommendations have to do with the investment of cash flows in real assets. For Starbucks, these recommendations principally have to do with the investment in new retail stores. When Starbucks enters a new market, it typically places stores very close to existing Starbucks stores. In fact, Starbucks itself notes that new stores might cannibalize up to 30 percent of the sales of already-established Starbucks stores in the market. This is an important consideration that should be taken into account in the pro forma financial statements for a market area, as it will directly impact Starbucks' operations of any one store in the area. For example, one implication of this fact would be the size of any one store in the market area. Anticipating 30 percent cannibalization of sales, the first Starbucks store in a region would probably not be a "super-sized" store but one that is more modest in terms of square footage. This would have implications for seating capacity, coffee-making equipment, supplies, staffing, and so on. In conclusion, pro forma financial statements are a powerful tool that can help managers design, plan, and execute their business strategies.

❖ Summary

Financial planning is just one type of planning that occurs in a firm. Managers also must plan for the strategic direction of their firm, as well as plan for the operational aspects of actually carrying out a strategic plan. Financial planning encompasses a wide variety of activities in a firm, ranging from planning for the entire firm's future financing needs to evaluating specific capital budgeting proposals. Forecasting is difficult, and even the best forecasts are subject to changes in the external environment. Even so, forecasting relies on managers selecting relevant data from many different sources and an ability to process the information in a clear and appropriate manner. In this section, we have identified various sources of economic and industry information. We have also laid out a framework for managers to think about how to use information in analyzing their firm's performance in light of their industry. These factors include the extent of the rivalry among existing firms, barriers to entry for new firms, the threat of substitute products or services, and the bargaining power that buyers and suppliers have in the industry. Based in part on these factors, managers select a strategy to follow and organizational goals, including financial goals, they desire their firm to meet.

Next, we present a model to forecast financial statements. We recognize that most managers will rely on firm-specific and industry-specific considerations to generate a business model forecast of the financial statements. A business model forecast is a very detailed projection of revenues, expenses, assets, and liabilities. In order to show the basics of financial statement forecasting, we use a simple, yet practical approach called the percent of sales method and apply this technique to Starbucks Corporation. We determine the extent to which Starbucks will need external financing or will generate excess cash flow during the forecast period. We also demonstrate how to use the income statement and balance sheet to forecast an indirect cash flow statement. We evaluate our forecasts using sensitivity analysis and show the impact of downside risks regarding coffee prices and availability, competition within the coffee industry, the ability of Starbucks to find optimal store locations, and store operating expenses.

Finally, we discuss organizational financial goals within the context of legal requirements and ethical considerations. We discuss the Sarbanes-Oxley Act of 2002 as well as the Private Securities Litigation Reform Act of 1995. We also discuss how managers should make recommendations based on pro forma financial statements. In the end, pro forma financial statements are an important aspect of the entire planning process by reflecting the firm's strategic, operational, and financial plans.

❖ Glossary

assets Resources that will provide future benefits to the firm and are owned by the firm.

base case pro forma financial statements The forecasted financial statements using the most likely assumptions for each variable.

business model How a company decides to compete within its industry or sector. Alternatively, how a company "makes its money." Another term for the firm's business strategy.

cash flow statement A financial statement that summarizes the sources of cash flow and the uses of cash flow.

depreciation expense The systematic writing off against income of investments in capital expenditures that benefit more than one accounting period.

dividend payout ratio The result from dividing cash dividends by net income.

effective income tax rate The result from dividing income tax expense by pre-tax income.

financial planning The process of using the firm's strategic and implementation plans to determine how they will impact the financial performance of the firm.

fixed cost An operating expense that does not vary in the short run as sales volume varies.

forward looking statements Statements made by management in press releases, filings with the SEC, or in conference calls that refer to future trends or projections based on the current insights and thinking of management of a company.

Generally Accepted Accounting Principles (GAAP) A set of accounting standards and conventions promulgated by a standard-setting bodies, including the Securities and Exchange Commission and the Financial Accounting Standards Board.

liabilities Obligations of a firm arising from benefits received in the past.

operational planning The process of implementing the strategy conceived by the firm's managers.

owners' equity The difference between a firm's asset and its liabilities.

percent of sales method A method of forecast future income statements and balance sheets based on their individual accounts' relationships with sales.

pro forma financial statements Forecast of the income statements, balance sheets, and cash flow statements for future time periods.

retained earnings All earnings of a firm that have been reinvested in the business since the firm's inception.

scenario analysis Changing the assumptions in the pro forma financial statements based on changes in several factors at once.

sensitivity analysis Changing the pro forma financial statements one variable at a time.

strategic planning The process of determining the businesses in which the firm should compete and how it should go about competing in them.

variable cost An operating expense that varies as sales volume varies.

❖ Questions

1. Define strategic planning.
2. Define operational planning.
3. Define financial planning.
4. What are the essential differences between strategic, operational, and financial planning?
5. Discuss the types of macroeconomic data that might be of most use to a retailer.
6. Name three sources of industry data.
7. Discuss the five forces affecting industry profitability. Give examples of each.
8. Discuss different types of business strategies that companies generally choose to pursue.
9. Define pro forma financial statements.
10. For what purposes are pro forma financial statements generated?
11. Describe the business model method of generating pro forma financial statements.
12. Describe, in general, the steps involved in using the percent of sales forecasting method to generate pro forma financial statements.

13. Describe how to perform sensitivity analysis on pro forma financial statements.

14. How do fixed versus variable costs impact sensitivity analysis on pro forma financial statements?

15. Name three legal requirements with which public companies must comply with respect to their published financial statements.

16. Discuss ethical considerations that managers should keep in mind as they prepare and use pro forma financial statements.

❖ Problems

Note: In all of these problems, round all computations involving fractions to four decimal places and all computations involving dollar figures to the nearest whole dollar.

1. Suppose sales were $28,873, $35,626, and $47,689 for the years 2000, 2001, and 2002, respectively. Compute the annual growth rate in sales for 2001 and 2002. Compute the arithmetic average growth rate based on the annual growth rate calculations. Using the arithmetic average growth rate, compute the forecast for sales for 2003.
2. Suppose sales for the coming year are forecasted to be $71,162 and the forecasted cost of sales to sales ratio is 73.00 percent. Calculate gross profit.
3. Suppose pretax income is $1,981, the effective tax rate is 40 percent, and the dividend payout ratio is 6 percent. Calculate the amount of cash dividends.
4. Suppose forecasted sales are $26,117 and the gross profit margin is expected to be 35.00 percent. If the forecasted ratio of inventories to cost of sales is 20.00 percent, compute the forecasted inventories balance for the pro forma financial statements.
5. Suppose beginning-of-year retained earnings are $7,767 and net income is forecasted to be $2,341 for the coming year. If the dividend payout ratio is expected to be 25.00 percent,

compute forecasted end-of-year retained earnings.

6. Suppose net income for the coming year is forecasted to be $1,634 and dividends are forecasted to be $657. After careful analysis, you determine asset needs for next year are $48,824 and liabilities are expected to be $12,869. Owner's equity of the year just completed was $9,040. Calculate the additional funds needed or generated for the coming year.
7. Suppose net income is forecasted to be $1,188 for the coming year, depreciation expense is forecasted to be $1,957, and dividends are expected to be $451. The balances in accounts receivable, inventories, accounts payable, and gross property, plant, and equipment are expected to be $279, $4,889, $2,209, and $26,111, respectively. At the end of the most recent fiscal year, the balances in these accounts were $201, $4,111, $1,906, and $19,169, respectively. Based on this information, calculate cash flow from operating activities for the coming year.
8. Suppose that net cash flow from operating activities is expected to be $829 for the coming year and that net cash flow from investing activities is expected to be ($7,048). If the cash balance at the beginning of the forecast year was $1,222 and at the end of the forecast year it is expected to be $1,626, calculate net cash flow from financing activities for the forecast year.

❖ Mini-Case Study: Home Safety, Inc.

In late 2002, Home Safety, Inc., a leading developer, marketer, and distributor of child safety products, was riding high. Since 1997, sales had increased from just $7.7 million to more than $70 million. Over the past three years, net income had more than doubled and the company's stock price had nearly tripled from $12 per share to more than $32 per share. Michael Lowe, the CEO, exuded confidence, remarking, "We've only just begun to hit our stride. As we implement our new growth strategy into home security products, there's no telling how high sales or our stock price can go."

Industry Overview

The juvenile products industry has experienced significant growth in retail sales from about $1.5 billion in 1992 to nearly $4.0 billion for 2001, an annually compounded growth rate of more than 10 percent. Juvenile products include not only child safety and child care products, but baby apparel, furniture, convenience, and activity products. The drivers behind this growth have been favorable demographic trends, coupled with a significant marketing push by the industry. According to an industry trade group, first-time parents have accounted for about 40 percent of total births over the past 10 years. And, it is these parents who are the largest purchasers of juvenile products. Furthermore, today's parents are more aware of and place a greater emphasis on child safety than parents of

previous generations. These facts, together with studies indicating that couples are marrying later in life and have higher disposable income per family due to more dual-income households, mean that they are more willing to spend money on their children.

The home security products industry was also experiencing significant growth, primarily as a result of heightened public concern with crime and home safety issues. Current industrywide annual sales were estimated at $5 billion, with annual growth rates modestly estimated to range between 30 percent and 50 percent for the next 10 years. Additionally, the expansion of “do-it-yourself” home center chains offer consumers less-expensive options for making homes safe and provide a wide distribution network for home safety products.

Business Strategy

Home Safety, Inc. recognized these trends earlier than most companies. It believed that its flagship brand name, Baby Safety®, was closely associated with child safety among consumers. The company had already garnered national attention from its distinctive yellow and black diamond-shaped car window signs reading “Baby on Board” and “Child on Board.” Since then, Home Safety had continually expanded its line of safety products from basic items, such as outlet plugs and drawer and cabinet locks, to safety gates, bed rails and balcony guards. The company believed that it was the leading supplier of child safety products in the United States.

In 2001, Home Safety embarked on its new strategy of expanding into the home security market by introducing a new line of products. These products included locks, bolts, and latches for doors, windows, and cabinets, as well as electrical safety items, home automation products, carbon monoxide detectors, and smoke detectors. Increased marketing efforts and favorable demographic trends were expected to keep sales on its upward growth path. By year-end 2003, juvenile product offerings were expected to increase from 200 to 400 products, whereas home security products were forecast to increase from 100 to 250 products.

Home Safety expected to accomplish this growth by using the following key objectives.

- **New and innovative products:** The company expected to develop and market high-quality products with innovative features and sell them at competitive prices.
- **Expansion of markets and customer base:** Home Safety has continually expanded its child safety product line while also developing child care, convenience, and activity products. The expansion into the home security market has enabled the company to broaden its customer base. It now markets products not only to large discount retailers, but also to food and drug chains, hardware and home center chains, warehouse clubs, and mail-order catalogs.
- **International expansion:** Home Safety continues to expand internationally and now sells products in over 55 countries either directly or through distributorships. To support this expansion, the company has established a new position of vice president of international sales and has set up seven new regional offices on six different continents.
- **Brand name recognition:** Being the first marketer of child safety products, Home Safety has established a strong brand name. Its use of distinctive blue and yellow graphic packaging, and photography that depicts the

actual use of the product, has contributed to a strong brand awareness. Given its push into international markets, the company plans to introduce bilingual text and an updated use of its color design.

- **Commitment to serving customer needs:** Home Safety is committed to serving customer needs. This is evidenced through its use of an advanced electronic data ordering system, which permits customers to place orders directly through the company's Web site. Satisfying the customer is critical to the success of the company.

Financial Planning

Because of its rapid expansion, financial planning at Home Safety had never been at the top of its agenda. With its new business strategy, however, the time had come to plan for 2003's growth targets. As a newly hired financial analyst, your job is to put together the financial statement forecast for Mr. Lowe. Toward that end, you have had several conversations with him in which he had often referred to his principal financial goal, annual growth in net income of 25 percent. In years past, the company has had no problems in reaching this goal, and Mr. Lowe was confident that next year would prove no different. He noted that the company currently operated at full capacity and was therefore planning $11.5 million in capital expenditures for 2003. Mr. Lowe felt that liquidity would be no problem, as the company had engaged in two stock issues over

the past two years to take advantage of receptive investors who believed in the company's growth story. However, if any additional short-term funding was needed, Mr. Lowe was confident the company's revolving credit facility at the local bank would more than handle it. Additionally, he felt that, as a percentage of sales, the trends in current as well as noncurrent assets and liabilities would probably continue. However, he really wasn't all that concerned about the balance sheet.

As the company had grown over the past few years, advertising expenses had grown commensurately. Mr. Lowe believed the historical growth rate in advertising would continue and was essential to the company's success. Additionally, he pointed out that, as part of the international expansion and the new push into home security products, the company would soon be hiring 45 new employees. Mr. Lowe thought that the fixed nature of the general and administrative expenses and advertising would help the company's performance, but he wasn't exactly sure how. He was hoping you could enlighten him.

In your last conversation with him, Mr. Lowe mused, "You know, I remember back in 2000 when we had just 48 employees. I knew everyone and their family back then! Then in 2001, we added only 9 employees and, last year, why, we hired 31! I love growth, but it sure makes it hard to keep up with everyone!" He then smiled and nodded his head. "Better

get to work on that forecast for next year. And, by the way, be sure to tell me what the sales growth rate has to be so that net income grows by 25 percent. I'd hate to lose my bonus check over a slight miss."

You felt like you nearly had all the data you needed to put together the financial statement forecast for next year. The historical income statements and balance sheets were in Table 1-8 and 1-9, respectively. Finally, you figured that any short-term investments and cash equivalents would earn interest at 1.20 percent and the bank would charge the company 4.50 percent interest on the revolving credit facility. You took a deep breath, opened up your laptop, and got to work.

TABLE 1-8

Home Safety, Inc.: Historical Income Statements

Income Statements (000)	2000	2001	2002
Net sales	$28,523	$43,030	$70,166
Cost of sales	$15,150	$24,231	$40,831
Gross profit	***$13,373***	***$18,799***	***$29,335***
General and administrative expenses	$8,754	$10,452	$16,182
Advertising expense	$316	$633	$1,267
Depreciation expense	$317	$516	$1,128
Operating income (loss)	***$3,986***	***$7,198***	***$10,758***
Interest income	$160	$66	$153
Interest expense	$155	$206	$43
Other income, net	($187)		
Pre-tax income	***$3,804***	***$7,058***	***$10,868***
Income Taxes	$1,534	$2,842	$4,286
Net Income	***$2,270***	***$4,216***	***$6,582***
Dividends	$0	$0	$0

TABLE 1-9

Home Safety, Inc.: Historical Balance Sheets

Balance sheets (000)	**2001**	**2002**
Cash and equivalents	$973	$119
Short-term investments	$1,138	$0
Accounts receivable	$7,790	$17,086
Inventories	$7,328	$16,927
Other current assets	$1,773	$3,263
Total Current Assets	***$19,002***	***$37,395***
Gross property, plant, & equipment	$5,074	$11,041
Depreciation	$1,181	$2,310
Net property, plant & equipment	***$3,893***	***$8,731***
Other non-current assets	$1,602	$6,188
Total Assets	***$24,497***	***$52,314***
Liabilities and Shareholders' Equity		
Revolving credit facility	$0	$0
Accounts Payable	$5,530	$7,992
Current portion of LT debt	$0	$0
Other current liabilities	$220	$1,279
Total Current Liabilities	***$5,750***	***$9,271***
Long term debt	$0	$0
Other non-current liabilities	$609	$1,195
Total Liabilities	***$6,359***	***$10,466***
Common Stock	$15,561	$32,688
Retained earnings	$2,577	$9,160
Total Common Equity	***$18,138***	***$41,848***
Total Liabilities and Equity	***$24,497***	***$52,314***

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