THE COMPREHENSIVE GUIDE TO

HOW TO READ A FINANCIAL REPORT

EIGHTH EDITION + WEBSITE

EXPANDED EDITION WITH EXTENSIVE WEBSITE MATERIAL AND ENHANCED ANALYSIS TOOLS

Wringing vital signs out of the numbers

John A. Tracy *and* Tage Tracy

WILEY

THE COMPREHENSIVE GUIDE ON HOW TO READ A FINANCIAL REPORT

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WRINGING VITAL SIGNS OUT OF

Eighth Edition

WILEY

FINANCIAL REPORT

THE NUMBERS

JOHN A. TRACY AND TAGE C. TRACY

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PREFACE

When TOP (i.e., the Old Pro, aka John A. Tracy) and myself were approached by John Wiley & Sons about expanding and enhancing *How to Read a Financial Report*, at first I was taken aback. I mean honestly, how does one improve on a book that has been in publication for more than 30 years, has sold 300,000-plus copies (and counting), is now in its eighth edition, and is widely referenced as ***the*** benchmark when it comes to helping readers from all walks of life clearly and concisely understand the complex world of financial reports? Then it occurred to me that attempting to improve the book was not the goal but rather the idea was to expand or enhance the book in an effort to achieve three primary goals.

First, to transition the material and subject matter into a format that is more user friendly from an "e" (electronic or digital) perspective. A number of features have been incorporated to improve the interactivity of the material by incorporating hotlinks on important subject matter; referencing current events of significance; highlighting critical concepts, terminology, and tips; and building in a web-based TMK, or test my knowledge section, to provide positive feedback on key material in a real-time fashion.

Second, to empower the readers and extend their knowledge of financial reports and statements to identify potential problems, inconsistencies, errors, and irregularities within the financial information presented. The idea is to move beyond simply understanding the basics of financial reports and statements into the world of analysis and further, to what a company's financial results really mean or indicate. Or to quote Jack Nicholson from the movie *A Few Good Men*, to ensure that you will be able to "handle the truth."

Third, to take you, the reader, on a journey through a case study that is not just designed to test your knowledge of financial reports and statements but more importantly, to walk you through the life of two similar companies, the fates that await them after operating for a number of years (good and bad), and the role that accounting played in their successes and failures. Or in other words, to highlight a critical concept within company financial reports and statements—that accounting is more of an art than science.

Thus, the reference to "the comprehensive guide" was born, as this really captures the essence of this book, a more comprehensive guide to reading and understanding financial reports. In addition, this edition catches up with the major changes in financial reporting since the previous edition of *How to Read a Financial Report*, and addresses a fast-moving topic toward incorporating different financial reporting standards for private and small businesses compared to large, publicly traded companies. But I note that although numerous changes were made with the comprehensive version, the basic architecture and structure of the book remains unchanged, which at its heart is centered on two concepts that are of intense importance in today's highly uncertain economic environment:

1. Understanding the connections between the big three financial statements, and that all are of equal importance and relay a valuable message about the financial health of a company.
2. Highlighting the importance of cash flows, which is the hallmark of the book.

The basic framework of the book has proved successful for more than 33 years and I would be a fool to mess with this success formula (not to mention feeling the wrath of my father who undoubtedly would "cut me out of the will" for the umpteenth time).

All of the exhibits in the book have been prepared in Excel worksheets. To request a copy of the workbook file of all the exhibits, please contact me at my

e-mail address: tagetracy@cox.net. We express our sincere thanks to all of you who have sent compliments about the book over the years. The royalties from sales of the book are nice, but the bouquets from readers are icing on the cake.

This book has taken a good deal of "thinking outside of the box," which was highly dependent on a strong working partnership between the authors and the publisher. I thank most sincerely the many people at John Wiley & Sons who have worked with my father on the previous editions of the book, for more than three decades now. In addition, I'd be remiss without mentioning Tula Batanchiev and Judy Howarth, who were critical drivers in developing this comprehensive version of the book. They've been a pleasure to work with on this version and throughout the process have maintained an open, creative, and visionary mind-set, all essential when working with this type of project. There is no doubt that they've made the new version much better than if we had been left on our own. Books are the collaboration of good editors and good authors. We had good editors; you'll have to be the judge how good the authors are.

In closing, this is now the fourth book I've had the opportunity to work with my father on since 2003. Each book has been a remarkable journey and adventure that simply put, I could not have ever imagined taking without his support, guidance, and yes, frequent ribbing and jabs (and when you move through the books, you'll notice we attempt to incorporate humor and poke fun at ourselves, as well as the accounting profession). But the bottom line (no pun intended with this book's subject matter) is, if it weren't for the man I call TOP, I would have never had the opportunity to become an author. Again, I'm forever grateful for the opportunity and dedicate this book to a man who still to this day continues, after more than 50 years of being a father, to open new doors for me each and every day.

Poway, California
August 2013

Tage C. Tracy

Part One

FINANCIAL REPORT FUNDAMENTALS

1

FINANCIAL STATEMENT BASICS

The Real Meat and Potatoes of Financial Reports

To start this book it is important to understand that every for-profit business, nonprofit organization, governmental entity, and/or just about any type of "entity" you can think of need financial reports or financial statements (which represent the meat and potatoes of the financial reports). Without financial statements, managing the interests of these entities would be damn near impossible. Creditors such as banks, suppliers, landlords, and the like would not be able to assess the economic performance of the entity (and decide if credit should be extended). Management would not be able to determine how the entity is performing, including the rather novel concept of whether the entity is actually making or losing money (something the federal government doesn't appear to have to worry about but we'll leave this topic for another time). Investors would not be able to determine if their investments in the entity are actually worth anything. And completing and filing periodic tax returns to the slew of taxing authorities all entities must inevitably comply with would be challenging, to say the least.

Countless other examples of why financial statements are needed could be cited, so rather than burn an entire chapter on listing every potential scenario, let's stay focused on two important acronyms as they apply to financial statements.

As we proceed through this book and assist the reader with understanding the basics of financial statements, a constant theme is also presented in helping readers understand and identify when CART financial statements are being produced compared to applying the SWAG method. We note that you generally won't find these acronyms listed in any official accounting literature, formal accounting guidance reference material, and so on, as these terms are centered more on how accounting is applied and conducted on "the street" as opposed to how accounting theory and principles are taught "in the classroom." But whether CART or SWAG is applied, the same concept still holds as it relates to preparing financial statements and the consequences of not completing even the basics, as Twitter found out the hard way!

Critical Terminology Alert—CART versus SWAG

CART stands for Complete, Accurate, Reliable, and Timely. This is how financial statements should be produced—in a complete, accurate, reliable, and timely manner. SWAG stands for Scientific Wild Ass Guess. And yes, let's just say that more than a few companies have produced financial statements utilizing the ever-so-popular SWAG methodology.

The Big Three—Financial Condition, Profit Performance, and Cash Flows

As previously noted, business managers, lenders, investors, governmental organizations, and the like (collectively referred to as the *parties* throughout this book) need to have a clear understanding of the financial condition of a business, both at a point in time and over a period of time. The primary objective of the big three financial statements summarized in this segment of the chapter is to achieve just this goal.

First Up, the Balance Sheet

Parties need to assess the *financial condition* of a business *at a point in time*. For this purpose they need a report that summarizes its assets (what the business owns) and liabilities or obligations (what the business owes), as well as the ownership interests in the residual of assets in excess of liabilities (which is commonly referred to as *owners' equity*). Understanding the financial condition of a business is best measured by number one on the list of the big three financial statements—***the balance sheet***.

Exhibit 1.1 presents a standard balance sheet for a business entity.

When first reviewing the balance sheet a number of items should jump out at the reader including the format used, the different groupings of assets, liabilities, and equity, the allocation of assets and liabilities between current and long-term, and other details. All of these concepts are discussed in Chapter 3, "Mastering the Balance Sheet," but if there is one extremely important concept that must be understood with the balance sheet it is this—***the balance sheet must balance***. That is, total assets must equal total liabilities plus shareholders' equity. If not, well I can only think of the line quoted by Tom Hanks who played astronaut Jim Lovell in the movie *Apollo 13*—"Houston, we have a problem."

Next in Line, the Income Statement

Second up on our list of the big three financial statements is based on the simple concept of knowing (by the parties) whether a business has generated a profit or incurred a loss over *a period of time*. For this purpose, the business needs a report that summarizes sales or revenues against expenses or costs for a given period and the resulting profit generated or loss incurred. This financial statement is most commonly known as ***the income statement*** or similarly, the profit and loss statement (or *P&L* for short).

Exhibit 1.2 presents a typical income statement for the same business entity the balance sheet was presented in Exhibit 1.1.

Chapter 4, titled Understanding Profit, on understanding the income statement has been dedicated to breaking down the income statement in more detail but similar to the balance sheet, one important concept must be understood—***profit ≠ success and losses ≠ failure***. That is, generating a profit does not mean that the business is financially sound and is guaranteed success and conversely, incurring a loss does not mean the business is going to fail. Financial statements need to be understood in their entirety before a judgment can be passed on the long-term financial viability of the business.

EXHIBIT 1.1—YEAR-END BALANCE SHEETS

Dollar Amounts in Thousands

	Last Year	This Year	Change
Cash	$ 3,735	$ 3,265	$ (470)
Accounts Receivable	4,680	5,000	320
Inventory	7,515	8,450	935
Prepaid Expenses	685	960	275
Current Assets	$16,615	$17,675	
Property, Plant, and Equipment	$13,450	$16,500	3,050
Accumulated Depreciation	(3,465)	(4,250)	(785)
Cost Less Depreciation	$ 9,985	$12,250	
Intangible Assets	$ 5,000	$ 5,575	575
Long-Term Operating Assets	$14,985	$17,825	
Total Assets	$31,600	$35,500	$3,900

	Last Year	This Year	Change
Accounts Payable	$ 2,675	$ 3,320	$ 645
Accrued Expenses Payable	1,035	1,515	480
Income Tax Payable	82	165	83
Short-Term Notes Payable	3,000	3,125	125
Current Liabilities	$ 6,792	$ 8,125	
Long-Term Notes Payable	$ 3,750	$ 4,250	500
Capital Stock–793,000 Shares and 800,000 Shares Respectively	$ 7,950	$ 8,125	175
Retained Earnings	13,108	15,000	1,892
Stockholders' Equity	$21,058	$23,125	
Total Liabilities and Stockholders' Equity	$31,600	$35,500	$3,900

EXHIBIT 1.2—INCOME STATEMENT FOR YEAR
Dollar Amounts in Thousands

Sales Revenue	$52,000
Cost of Goods Sold Expense	(33,800)
Gross Profit	$18,200
Selling, General, and Administrative Expenses	(12,480)
Depreciation Expense	(785)
Earnings before Interest and Income Tax	$ 4,935
Interest Expense	(545)
Earnings before Income Tax	$ 4,390
Income Tax Expense	(1,748)
Net Income	$ 2,642

Bringing Up the Rear, the Statement of Cash Flows

And, finally the parties need a summary of its *cash flows for a period of time*. Similar to the income statement, cash flows are measured over a period of time (generally the same length of time as the income statement such as a month, quarter, or year) but unlike the income statement (which measures total sales or revenues against total expenses or costs to calculate the profit or loss), cash flows are best understood by distinguishing between where cash comes from (the sources) and where cash goes (the uses). This brings us to the last of the big three financial statements, which is ***the statement of cash flows***.

Exhibit 1.3 presents a typical statement of cash flows for the same business entity the balance sheet was presented in Exhibit 1.1 and income statement was presented in Exhibit 1.2.

EXHIBIT 1.3—STATEMENT OF CASH FLOWS FOR YEAR
Dollar Amounts in Thousands

Cash Flow from Operating Activities		
Net Income (from Income Statement)	$ 2,642	
Accounts Receivable Increase	(320)	
Inventory Increase	(935)	
Prepaid Expenses Increase	(275)	
Depreciation Expense	785	
Accounts Payable Increase	645	
Accrued Expenses Payable Increase	480	
Income Tax Payable Increase	83	$3,105
Cash Flow from Investing Activities		
Expenditures for Property, Plant, and Equipment	$(3,050)	
Expenditures for Intangible Assets	(575)	(3,625)
Cash Flow from Financing Activities		
Increase in Short-Term Debt	$ 125	
Increase in Long-Term Debt	500	
Issuance of Additional Capital Stock Shares	175	
Distribution of Cash Dividends from Profit	(750)	50
Decrease in Cash During Year		$ (470)
Cash Balance at Start of Year		3,735
Cash Balance at End of Year		$3,265

In our business travels, there is no question that the statement of cash flows is without doubt the least understood of the big three financial statements but at the same time, the most important. Understanding how a business generates and consumes cash is discussed in more depth in Chapter 2 and as you start that chapter it is important to keep the most critical of concepts at the forefront of your thoughts as it relates to cash flows–***profit ≠ positive cash flow and a loss ≠ negative cash flow***.

For a perfect example of just how significant the difference can be between profit and cash flow, please refer to page 50 of Netflix's 2012 annual report (available online) and you see that for the fiscal year-end 2012, Netflix generated a profit of **$17,152,000** or the company was "in the black" for the year (i.e., the color black in the financial community equates to positive earnings and the color red to losses). Now if you proceed to page 52, you see that Netflix actually had negative cash flow for the year of **$217,762,000** (referred to as the "Net increase [decrease] in cash and cash equivalents"). So for the same 12-month reporting period used for both the income statement and the statement of cash flows, one can see just how significant the divergence between the two figures can be (i.e., net profit versus negative cash flow). Netflix's results offer a perfect case study in why it is so important to understand all three of the financial statements to properly assess the economic performance of a business.

The three financial statements for the company example introduced in this chapter are now presented here in Exhibits 1.1, 1.2, and 1.3. The format and content of these three financial statements apply to manufacturers, wholesalers, and retailers—businesses that make or buy *products* that are sold to their customers. Although the financial statements of service businesses that don't sell products differ somewhat, Exhibits 1.1, 1.2, and 1.3 illustrate the basic framework and content of balance sheets, income statements, and statements of cash flows for all businesses.

Additional Financial Statement Considerations and Concepts

So there you have it, the big three financial statements that represent the core financial information that is reported regularly by businesses to the parties. But before we dive into these financial statements and their subcomponents in great detail, it's worthwhile to cover some additional concepts, formats, and terminology associated with financial statements:

- Supplemental information: In almost all cases the financial statements need to be supplemented with additional information, which is presented in *footnotes*, *supporting schedules*, *audit reports*, and/or *other information*. One common supporting schedule—the *statement of changes in stockholders' (owners') equity*—accounts for increases and decreases in owners' equity over a period of time.
- Financial report versus financial statements: The broader term *financial report* refers to all of the above, plus any additional commentary from management, narrative explanations, graphics, and promotional content that accompany the financial statements and their footnotes and supporting schedules. The use of MDORs and MD&As (i.e., management discussion of operating results and management discussion and analysis) offer the company's executive management team with a window to highlight and/or summarize the performance of the business to assist the reader with gaining a better understanding of the financial results. In theory, this should be the primary purpose of an MDOR or MD&A but in practice, let's face it, these items provide management with an ideal window to "promote" the business.
- Alternative financial statement titles: Alternative titles for the balance sheet include "statement of financial condition" or "statement of financial position." An income statement may be titled "statement of operations," "earnings statement," or as previously noted, a P&L. For the purposes of this book, we stick with the names *balance sheet* and *income statement* to be consistent throughout the book. The statement of cash flows is almost always called just that.
- Plural: The term *financial statements*, in the plural, generally refers to a complete set that includes a balance sheet, an income statement, and a statement of cash flows. Informally, financial statements may be called just *financials*.
- Profit as a four letter word: The term *profit* is not popular in income statements (or elsewhere in financial reports). Not many companies use the term (although some do). Profit comes across to many people as greedy or mercenary. The term suggests an excess or a surplus over and above what's necessary. You may hear the term *profit and loss* or *P&L statement* for the income statement. But this title is not used in external financial reports released outside a business. Generally speaking, *net income* is used instead of profit.

- Comparative information: Many businesses present a two-year comparative income statement and statement of cash flows, either because they legally have to or they decide to do so. Comparative balance sheets may also be presented if desired. For external readers, having comparative information is generally favorable as it provides an easier method to evaluate and assess periodic financial results.
- SEC required disclosures: When companies are publicly traded, they must adhere to strict reporting standards governed by the SEC. Understanding all public reporting requirements is well beyond the scope of this book but the concept of just how extensive SEC disclosures are needs to be mentioned to help readers sort through the mounds of information disclosed in a typical public company's annual shareholder report.

A perfect example of just how lengthy and extensive a company's complete annual financial report can be located in Yahoo's 2012 annual report. Of a total of 145 pages of material presented in the annual report, just five pages are allocated to the actual financial statements. The rest is allocated to primarily two functions—management promoting the business (to lead the report) and SEC disclosure requirements (covering the balance of the report).

An Important Concept to Understand Throughout This Book

Over the past century (and longer) a recognized profession has developed, one of whose main functions is to prepare and report business financial statements—the *accounting profession*. A primary goal of the accounting profession has been to develop and enforce accounting and financial reporting standards that apply to all businesses. In other words, there is a "rule book" that businesses should obey in accounting for profit and in reporting profit, financial condition, and cash flows. Businesses are not free to make up their own individual accounting methods and financial reporting practices. The established rules and standards are collectively referred to as *generally accepted accounting principles* (or GAAP as previously noted), which continuously change, adapt, and evolve as business conditions change.

Tips, Tidbits, and Traps

A critical concept to understand is that GAAP represents more of an "Art" than an exact "Science." That is, GAAP provides a certain amount of leeway in applying accounting principles by businesses that have similar business models yet use different financial and accounting strategies for reporting purposes. A common theme that is highlighted again and again through this book is just how *creative* (for lack of a better term) businesses can be when reporting financial results. Or as the old saying goes when an accountant gets asked what would seem to be a very simple question: What does 2 + 2 equal? And the clever accountant's response: Whatever you want it or need it to be!

But things are getting more complicated these days, that's for sure. In the United States there are serious beginnings to adopt separate rules for private companies versus public companies, and for small companies versus larger companies. Furthermore, the efforts to develop international accounting and financial reporting standards keep slogging along, with mixed results so far. There will be a set of rules governing profit accounting and financial reporting for every business. However, exactly which set of rules will apply in the future to particular types of business is open to change.

In the book we generally assume that traditional GAAP standards apply, unless we say otherwise. We say more about the changing landscape of accounting and financial reporting standards in later chapters.

2

STARTING WITH CASH FLOWS

Cash Flows—Just How Important Is It for a Business?

Not so long ago, back before central bankers and governments both near and far had to bail out the world's economies, the concept of understanding cash flow was basically a foreign language, best left to the bean counters and Wall Street financial types to deal with. This was before the worst financial crisis to hit the United States (and for that matter, the world) since the Great Depression was experienced, starting in 2008 with the collapse of Bear Stearns and Lehman Brothers, which laid the foundation for the start of the Great Recession (that many still argue the world has not fully emerged from).

You may be asking why this reference is being provided, which is simple. Unlike central banks, businesses cannot magically create cash when needed and out of thin air but rather must understand what sources of cash are available and how cash is used or consumed.

Now let's go back in time to pre-2008, when life for businesses, governments, and even the individual consumer was different. Capital or access to cash was readily available, credit underwriting standards were limited to poor (think residential real estate mortgage lending), financial markets appeared healthy, and economic growth was solid if not strong across most industries. The focus in the mid-2000s time period was not on understanding or even caring about cash flow but rather, most parties were concentrated on a financial report perceived to be more important, the income statement or profit and loss statement (the P&L). And why not? Times were good and the income statement was going to relay just how much profit a business was producing and how wealthy everyone had become. Oh how quickly times have changed!

There's no doubt that the income statement (covered in-depth in Chapter 4) is important as it is designed to measure how much net profit or loss a business generates over a period of time. The problem that arises is when a party becomes too fixated or overly reliant on just the income statement and does not bother to understand the income statement's two ugly stepsisters, the balance sheet and the statement of cash flows. As most savvy parties will attest, paying attention to and understanding cash flows represents the economic backbone of every company that hopes to survive, grow, and prosper.

And because businesses can't print or create "cash" on demand such as the world's central banks, it goes without saying that in this day and age of economic uncertainty, a business's ability to generate internal cash flows can mean the difference between life and death.

Tips, Tidbits, and Traps

Remember these key concepts as they relate to each of the big three financial statements (introduced in Chapter 1):

- The income statement: It is important to **understand** the income statement but remember this represents just one element of a business's financial condition and tells only a portion of its financial health story.
- The balance sheet: Appropriately, the quick and frequently used reference or acronym for the balance sheet is "BS." So without going into a great deal here, it is of critical importance that you **trust** the balance sheet. That is, you need to make sure the assets listed on the balance sheet are not lying and its liabilities presented are telling the whole truth.
- The statement of cash flows: Understand the P&L and trust the BS but most importantly, **rely** on the cash flow statement. The cash flow statement is the lifeblood of every business and offers invaluable insight into the financial condition of a business as to how it produces and consumes cash, in good times and bad.

So now that we have your attention on understanding the importance of cash flow, we dive into this concept head first with Exhibit 2.1. For our example we use a business that has been operating many years. This established business makes profit regularly and, equally important, it keeps good financial conditions. It has a good credit history, and banks lend money to the business on competitive terms. Its present stockholders would

EXHIBIT 2.1—SUMMARY OF CASH FLOWS DURING YEAR
Dollar Amounts in Thousands

Cash Flows of Profit-Making Activities	
From sales of products to customers, which includes some sales made last year	$ 51,680
For acquiring products that were sold, or are still being held for future sale	$(34,760)
For operating expenses, some of which were incurred last year	$(11,630)
For interest on short-term and long-term debt, some of which applies to last year	$ (520)
For income tax, some of which was paid on last year's taxable income	$ (1,665)
Cash flow from profit-making activities during year	$ 3,105
Other Sources and Uses of Cash	
From increasing amount borrowed on interest-bearing notes payable	$ 625
From issuing additional capital stock (ownership shares) in the business	$ 175
For building improvements, new machines, new equipment, and intangible assets	$ (3,625)
For distributions to stockholders from profit	$ (750)
Net cash decrease from other sources and uses of cash	$ (3,575)
Net cash increase (decrease) during year	$ (470)

be willing to invest additional capital in the business, if needed. None of this comes easy. It takes good management to make profit consistently, to secure capital, and to stay out of financial trouble. Many businesses fail these imperatives, especially when the going gets tough.

Exhibit 2.1 summarizes the company's cash inflows and outflows for the year just ended, and shows two separate groups of cash flows. First are the cash flows of its profit-making activities—cash inflows from sales and cash outflows for expenses. Second are the other cash inflows and outflows of the business—raising capital, investing capital in assets, and distributing some of its profit to shareowners.

We assume that you're familiar with the cash inflows and outflows listed in Exhibit 2.1. Therefore, we are brief in describing the cash flows at this early point in the book:

- The business received $51,680,000 during the year from selling products to its customers. It should be no surprise that this is its largest source of cash inflow. Cash inflow from sales revenue is needed for paying expenses. During the year the company paid $34,760,000 for the products it sells to customers. And, it had sizable cash outflows for operating expenses, interest on its debt (borrowed money), and income tax. The net result of its cash flows of profit-making activities is a $3,105,000 cash increase for the year—an extremely important number that managers, lenders, and investors watch closely.
- Moving on to the second group of cash flows during the year, the business increased the amount borrowed on notes payable $625,000, and its stockholders invested an additional $175,000 in the business. Together these two external sources of capital provided $800,000, which is in addition to the internal $3,105,000 cash from its profit-making activities during the year. On the other side of the ledger, the business spent $3,625,000 for building improvements, for new machines and equipment, and for intangible assets. Finally, the business distributed $750,000 cash to its stockholders from profit. This distribution from profit is included in the second group of cash flows. In other words, the $3,105,000 cash flow from profit is before the distribution to shareowners.
- The net result of all cash inflows and outflows is a $470,000 cash *decrease* during the year. Don't jump to any conclusions; the net decrease in cash in and of itself is neither good nor bad. You need more information than just the summary of cash flows to come to any conclusions about the financial performance and situation of the business.

Cash Flows—What Does It *Not* Tell You?

In Exhibit 2.1 we see that cash, the all-important lubricant of business activity, decreased $470,000 during the year. In other words, the total of cash outflows exceeded the total of cash inflows by this amount for the year. The cash decrease and the reasons for the decrease are very important information. The cash flows summary tells an important part of the story of the business. But, cash flows do not tell the whole story. Parties need to know two other types of information about a business that are *not* reported in its cash flows summary.

These two important types of information (as summarized in Chapter 1 and discussed in more depth in Chapters 3 and 4) are:

1. The income statement (Chapter 4), which reports the profit earned (or loss suffered) by the business for a period.
2. The balance sheet (Chapter 3), which reports the financial condition of the business at a point in time.

Now hold on. Didn't we just see in Exhibit 2.1 that the net cash increase from sales revenue less expenses was $3,105,000 for the year? You may ask: Doesn't this cash increase equal the amount of profit earned for the year? No, it doesn't. The net cash flow from profit-making operations during the year does not equal the amount of profit earned for the year. In fact, it's not unusual that these two numbers are very different. The reason for this is simple—profit (or losses) is an *accounting-determined* number that requires much more than simply keeping track of cash flows so you might as well start to get familiar with the following terminology (introduced in Chapter 1 but worth repeating again):

Critical Terminology Alert

GAAP: As you become familiar with, profit or losses are measured by applying generally accepted accounting principles or GAAP. The following link provides a little more insight on GAAP:
www.fasab.gov/accounting-standards/authoritative-source-of-gaap/

The differences between using a checkbook (for you old timers) or electronic bank account data to measure profits and losses and using GAAP accounting methods to measure profits and losses are explained later in this book and are important to understand. But in summary, the following key concept should be understood: Rarely do cash flows during a period accurately measure the correct amounts of a company's sales revenue and expenses for that period.

Furthermore, a summary of cash flows reveals virtually nothing about the *financial condition (strength or weakness)* of the business at a point in time. Financial condition refers to the assets of the business matched against its liabilities at the end of the period. For example: How much cash does the company have in its business bank account(s) at the end of the year? From the summary of cash flows (Exhibit 2.1) we see that the business decreased its cash balance $470,000 during the year. But we can't tell from the cash flows summary the company's ending cash balance. And, more importantly, the cash flows summary does not report the amounts of assets and liabilities of the business at the end of the period.

Profit and Losses Cannot Be Measured by Cash Flows

The business in Exhibit 2.1, like most companies, sell products on *credit*. That is, the business offers its customers a short period of time or term to pay for their purchases. Most of the company's sales are to other businesses, which demand credit for say anywhere from 30 to 60 days to remit payment (in contrast, most retailers selling to individuals accept credit cards or accept cash instead of extending credit to their customers). In this example the company collected $51,680,000 from its customers during the year. However, some of this cash inflow was for sales made in the *previous* year. And, some sales made on credit in the year just ended had not been collected by the end of the year.

At year-end the company had *receivables* from sales made to its customers during the latter part of the year. These receivables will be collected early next year. Because some cash was collected from last year's sales and some cash was not collected from sales made in the year just ended, the total amount of cash collections during the year differs from the amount of *sales revenue* for the year.

Cash disbursements during the year are *not* the correct amounts for measuring expenses. The company paid $34,760,000 for products that are sold to customers (see Exhibit 2.1). At year-end, however, many products were still being held in *inventory*. These products had not yet been sold by year-end. Only the cost of products sold and delivered to customers during the year should be deducted as expense from sales revenue to measure profit. Don't you agree?

Furthermore, some of the company's product costs had not yet been paid by the end of the year. The company buys on credit and takes several weeks before paying its bills. The company has *liabilities* at year-end for recent product purchases and for operating costs as well.

Its cash payments during the year for operating expenses, as well as for interest and income tax expenses, are not the correct amounts to measure profit for the year. The company has liabilities at the end of the year for *unpaid expenses*. The cash outflow amounts shown in Exhibit 2.1 do not include the amounts of unpaid expenses at the end of the year.

In short, cash flows from sales revenue and for expenses are not the correct amounts for measuring profit for a period of time. Cash flows take place too late or too early for correctly measuring profit for a period. Correct timing is needed to record sales revenue and expenses in the right period.

The correct timing of recording sales revenue and expenses is called *accrual-basis accounting* and specifically addressed by GAAP. Accrual-basis accounting recognizes receivables from making sales on credit and recognizes liabilities for unpaid expenses in order to determine the correct profit measure for the period. Accrual-basis accounting also is necessary to determine the financial condition of a business—to record the assets and liabilities of the business.

Cash Flows Do Not Reveal Financial Condition

The cash flow summary for the year (Exhibit 2.1) does not reveal the financial condition of the company. Parties certainly need to know which assets the business owns and the amounts of each asset, including cash, receivables, inventory, and all other assets. Also, they need to know which liabilities the company owes and the amounts of each.

Parties have the responsibility for keeping the company in a position to pay its liabilities when they come due to keep the business *solvent* (able to pay its liabilities on time). Business managers also have to keep the business *liquid* (having enough available cash or cash equivalents when they need it). Furthermore, managers have to know whether assets are too large (or too small) relative to the sales volume of the business and its lenders and investors want to know the same things about a business. These concepts will be addressed throughout the book as not only is it important to know "How to Read a Financial Report" but just as importantly, one needs to know what the financial reports really say about a business's financial performance and condition.

In brief, both primary groups of parties including insiders (managers, executives, owners, etc.) and outsiders (creditors, lenders, investors, governmental regulatory bodies, etc.) need a summary of a company's financial condition (its assets and liabilities) to make informed decisions. They need a profit performance report as well, which summarizes the company's sales revenue and expenses and its profit for the year.

A cash flow summary is very useful. In fact, a slightly different version of Exhibit 2.1 is one of the three primary financial statements reported by every business. But in no sense does the cash flows report take the place of the profit performance report and the financial condition report. The next two chapters introduce these two financial statements, and show the generally accepted format of a summary of cash flows (instead of the informal format shown in Exhibit 2.1).

3

MASTERING THE BALANCE SHEET

Solvency versus Liquidity

Before we delve into the basic attributes, structure, and format of a typical company balance sheet, a discussion needs to be held on the topic of solvency versus liquidity. The reason for this is simple, as if one looks at the financial condition of "Western" governments (e.g., the United States, Japan, and most of Europe), you read that most if not all of these countries are technically insolvent, yet all seem to have ample liquidity (or availability to cash to cover ongoing costs and expenses) to support continued government functions. But of course wouldn't you know it, just as we were completing this book, the U.S. government "shutdown" in October of 2013 as a result of not being able to sell new debt to raise cash to continue normal operations. So now we have a situation where the U.S. government is both illiquid and insolvent.

The concepts of liquidity and solvency apply not just to governments but to a number of businesses as well including financial institutions such as banks, insurance companies, auto manufacturing businesses, and others (again, types of entities singled out for being insolvent at one point or another over the past five years).

The key when reviewing the definitions is to understand liquidity versus solvency from an accounting or business perspective and realize this critical concept. Being solvent ≠ being liquid and conversely, being liquid ≠ being solvent.

To better illustrate this point, please refer to Exhibit 3.1 providing a balance sheet for two different companies:

Company ABC, Inc.'s balance sheet displays total assets of $10,500,000 compared to total liabilities of $12,100,000 resulting in negative shareholders' equity of $1,600,000. By definition, this company is technically insolvent as its liabilities exceed its assets (or stated another way, if the company was to liquidate, it would not be able to pay off all liabilities if the proceeds from asset sales equaled $10,500,000). But on further review of the balance sheet, we notice that Company ABC, Inc. is very liquid as its current assets totaling $6,400,000 (including cash balances of $2,400,000) greatly exceed its current liabilities (or obligations due within a short time period) by a rate of 2 to 1 (as total liabilities amount to $3,200,000). So here we have a company that is technically insolvent yet very liquid.

Now let's take a look at Company XYZ from Business XYZ, Inc. with total assets of $16,300,000 compared to total liabilities of $9,600,000. With asset values in excess of liabilities by $6,700,000, we have what would appear to be a solvent company. But as we dig deeper, liquidity problems begin to appear as with only $4,250,000 of current assets (of which only $500,000 is in the form of cash) and current liabilities of $8,100,000, of which a short-term loan of $1,500,000 is due within 30 days, Company XYZ, Inc. is about to realize a severe liquidity crisis.

This brings us to the key concept of the balance sheet, which is very simple in that it must properly measure a company's *financial condition* at any point in time. The remainder of this chapter addresses just how important the information reported in the balance sheet is in relation to understanding liquidity, solvency, and financial condition.

EXHIBIT 3.1—COMPARATIVE YEAR-END COMPANY BALANCE SHEETS

Dollar Amounts in Thousands

	Company ABC, Inc. **FYE 12/31/2012**	*Company XYZ, Inc.* **FYE 12/31/2012**		*Company ABC, Inc.* **FYE 12/31/2012**	*Company XYZ, Inc.* **FYE 12/31/2012**
Cash	$ 2,400,000	$ 500,000	Accounts Payable	$ 2,200,000	$ 4,450,000
Accounts Receivable	3,000,000	2,825,000	Accrued Expenses Payable	575,000	1,750,000
Inventory	900,000	850,000	Income Tax Payable	—	400,000
Prepaid Expenses	100,000	75,000	Short-Term Notes Payable	425,000	1,500,000
Current Assets	$ 6,400,000	$ 4,250,000	**Current Liabilities**	$ 3,200,000	$ 8,100,000
Property, Plant, and Equipment	$ 3,500,000	$ 7,500,000	**Long-Term Notes Payable**	$ 8,900,000	$ 1,500,000
Accumulated Depreciation	(900,000)	(2,500,000)			
Cost Less Depreciation	$ 2,600,000	$ 5,000,000	Capital Stock	4,000,000	4,000,000
Intangible Assets	$ 1,500,000	$ 7,050,000	Retained Earnings (Deficit)	(5,600,000)	2,700,000
Long-Term Operating Assets	$ 4,100,000	$12,050,000	**Shareholders' Equity**	$ (1,600,000)	$ 6,700,000
Total Assets	$10,500,000	$16,300,000	**Total Liabilities and Shareholders' Equity**	$10,500,000	$16,300,000

Balance Sheet Basics—Left and Right, Top to Bottom

The balance sheet shown in Exhibit 3.2 follows the standardized format regarding the classification and ordering of assets, liabilities, and ownership interests in the business. It should be noted that slightly different balance sheet formats may be used in certain industries such as financial institutions (e.g., banks), public utilities, railroads, and other specialized businesses but the basic balance sheet format structure still remains intact. That is, assets presented on the left, liabilities and owners' equity on the right, with assets equaling liabilities plus owners' equity. So for the purposes of this book, we reference the standard balance sheet format as presented in Exhibit 3.2, which most companies including manufacturers, retailers, distributors, technology, and professional services utilize.

On the left side the balance sheet lists *assets*. On the right side the balance sheet first lists the *liabilities* of the business. The sources of ownership (equity) capital in the business are then presented below the liabilities, to emphasize that the owners or equity holders in a business (the stockholders of a business corporation) have a secondary and lower order claim on the assets—after its liabilities are satisfied.

Each separate asset, liability, and stockholders' equity reported in a balance sheet is called an *account*. Every account has a name (title) and a dollar amount, which is called its *balance*. For instance, from Exhibit 3.2 at the end of the most recent year:

Name of Account	*Amount (Balance) of Account*
Inventory	$8,450,000

The other dollar amounts in the balance sheet are either subtotals or totals of account balances. For example, the $17,675,000 amount for "Current Assets" at the end of this year does not represent an account but rather the subtotal of the four accounts making up this group of accounts. A line is drawn above a subtotal or total, indicating account balances are being added. A double underline (such as for "Total Assets") indicates the last amount in a column.

A balance sheet is prepared at the close of business on the last day of the income statement period. For example, if the income statement is for the year ending June 30, 2014, the balance sheet is prepared at midnight June 30, 2014. The amounts reported in the balance sheet are the balances of the accounts at that precise moment in time. The financial condition of the business is frozen for one split second. A business should be careful to make a precise and accurate cut-off to separate transactions between the period just ended and next period.

A balance sheet does not report the flows of activities in the company's assets, liabilities, and shareowners' equity accounts during the period. Only the ending balances at the moment the balance sheet is prepared are reported for the accounts.

EXHIBIT 3.2—YEAR-END BALANCE SHEET

Dollar Amounts in Thousands

	Last Year	This Year		Last Year	This Year
Cash	$ 3,735	$ 3,265	Accounts Payable	$ 2,675	$ 3,320
Accounts Receivable	4,680	5,000	Accrued Expenses Payable	1,035	1,515
Inventory	7,515	8,450	Income Tax Payable	82	165
Prepaid Expenses	685	960	Short-Term Notes Payable	3,000	3,125
Current Assets	$16,615	$17,675	**Current Liabilities**	$ 6,792	$ 8,125
Property, Plant, and Equipment	$13,450	$16,500	**Long-Term Notes Payable**	$ 3,750	$ 4,250
Accumulated Depreciation	(3,465)	(4,250)			
Cost Less Depreciation	$ 9,985	$12,250	Capital Stock–793,000 Shares and 800,000 Shares Respectively	$ 7,950	$ 8,125
Intangible Assets	$ 5,000	$ 5,575	Retained Earnings	13,108	15,000
Long-Term Operating Assets	$14,985	$17,825	**Stockholders' Equity**	$21,058	$23,125
Total Assets	$31,600	$35,500	**Total Liabilities and Stockholders' Equity**	$31,600	$35,500

For example, the company reports an ending cash balance of $3,265,000 at the end of its most recent year (see Exhibit 3.2). Can you tell the total cash inflows and outflows for the year? No, not from the balance sheet; you can't even get a clue from the balance sheet alone.

A balance sheet can be presented in the landscape (horizontal) layout mode (as shown in Exhibit 3.2) or in the portrait (vertical) layout. The accounts reported in the balance sheet are not thrown together haphazardly in no particular order. According to long-standing rules, balance sheet accounts are subdivided into

the following classes, or basic groups, in the following order of presentation:

Left Side (or Top Section)	*Right Side (or Bottom Section)*
Current assets	Current liabilities
Long-term operating assets	Long-term liabilities
Other assets	Owners' equity

Current assets are cash and other assets that will be converted into cash during one *operating cycle*. The operating cycle refers to the sequence of buying or manufacturing products, holding the products until sale, selling the products, waiting to collect the receivables from the sales, and finally receiving cash from customers. This sequence is the most basic rhythm of a company's operations; it is repeated over and over. The operating cycle may be short, only 60 days or less, or it may be relatively long, taking 180 days or more.

Assets not directly required in the operating cycle, such as marketable securities held as temporary investments or short-term loans made to employees, are included in the current assets class if they will be converted into cash during the coming year. A business pays in advance for some costs of operations that will not be charged to expense until next period. These *prepaid* expenses are included in current assets, as you see in Exhibit 3.2.

The second group of assets is labeled "Long-Term Operating Assets" in the balance sheet. These assets are not held for sale to customers; rather, they are used in the operations of the business. Broadly speaking, these assets fall into two groups: *tangible* and *intangible* assets. Tangible assets have physical existence, such as machines and buildings. Intangible assets do not have physical existence, but they are legally protected rights (such as patents and trademarks), or they are such things as secret processes and well-known favorable reputations that give businesses important competitive advantages. Generally intangible assets are recorded only when the assets are purchased from a source outside the business.

The tangible assets of the business are reported in the "Property, Plant, and Equipment" account—see Exhibit 3.2 again. More informally, these assets are called *fixed assets*, although this term is generally not used in balance sheets. The word *fixed* is a little strong; these assets are not really fixed or permanent, except for the land owned by a business. More accurately, these assets are the long-term operating resources used over several years—such as buildings, machinery, equipment, trucks, forklifts, furniture, computers, and telephones.

The cost of a fixed asset—with the exception of land—is gradually charged off to expense over its useful life. Each period of use thereby bears its share of the total cost of each fixed asset. This apportionment of the cost of fixed assets over their useful lives is called *depreciation*. The amount of depreciation for one year is reported as an expense in the income statement (see Exhibit 4.1). The cumulative amount that has been recorded as depreciation expense since the date of acquisition up to the balance sheet date is reported in the *accumulated depreciation* account in the balance sheet (see Exhibit 3.2). As you see, the balance in the accumulated depreciation account is deducted from the original cost of the fixed assets.

In the example, the business owns various intangible long-term operating assets. These assets report the cost of acquisition. The cost of an intangible asset remains on the books until the business determines that the asset has lost value or no longer has economic benefit. At that time the business writes down (or writes off) the original cost of the intangible asset and charges the amount to an expense, usually *amortization expense*. Until recently, the general practice was to allocate the cost of intangible assets over arbitrary time periods. However, many intangible assets have indefinite and

indeterminable useful lives. The conventional wisdom now is that it's better to wait until an intangible asset has lost value, at which time an expense is recorded.

You may see an account called "Other Assets" on a balance sheet, which is a catchall title for those assets that don't fit in the current assets or long-term operating assets classes. The company in this example does not have any such "other" assets.

The accounts reported in the *current liabilities* class are short-term liabilities that for the most part depend on the conversion of current assets into cash for their payment. Also, debts (borrowed money) that will come due within one year from the balance sheet date are put in this group. In our example, there are four accounts in current liabilities (see Exhibit 3.2 again). We explain these different types of current liabilities in later chapters.

Long-term liabilities (labeled "Long-Term Notes Payable" in Exhibit 3.2) are those whose maturity dates are more than one year after the balance sheet date. There's only one such account in our example. Either in the balance sheet or in a footnote, the maturity dates, interest rates, and other relevant provisions of long-term liabilities are disclosed.

Note: To simplify, we do not include footnotes with our financial statements example. We discuss footnotes in Chapter 21.

Liabilities are claims on the assets of a business; cash or other assets that will be later converted into cash will be used to pay the liabilities. (Also, cash generated by future profit earned by the business will be available to pay its liabilities.) Clearly, all liabilities of a business should be reported in its balance sheet to give a complete picture of the financial condition of a business.

Liabilities are also sources of assets. For example, cash increases when a business borrows money. Inventory increases when a business buys products on credit and incurs a liability that will be paid later. Also, typically a business has liabilities for unpaid expenses and has not yet used cash to pay these liabilities. Another reason for reporting liabilities in the balance sheet is to account for the sources of the company's assets—to answer the question: Where did the company's total assets come from?

Some part of the total assets of a business comes not from liabilities but from its owners investing capital in the business and from retaining some or all of the profit the business earns that is not distributed to its owners. In this example the business is organized legally as a corporation. Its *stockholders' equity* accounts in the balance sheet reveal the sources of the company's total assets in excess of its total liabilities. Notice in Exhibit 3.2 the two stockholders' (owners') equity sources, which are called "Capital Stock" and "Retained Earnings."

When owners (stockholders of a business corporation) invest capital in the business, the capital stock account is increased.* Net income earned by a business less the amount distributed to owners increases the retained earnings account. The nature of retained earnings can be confusing; therefore, we explain this account in depth at the appropriate places in the book. Just a quick word of advice here: Retained earnings is *not*—we repeat, is *not*—an asset. Get such a notion out of your head.

*Many business corporations issue *par value* stock shares. The shares have to be issued for a certain minimum amount, called the *par value*, but the corporation may issue the shares for more than par value. The excess over par value is put in a second account called "Paid-In Capital in Excess of Par Value." This is not shown in the balance sheet example, because the separation between the two accounts has little practical significance for financial reporting.

The Balance Sheet Message

Now that we have a basic understanding of the balance sheet format and structure, our focus can turn from what the balance sheet "reports" or states to more importantly, what the balance sheet is "saying" or what it means. Here, we turn our attention to an expanded Exhibit 3.1 for company ABC, Inc. and company XYZ, Inc. for reference and analysis using a couple of key measurement tools.

Critical Ratio Alert(s)

There are a number of calculations (more fully discussed in Chapter 22) that can be completed on the balance sheet to measure a company's financial condition and operating performance. Rather than list them all, we focus on three critical and very "telling" ratios to gain a better understanding of our sample companies originally presented in Exhibit 3.2 and expanded on in Exhibit 3.3.

- Net working capital—Current assets minus current liabilities: Company ABC maintains a net positive working capital position of $3,200,000 compared to company XYZ's net negative working capital position of ($3,850,000). A positive net working capital position is essential for companies looking to stay liquid and provide enough current assets to cover current liability requirements. Company ABC has achieved this whereas company XYZ's negative net working capital position is a significant issue or flag.
- Current ratio—Current assets divided by current liabilities: Company ABC has a current ratio of 2.00 x 1.00 compared to a .52 x 100 current ratio for company XYZ. Working capital ratios above 1.00 x 1.00 and usually closer to 1.50 x 1.00 (plus) indicate a healthier financial position. Again, company ABC looks to be in good shape whereas company XYZ is displaying all kinds of short-term financial stress.
- Debt-to-equity ratio, total—Total liabilities divided by total owners' equity: Company ABC has a debt-to-equity ratio of negative 7.56 x 1.00 compared to a positive 1.43 x 100 debt-to-equity ratio for company XYZ. Needless to say, a negative debt-to-equity ratio is a major concern, which ABC Company is currently experiencing. For company XYZ, its debt-to-equity ratio of 1.43 x 1.00 indicates it is stronger financially as its financial leverage ratio (total debt or liabilities compared against total shareholders' equity) is not unreasonable for businesses of this size. That is, debt-to-equity ratios should stay under 2.00 x 1.00 for most businesses and ideally would be under 1.00 x 1.00 (indicating a far lower level of debt is present and as a result, a stronger balance has been created).

EXHIBIT 3.3—COMPARATIVE YEAR-END COMPANY BALANCE SHEETS WITH RATIO ANALYSIS

Dollar Amounts in Thousands

	Company ABC, Inc. **FYE 12/31/2012**	*Company XYZ, Inc.* **FYE 12/31/2012**		*Company ABC, Inc.* **FYE 12/31/2012**	*Company XYZ, Inc.* **FYE 12/31/2012**
Cash	$ 2,400,000	$ 500,000	Accounts Payable	$ 2,200,000	$ 4,450,000
Accounts Receivable	3,000,000	2,825,000	Accrued Expenses Payable	575,000	1,750,000
Inventory	900,000	850,000	Income Tax Payable	–	400,000
Prepaid Expenses	100,000	75,000	Short-Term Notes Payable	425,000	1,500,000
Current Assets	$ 6,400,000	$ 4,250,000	**Current Liabilities**	$ 3,200,000	$ 8,100,000
Property, Plant and Equipment	$ 3,500,000	$ 7,500,000	**Long-Term Notes Payable**	$ 8,900,000	$ 1,500,000
Accumulated Depreciation	(900,000)	(2,500,000)			
Cost Less Depreciation	$ 2,600,000	$ 5,000,000	Capital Stock	4,000,000	4,000,000
Intangible Assets	$ 1,500,000	$ 7,050,000	Retained Earnings (Deficit)	(5,600,000)	2,700,000
Long-term Operating Assets	$ 4,100,000	$12,050,000	**Shareholders' Equity**	$ (1,600,000)	$ 6,700,000
Total Assets	$10,500,000	$16,300,000	**Total Liabilities and Shareholders' Equity**	$10,500,000	$16,300,000

Key Ratio Analysis	*Company ABC, Inc.* **FYE 12/31/2012**	*Company XYZ, Inc.* **FYE 12/31/2012**
Net Working Capital		
Current Assets	6,400,000	4,250,000
Current Liabilities	3,200,000	8,100,000
Net Working Capital	3,200,000	(3,850,000)
Current Ratio:		
Current Assets	6,400,000	4,250,000
Current Liabilities	3,200,000	8,100,000
Current Ratio	2.00	0.52
Debt to Equity:		
Current Liabilities	3,200,000	8,100,000
Long-Term Liabilities	8,900,000	1,500,000
Total Liabilities	12,100,000	9,600,000
Total Shareholders' Equity	(1,600,000)	6,700,000
Debt to Equity	(7.56)	1.43

The reason the comparison in Exhibit 3.3 has been provided is to highlight the fact that while one company has a stronger long-term financial outlook (company XYZ), over the short term, it may have some real challenges present in terms of resolving its short-term liquidity crisis. On the other hand, company ABC does not appear to have any short-term liquidity problems as it has more than enough liquid current assets to cover current liabilities. However long term, company ABC may have some real challenges present in terms of repaying its long-term debt, especially if it can't figure out how to turn a profit.

Tips, Tidbits, and Traps

The strength of a balance sheet needs to be evaluated and analyzed at both the total and parts levels. Businesses can often get into trouble when short-term debt is used to finance long-term assets and/or long-term debt is used to support current working capital needs. So when we discussed the concept of "the balance sheet must balance" this can actually be applied to the structure of the balance sheet as well as total current assets should be properly balanced against total current liabilities and total long-term assets should be properly balanced against total long-term debt and shareholders' equity. Trust us when we say that more than a few companies have gotten into severe liquidity squeezes by not applying this fundamental financing principal.

4

UNDERSTANDING PROFIT

Why Discuss Profits Last?

If you hadn't noticed, we've intentionally taken you down a different road than most reference material when it comes to understanding the big three financial statements. That is, the income statement or profit and loss statement is usually the place most start when evaluating a business's financial results. Or to be blunt and cut to the chase, most simply want to know how much sales revenue a business generated and what was its profit.

No doubt very good questions to ask but in reality, the usefulness of the income statement is directly dependent on the trust worthiness of the balance sheet and the reliability of the statement of cash flows, covered in Chapters 3 and 2, respectively. The point we're trying to emphasize with the layout or order of the book's chapters is not to de-emphasize the importance of the income statement but rather to highlight the critical importance of both the balance sheet and statement of cash flows, and unfortunately how these two financial statements are often ignored and overlooked when evaluating an entity's complete financial performance and condition.

The balance of this chapter is now directed toward understanding the logic and structure of the income statement and how profits and losses are calculated and dependent on properly recording sales revenue and expenses to measure net profits or losses. But remember that with one simple misstep, estimate or calculation error, and/or intentional or unintentional omission in the balance sheet, a business's profit can disappear faster than a "fart in the wind" (per the quote provided by Warden Norton played by Bob Gunton in the movie *The Shawshank Redemption*).

An Important Question

In Chapter 1 we introduced the three primary financial statements for a representative business example. See Exhibits 1.1 (balance sheet), 1.2 (income statement), and 1.3 (statement of cash flows). These three financial statements provide a comprehensive financial summary of the business. In reading these three financial statements did anything pique your curiosity? Did something in the financial statements stop you in your tracks and raise a question in your mind?

Well, one thing might have caught your attention. In its income statement for the year (Exhibit 1.2), the company reports that it earned $2,642,000 net income, or bottom-line profit. On the other hand, in its statement of cash flows for the year (Exhibit 1.3) the company reports that it generated $3,105,000 cash flow from operating activities, that is, from profit-making activities. In short, profit is $2,642,000 and cash flow from profit is $3,105,000 for the year.

Wait a minute: How can cash flow from profit be higher than profit? Where did the "extra" cash come from? In other situations could cash flow be less than profit? A simple answer is that profit, or more accurately the revenue and expenses that determine profit, consist of more than just cash flows. Actual cash inflow from revenue is typically higher or lower than the amount of revenue recorded for the period. And, actual cash outflows for expenses are typically higher or lower than the amounts of expenses recorded for the period.

The first section of the statement of cash flows (see Exhibit 1.3 for instance) attempts to explain the differences between cash flows and revenue and expenses. But in our experience business managers, lenders, and investors generally cannot make heads or tails of this section of the cash flows statement. The main reason is that they don't have a clear picture of how revenue and expenses are recorded. Do you?

In this chapter we explain profit accounting fundamentals. We focus on the assets and liabilities used in recording revenue and expenses. The increases or decreases in these assets and liabilities during the period tell the tale of why cash flows differ from revenue and expenses. Directing attention to these changes opens the door to understanding cash flow from profit-making (operating) activities.

Having read this chapter you'll have a leg up in understanding what the first section of the statement of cash flows is trying to tell you.

Nature of Profit

Profit does not appear magically in the accounts of a business. The amount of profit for a period arises from recording revenue and expenses during the period. Recording revenue and expenses follow basic rules:

	Asset	*Liability*
Revenue	+	–
Expenses	–	+

Put into words, revenue increases an asset or decreases a liability. Expenses decrease an asset or increase a liability.

Revenue minus expenses equals profit. We're sure you have heard this many times. What you may not have heard is that profit equals the change in assets from revenue and expenses minus the change in liabilities from revenue and expenses. For example, consider the following scenario:

	Assets	*Liabilities*
Revenue	+$65	$ 0
Expenses	–$40	+$15
Net Change	+$25	+$15

What's profit for the period in this scenario? Assets increased $25 and liabilities increased $15—so profit equals $10. Notice that profit consists of a mix of changes in assets and liabilities. This point is extremely important to understand. Profit is not a single asset thing. Profit involves several assets, and liabilities as well.

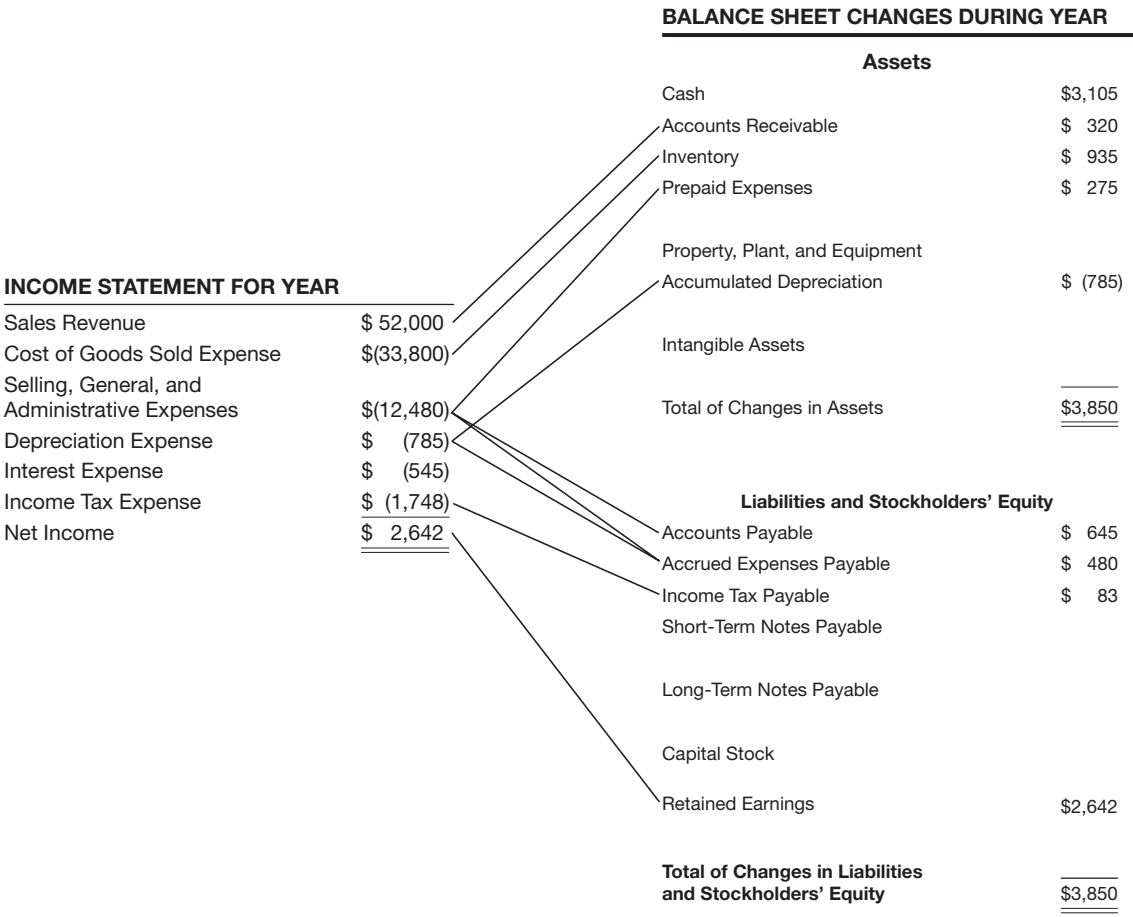
Employing several different assets and liabilities to record revenue and expenses complicates profit accounting. But this method produces the truest measure of profit for the period. It's called *accrual-basis* accounting. To be frank, "accrual" is not a good descriptor for this profit accounting method. The term basically means that revenue and expenses are recorded when things happen—that is, when sales take place and when expenses are incurred. It might be better to call accrual basis accounting *real-time* accounting.

What's the alternative? Well, revenue and expenses could be recorded when cash is received from sales and when expenses are paid. This method is called *cash basis* accounting. Cash basis accounting would be woefully inadequate and seriously misleading for most businesses, large or small, new or old, public or private.

At this point refer to Exhibit 4.1. On the left this exhibit starts with the single-step income statement for the example. On the right side the exhibit lists the balance sheet changes during the year for the asset and liabilities that are connected with revenue and expenses. Such a listing of balance sheet changes is not

EXHIBIT 4.1—INCOME STATEMENT AND BALANCE SHEET CHANGES DURING YEAR FROM PROFIT-MAKING ACTIVITIES

Dollar Amounts in Thousands



regularly prepared (although a business manager could ask the accountant for such a report).

Lines of connection are shown between revenue and expenses in the income statement and the particular assets and liabilities in the balance sheet that are used in recording revenue and expenses. Notice that there are blanks in the changes column for several balance sheet items. Recording revenue and expenses do not affect these assets, liabilities, and the capital stock account.

There are no lines of connection to or from the cash account. We would have to draw too many lines because cash is extensively connected with most other balance sheet accounts.

Recording Revenue and Expenses

In the following sections we emphasize the particular assets and liabilities accountants use for recording revenue and expenses in accrual basis accounting. Our purpose is to make you mindful that the sales and expense activities of a business increase or decrease various assets and liabilities. The balance sheet of a business is driven in large part by its sales and expense transactions. Please refer to Exhibit 4.1 as we consider each line in the income statement.

Recording Revenue

In our company example the business makes all sales on credit. It offers its customers 30 days before they have to pay the business for their purchases. The business records sales on credit immediately on closing the sale and delivering the products to the customer. The business records this entry:

Income Statement:	**+ Sales Revenue**
Balance Sheet:	**+ Accounts Receivable**

See the line of connection in Exhibit 4.1 between sales revenue in the income statement and the accounts receivable asset in the balance sheet.

Over the year the business makes credit sales totaling $52,000,000. Therefore, $52,000,000 of increases was recorded in its accounts receivable asset account. As cash is collected from customers the cash account is increased, and accounts receivable is decreased the same amount.

Tips, Tidbits, and Traps

A business may invoice and receive cash from customers before goods or services are delivered to them. One example is newspapers that collect subscriptions before the papers are delivered. When cash is received a liability account called *unearned revenue* (or equivalent title) is increased. As the business delivers the product or service it decreases the liability account and increases the revenue account. The business in our example does not collect money from customers in advance of delivery products or services to them; however, this changes in our case study comparing two like companies starting in Chapter 6.

During the year the business collected slightly less cash from customers than its sales revenue for the year. As a result, the balance in accounts receivable increased $320,000 (see Exhibit 4.1). Chapter 7 explains further the cash flow from making credit sales and collecting accounts receivable.

Recording Cost of Goods Sold Expense

The business in our example sells products. The business needs to have products ready for sale and immediate delivery to its customers. So the business stockpiles a sizable collection of products. The company manufactures some of the products it sells and it buys

other products that it resells to its customers. When it manufactures and buys products the cost amount of the acquisition is recorded as an increase in the inventory asset account. The cost of the products remains in the inventory asset account until the products are sold.

When products are sold their cost is removed from the inventory asset account and charged to cost of goods sold expense. The business makes this entry:

Income Statement: **+ Cost of Goods Sold Expense**
Balance Sheet: **– Inventory**

See the line of connection in Exhibit 4.1 between cost of goods sold expense in the income statement and the inventory asset in the balance sheet. Total cost of goods sold expense for the year is $33,800,000, and the inventory asset account was decreased this amount during the year. The business made purchases during the year to replenish its stock of products as sales were made during the year.

The cash outflow for manufacturing and buying inventory during the year depends on whether the business decides to increase or decrease its level of inventory during the year—as well as other factors. During the year the business bought more inventory than it sold. Therefore, inventory increased $935,000 (see Exhibit 4.1). This increase in inventory required additional cash outlay during the year. We discuss further the company's ending inventory level and cash outflow for inventory purchases in Chapters 8 and 9.

Recording Selling, General, and Administrative (SG&A) Expenses

Like all businesses the company in our example has many kinds of operating expenses, which are lumped under the broad category of "Selling, General, and Administrative (SG&A) Expenses." See Exhibit 4.1. This includes everything from the compensation of the president of the business to the cost of electricity. A good chunk is spent on advertising and marketing the products sold by the business. However, this group of expenses does not include the expenses for depreciation, interest, and income tax, which are reported separately in its income statement (see Exhibit 4.1).

Some selling, general, and administrative expenses are recorded by decreasing the cash asset account—no other asset or liability account is involved. Some are recorded by decreasing the prepaid expenses asset account. Some are recorded by increasing the accounts payable liability account. And, some are recorded by increasing the accrued expenses payable liability account.

Recording expenses when cash payments are made is straightforward:

Income Statement: **+ SG&A Expenses**
Balance Sheet**:** **– Cash**

Note: Recording an expense when cash payment is made assumes that the amount of expense is the correct amount to charge against revenue in the period.

The business has to prepay certain operating expenses, for example, insurance premiums. These prepayments benefit several future months. When the business makes a prepayment it initially records the amount in the prepaid expenses asset account. Then, the amounts of prepayments are allocated over the months benefited by the prepayment.

The prepayments are moved to expense by the following entry:

Income Statement: **+ SG&A Expenses**
Balance Sheet: **– Prepaid Expenses**

During the year the business prepaid for more of such expenses than it charged to selling, general, and administration expenses to the year. Thus, its prepaid expenses asset account increased $275,000 during the year (see Exhibit 4.1).

The company in our example has been in business several years and has established a good credit rating. Therefore, the vendors and suppliers it makes purchases from extend the business normal credit terms. Also, the company uses business credit cards for travel and entertainment by its salespersons and officers.

When the business buys something on credit and uses its credit cards for purchases that should be charged to expense, the business records these short-term payables in the accounts payable liability account and makes the following entry:

Income Statement:	**+ SG&A Expenses**
Balance Sheet:	**+ Accounts Payable**

During the year the company ran up the amount of payables from purchases on credit and using credit cards. It paid out less than the total that was recorded in its accounts payable liability account. So this liability account increased $645,000 (see Exhibit 4.1). We explain further the cash flow of buying on credit in Chapter 10.

Some operating expenses accumulate over time. The business does not get an invoice for these costs. It has to recognize the gradual buildup of these costs. For example, the business provides vacation and sick pay for its employees. After 50 weeks an employee is entitled to take two weeks paid vacation. To record such expenses as they accumulate over time, a business uses a liability account called *Accrued Expenses Payable* (or equivalent title) and makes the following entry:

Income Statement:	**+ SG&A Expenses**
Balance Sheet:	**+ Accrued Expenses Payable**

During the year the company paid less cash than the charges to its accrued expenses payable liability. So this liability increased $480,000 (see Exhibit 4.1). We explain further the cash flow of this liability account in Chapter 11.

Recording Depreciation Expense

The business in our example needs a warehouse to house the products it sells. And, it needs shelving, forklifts, and other equipment for handling and transporting the products. Also the business needs office space, as well as computers and office equipment and furniture. The business has invested $16,500,000 in various long-term operating assets, which are labeled *Property, Plant, and Equipment* on the balance sheet (see Exhibit 1.1).

The costs of these *fixed assets* (as they are also called) are not charged to expense immediately upon acquisition. Since fixed assets have useful lives of more than one year the cost of a fixed asset (except land) is charged piecemeal to expense over its estimated useful life to the business. Each year of using a fixed asset bares a share of the cost. The portion of cost allocated to a year is called *depreciation*. As you see in Exhibit 4.1 the business recorded $785,000 *depreciation expense* in the year.

Depreciation is recorded as follows:

Income Statement:	**+ Depreciation Expense**
Balance Sheet:	**– Accumulated Depreciation**

The accumulated depreciation account is an offset, or deduction against the cost of the fixed assets. It can be thought of

as the negative side of the fixed assets account. In the balance sheet (refer to Exhibit 1.1, for instance) the balance in accumulated depreciation is deducted from the cost of property, plant, and equipment. An increase in this offset, or contra account has the effect of reducing the balance of property, plant, and equipment. In short, fixed assets are decreased $785,000 by recording depreciation.

Recording depreciation expense does not involve cash payment in the period the expense is recorded. Cash was paid when the fixed assets were purchased or constructed. We explain further the nature of depreciation expense and the central role of depreciation in analyzing cash flow in Chapter 14.

Recording Interest Expense

The business has borrowed sizable amounts on short-term and long-term notes payable (refer back to its balance sheet in Exhibit 1.1). The business has to pay interest for the use of this money. Interest accrues day by day. Interest is paid quarterly or semi-annually, or even just once a year. To recognize the accumulation of interest the business makes the following entry:

Income Statement:	**+ Interest Expense**
Balance Sheet:	**+ Accrued Expenses Payable**

When interest is paid the business decreases the liability account and decreases the cash account. We explain further the cash flow differences between recording interest and paying interest in Chapter 15.

Recording Income Tax Expense

For the year just ended the business has taxable income that resulted in Income Tax Expense of $1,748,000 (see Exhibit 4.1). To record this expense the business makes the following entry:

Income Statement:	**+ Income Tax Expense**
Balance Sheet:	**+ Income Tax Payable**

During the year a business is generally required to make installment payments on its estimated federal income tax for the year. In fact, most of the income tax for the year should be paid over to the IRS by the end of the year. When the business makes installment payments to the IRS it decreases cash and decreases income tax payable. We explain further the cash flow effects of income tax expense and its liability in Chapter 12.

Recording Net Income into Retained Earnings

The net income for the year, as you undoubtedly know, equals sales revenue for the year minus the sum of expenses for the year. This bottom line net income amount is entered in the retained earnings owners' equity account. We won't bother you with the bookkeeping steps here, but the final effect is to increase retained earnings $2,642,000, which is the net income for the year (see Exhibit 4.1). The retained earnings stockholders' equity account in the balance sheet is the final home of profit.

The total of changes in the assets used to record revenue and expenses minus the total of changes in the liabilities used to measure revenue and expenses produces a net gain of $2,642,000 in

the owners' equity. The *net worth* of the business, that is, its assets minus its liabilities, increases $2,642,000 from making profit—and this increase belongs to the owners. Their equity in the business is this much better off from earning profit.

Once the $2,642,000 net income amount is entered in retained earnings the balance sheet is in balance. The amount of total assets on the one side equals the amount of liabilities plus owners' equity on the other side. In our example the company's assets increased $3,850,000 during the year from its profit-making activities (see Exhibit 4.1). Deducting the $1,208,000 increase in liabilities from its operating activities gives a net increase of $2,642,000, which is profit (net income) for the year.

Winding Up

The business example presented in Exhibit 4.1 illustrates that making profit results in changes in several different assets and liabilities—not just cash. Cash is at the center of it, but several other assets are changed by a company's profit-making operations and so are certain liabilities. Business managers, creditors, and investors should understand and keep an eye on these changes. We stress this point repeatedly throughout the book.

Finally, let's circle back to the question that kick started this chapter. Why did cash generated from operating or profit-making activities increase $3,105,000 during the period even though net income is only $2,642,000 for the period (see Exhibit 4.1)? In other words, why is cash flow $463,000 higher than profit for the period? There are several reasons.

In Exhibit 4.1 look again at the changes in assets and liabilities. Take the $320,000 increase in accounts receivable, for instance. This asset increase tells us that $320,000 less cash was collected from customers than sales revenue during the period. In general an increase in an asset has an unfavorable impact on cash flow, and a decrease has a favorable impact.

The cash flow impacts of changes in liabilities are the reverse of changes in assets. The $645,000 increase in accounts payable, for instance, tells us that $645,000 less cash was paid out during the year than the amount of expenses recorded in this liability. In general an increase in a liability has a favorable impact on cash flow, and a decrease has an unfavorable impact.

The cash flow effects of the changes in current assets and liabilities are summarized as follows:

Cash Flow Impacts of Changes in Assets and Liabilities During the Year (from Exhibit 4.1)

Accounts Receivable increase	$(320,000)
Inventory increase	$(935,000)
Prepaid Expenses increase	$(275,000)
Accumulated Depreciation decrease	$ 785,000
Accounts Payable increase	$ 645,000
Accrued Expenses Payable increase	$ 480,000
Income Tax Payable increase	$ 83,000
Net Effect on Cash Flow	$ 463,000

○ Recall that accumulated depreciation is a negative, or offset amount that is deducted from the cost of fixed assets. The increase in this account is in essence a decrease in the fixed assets being depreciated. Also, keep in mind that recording depreciation expense does not require a cash outlay. Thus, depreciation has a favorable impact on cash flow (more on this in Chapter 14).

○ The above summary shows the reasons why cash flow is $463,000 higher than profit for the period. If one of the changes had been different then cash flow would have been different. Suppose, for example, that accounts payable had not changed during the year. Cash flow from profit would have been $645,000 smaller, and in fact it would have been lower than profit for the year.

5

PROFIT ISN'T EVERYTHING AND ALL THINGS

Remember—Everything's Connected

If you haven't figured it out by now, let us reinforce two critical underlying premises and objectives of this book:

- First, everything is connected: That is, all information presented in financial statements and reports, in one fashion or another, is connected to another information source. The income statement connects with the balance sheet, the balance sheet connects with the statement of cash flows, the statement of cash flows connects with the income statement, and even the financial statement footnotes connect to the financial statements. But let's face it, accountants by their own admission and guilt, must have these connections to ensure that the financial statements make sense and present fairly, the operating results of a company.
- Second, all information is essential: To truly understand the financial results and condition of a company, all financial information needs to be evaluated and understood to make an informed and proper assessment (and decision if applicable). Relying on just one piece of financial information, such as the income statement, only tells a portion of the story and is often a fatal error made by novices (e.g., the company generated a profit so it must be a good investment).

Tips, Tidbits, and Traps

To expand on the concept of having all information available, you should note that this goes well beyond just the financial statements and reports provided by a company for review. The most experienced and qualified business professionals are always searching, acquiring, and accumulating information that relates or impacts a business, but which is not presented in the financial statements or reports (e.g., a third-party industry outlook report). The point we're attempting to drive home here is that having a clear understanding of where a business is going versus where a business has been is extremely important. The "where a company has been" issue is primarily covered in the financial statements and reports presented. The "where a company is going," well, now that is the million-dollar question, which the likes of Warren Buffett seem to really have figured out.

Threefold Financial Task of Business Managers

In Chapter 1, we introduced the three primary financial statements for a representative business example—the income statement, the balance sheet, and the statement of cash flows. We start this chapter by calling your attention to stockholders' equity in the balance sheet. Its owners have invested $8,125,000 capital in the business for which it issued capital stock shares to them. See the *capital stock* account in Exhibit 1.1. Furthermore, over the years the business has retained $15,000,000 profit, which is called *retained earnings*. Taken together these two sources of owners' equity equal $23,125,000. One purpose of the balance sheet is to disclose such information about the ownership of the business entity and the sources of its equity capital.

The stockholders expect the managers of the business to earn a reasonable annual profit on their $23,125,000 equity in the business. In its most recent annual income statement the business reports $2,642,000 bottom-line profit, or net income. Profit equals 11 percent on the company's year-end stockholders' equity. The stockholders, as well as the company's managers and its lenders, want to know more than just bottom-line profit. They want to see the whole picture of how profit is earned. Therefore, the income statement reports totals for revenue and expenses for the period as well as bottom-line net income.

The ability of managers to make sales and to control expenses, and thereby earn profit, is summarized in the income statement. Business investors and lenders pay particular attention to the profit yield from revenue. Earning profit is essential for survival and the business manager's most important financial imperative. But the bottom line is not the end of the manager's job, not by a long shot!

To earn profit and stay out of trouble, managers must control the *financial condition* of the business. This means, among other things, keeping assets and liabilities within appropriate limits and proportions relative to each other and relative to the sales revenue and expenses of the business. Managers must prevent cash shortages that would cause the business to default on its liabilities when they come due, or not be able to meet its payroll on time.

Business managers really have a threefold financial task: earning enough profit, controlling the company's assets and liabilities, and generating cash flows. For all businesses, regardless of size, a financial statement is prepared for each financial imperative—one for profit performance (the income statement), one for financial condition (the balance sheet), and the statement of cash flows.

Earning adequate profit by itself does not guarantee survival and good cash flow. A business manager cannot fully manage profit without also managing the assets and liabilities of sales revenue and expenses. We identify these assets and liabilities in Chapter 3 where we explain accrual-basis profit accounting. In our business example, the changes in these assets and liabilities cause cash flow to be higher than the profit for the year. In other situations the changes can cause cash flow from profit to be less, perhaps much less, than profit for the period (and can cause negative cash flow in extreme situations).

Business managers use their income statements to evaluate profit performance and to ask a raft of profit-oriented questions. Did sales revenue meet the goals and objectives for the period? Why did sales revenue increase compared with last period? Which expenses increased more or less than they should have? And there are many more such questions. These profit analysis questions are absolutely essential. But the manager can't stop at the end of these questions.

Beyond profit analysis, business managers should move on to financial condition analysis and cash flows analysis. In large business corporations, the responsibility for financial condition and cash flow is separated from profit responsibility. The chief financial officer (CFO) of the company is responsible for financial condition and cash flow. The chief executive and board of directors oversee the CFO. They need to see the big picture, which includes all three financial aspects of the business—profit, financial condition, and cash flow.

In smaller businesses, however, the president or the owner/manager is directly involved in controlling financial condition and cash flow. There's no one to whom to delegate these responsibilities—although, consultants and advisors can be hired for advice.

One Problem in Reporting Financial Statements

Chapter 1 introduced the balance sheet, income statement, and statement of cash flows for a business example, as you would see these three primary financial statements in a typical financial report. Each of the statements stands alone, by itself, usually on a separate page in the financial report. Each statement is presented like a tub standing on its own feet. The "water pipes" (interconnections) between the three financial statements are not made explicit. There is no clear trail of the crossover effects between the three financial statements.

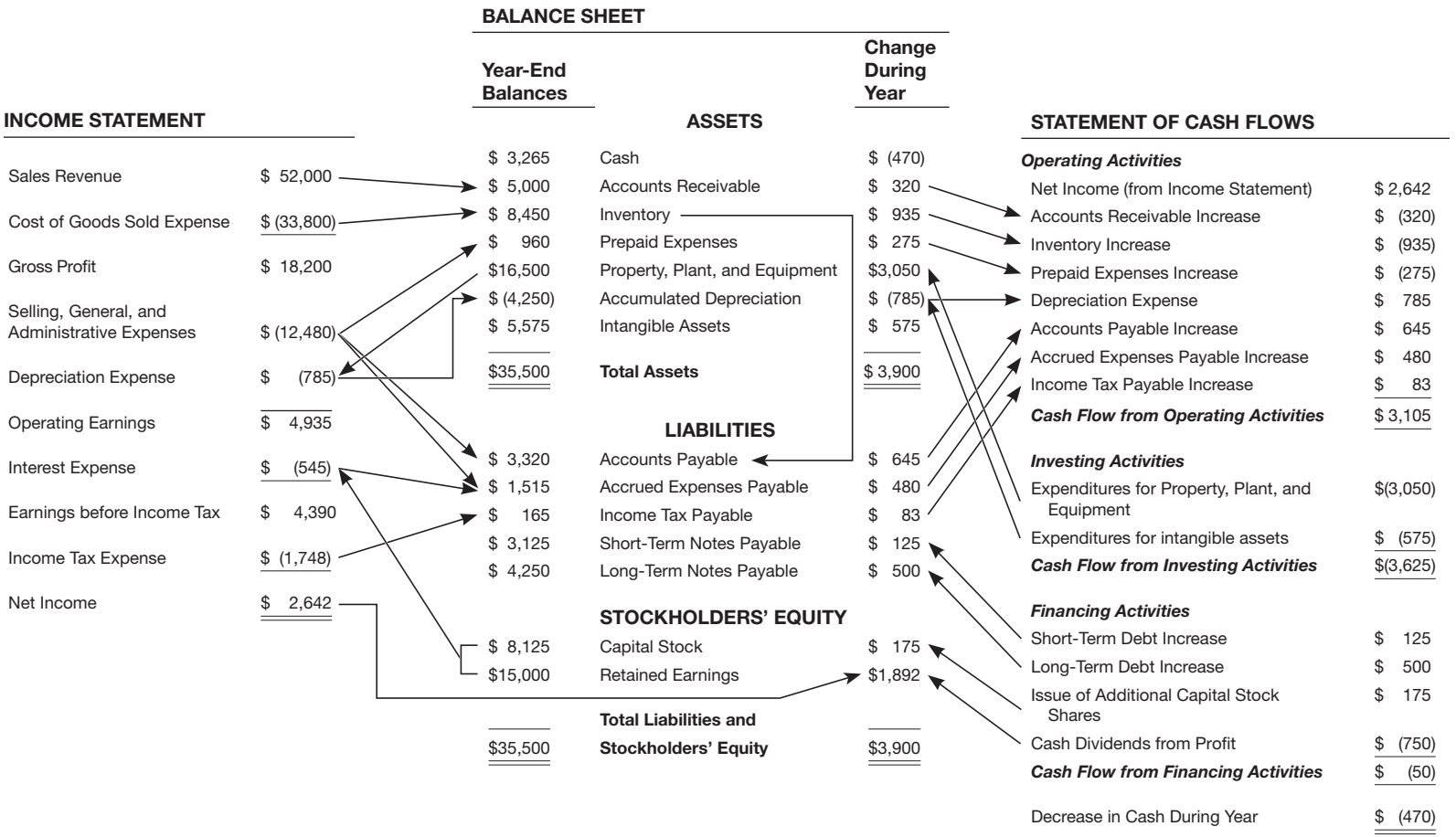
Unfortunately, the way financial statements are presented in a financial report does not make clear that making profit drives the financial condition and cash flows of the business. You can easily miss the vital interplay among the income statement, balance sheet, and statement of cash flows. Accountants assume that readers understand the couplings and linkages between the three financial statements and make use of these connections in analyzing the financial affairs of a business.

Chapter 4 provides a good start for understanding the connections between the income statement and the balance sheet. In Chapter 4 we identified the assets and liabilities used in recording revenue and expenses. The connections between revenue and expenses and their corresponding assets and liabilities are shown in Exhibit 4.1 (which you might want to take a quick look at again). The exhibit, however, does not show the other connections between the financial statements.

Exhibit 5.1 presents a comprehensive overview of the connections between the income statement and the balance sheet, and the connections between the changes in the balance sheet accounts and the statement of cash flows. The three financial statements fit together like tongue-in-groove woodwork; the income statement, balance sheet, and cash flows statement interlock with one another.

EXHIBIT 5.1—CONNECTIONS AMONG THREE FINANCIAL STATEMENTS

Dollar Amounts in Thousands



Interlocking Nature of the Three Financial Statements

In Exhibit 5.1 the balance sheet is presented in the *vertical*, or portrait format, also called the *report form*—assets on top, and liabilities and stockholders' equity below. To save space we do not include subtotals for current assets, current liabilities, and stockholders' equity in the balance sheet. (You might quickly compare the balance sheet in Exhibit 5.1 with the "official" balance sheet example in Exhibit 3.2.)

In Chapter 4 we explain the connections between revenue and expenses in the income statement and their assets and liabilities in the balance sheet (see Exhibit 4.1). These connections are shown again in Exhibit 5.1—except that the lines of connection are to the *ending balances* of the assets and liabilities. In the following chapters we examine how large these ending balances in assets and liabilities should be relative to the amounts of revenue and expenses for the year.

In addition to ending balances Exhibit 5.1 shows the *changes* in the balance sheet accounts during the year. These changes go to or come from the statement of cash flows. The first section of the statement uses the changes in the assets and liabilities of recording revenue and expenses to reconcile net income and *cash flow from operating activities*. This important cash flow number is the net increase or decrease in cash that is attributable to the profit-making (operating) activities of the business.

The cash increase from the company's profit-making activities for the year is $3,105,000 (see Exhibit 5.1), which compared with its $2,642,000 net income is a fairly significant difference. In this particular example, the company's cash flow from profit is $463,000 higher than its profit for the year. In Chapter 4 we explain how to use the changes in assets and liabilities of recording revenue and expenses to determine the difference between cash flow and profit.

The other, or nonoperating cash flows of the business during the year are reported in the *investing* and *financing* sections of the statement of cash flows. See Exhibit 5.1 again. The business made key decisions during the year that required major outlays of cash and secured additional cash during the year from its lenders and stockholders. Notice that the lines of connection for these cash flow decisions go from the cash flow sources and uses to their respective assets, liabilities, and stockholders' equity.

You really can't swallow all the information in Exhibit 5.1 in one gulp. You have to drink one sip at a time. Exhibit 5.1 serves as the road map that we refer to frequently in the following chapters—so that we don't lose sight of the big picture as we travel down the particular highways of connection between the financial statements.

Before moving on, we should stress that financial statements are not presented with lines of connection as shown in Exhibit 5.1. You never see tether lines like this between the financial statements. Accountants assume that the financial statement readers mentally fill in the connections that are shown in Exhibit 5.1. Accountants assume too much, in our opinion. It would be helpful if a financial report included reminders of the connections among the three financial statements. But don't hold your breath.

Connecting the Dots and Expanding Your Knowledge of Financial Reports

In our experience, business managers and executives, and for that matter even some certified public accountants (CPAs) do not recognize the connecting links among the financial statements that we show in Exhibit 5.1. Over the years the senior author (John) has corresponded with many persons via e-mail who requested the Microsoft Excel workbook file of the exhibits in this book. (See the Preface for John's e-mail address.) Over and over they mention one point—the value of seeing the connections among the financial statements.

John did not fully understand these connections himself until he started teaching at the University of California at Berkeley in 1961. In browsing through an old, out-of-print textbook, he came upon the point that financial statements, although presented separately, are articulated with one another. Even though John had already had earned his PhD, he had not seen this critical point before. (Perhaps he had slept through that particular lecture.) He was struck by the term *articulated*. In his mind's eye John could see an articulated bus, a bus having two compartments that were connected together.

Exhibit 5.1 provides the framework for the following chapters that in the comprehensive version of *How to Read a Financial Report*, offers the following seven additional features and benefits to support a more thorough and detailed understanding of financial reports and financial statements:

1. Links to current events and what's hot: Throughout the book, an effort is made to call out and reference current events that are of importance and highly relevant to the subject matter being discussed. Whether its excessive sovereign debt levels (United States, Europe, Japan, etc.) or the struggles small businesses have experienced as a result of the Great Recession, an underlying theme of the book will be to help bridge the gap between "theory" and the "street." Or as the junior author on this project (Tage) likes to joke with the senior author (John and my father), "You may teach accounting and finance in the classroom one way, but this is how it's done on the street."
2. Case study: Chapters 1 through 5 reference base material for a sample business to help everyone get started with understanding the basics. The balance of the book offers an in-depth case study starting in Chapter 6, which compares similar companies, executing basically the same business model, in the same industry. Chapter 6 launches a discussion, which is then updated in Chapter 13 and brought to a conclusion in Chapter 24. Is there a moral to the story? Absolutely. But just a heads up and as the senior author with this book never fails to remind me, "Nobody ever said life is fair."
3. Tips, tidbits, and traps: Every reader of financial statements and reports, no matter how savvy and experienced, can use some helpful advice along the way. We've incorporated a concept that hopefully you will find useful called *Tips*, *Tidbits*, *and Traps*. When you see this referenced in the

book, our goal is to emphasize or expand on a key point or topic that should be helpful to any party evaluating financial statements and reports (whether an internal business manager or external lender).

4. Critical terminology and ratio alerts: Along the same lines as tips, tidbits, and traps, we also draw the reader's attention to critical accounting and financial terminology and/or associated financial ratios that are widely used and relied on by the business community. While we don't expect everyone to remember each term or master each ratio covered in the book, having an easy method to refer back to the concepts and when needed, utilize the ratio is the goal.
5. Real world stories: When applicable, real world stories are scattered throughout the book to offer an actual series of events related to an operating business that is closely associated with a subject matter. The names and places of the stories have been changed to protect the innocent but hopefully the insight provided within these stories expands your understanding of just how businesses operate and think.
6. Accounting issues and our case study: In Chapters 7 through 18, we expand our discussion of critical accounting issues to be aware of with each topic covered as well as then provide a comparison in each chapter for our two case study companies. The goal is to keep the reader updated and informed on how each company is performing and what its respective financial statements may be saying.
7. Test my knowledge: Finally, the majority of the chapters in this book incorporate an interactive quiz or test segment. The questions are limited in number (three to five per chapter) and are designed to focus on the key concepts and issues covered in each chapter. And don't worry as nobody is going to "grade" you on your responses as the goal is to reinforce subject matter and content that hopefully will enable you to better understand financial statements and reports.

We think you'll find the financial tips in the following chapters interesting, helpful, and hopefully they will expand and "enhance" your knowledge of both financial reports and financial statements (thus the name of this book).

Part Two

WORKING CAPITAL CONNECTIONS

6

OUR CASE STUDY—COMPANY INTRODUCTIONS

Company Overviews

Through the balance of the book, all future references center on our case study, which presents two different companies operating in the same industry and executing the same basic business plan. For all-intensive purposes, these companies are alike in every way as noted in the following summary of key operating, marketing, and legal strategies:

- The companies generate revenue (or sales) from two primary sources, including the sale of annual enterprise resource planning (ERP) software licenses and the necessary technology hardware (i.e., computers, servers, mobile devices) to support the ERP system. All annual ERP software licenses are billed in advance for the next 12-month period. All sales of hardware are billed at the point of delivery and sign-off or acceptance by the customer.
- The companies do not manufacture the hardware technology but rather purchase it from third-party suppliers and then resell the products to their customers. The equipment is purchased and stored at the companies' facilities to support future deliveries (so inventory is maintained).
- Total operating expenses for both companies are similar as it relates to the number of employees, compensation rates, benefits, facility requirements and expenses incurred, and so on. However, each company may elect to allocate the total operating expenses to different internal functions (e.g., sales and marketing versus research and development versus general and administrative, etc.)
- Both companies operate as regular C corporations, domiciled in the same state, and pay a combined federal and state income tax rate of 35 percent. Each company was launched in 2009 with an initial investment of $1,000,000 of which at the end of 2009, $100,000 of cash remains. To start 2010, both companies secure an additional initial equity investment of $2,000,000 (bringing the total equity secured to $3,000,000) and a long-term note payable of $2,000,000 with annual debt service payments of $400,000 due (to be paid off in five years). The note payable carries an annual interest rate of 5 percent.
- The companies' investment in property, plant, and equipment is consistent both in terms of the total amount of capital expenditures made and the depreciation policy used (straight line for 60 months with no salvage value).

Although the similarities are numerous between the two companies, when it comes to accounting and financial strategies, each company applies different accounting policies and procedures related to three critical areas: revenue recognition, inventory valuation, and software development costs. The next two sections introduce HareSquared, Inc.'s and TortTech, Inc.'s financial statements to our readers and provide summarized financial statement footnotes related to these three areas.

HareSquared, Inc.

Exhibit 6.1 presents HareSquared, Inc.'s (HSI) financial statements for the two year comparison period for the fiscal years ending 12/31/10 and 12/31/11.

When first reviewing the financial statements for HSI, please note the following three financial statement "truths" related to the balance sheet, income statement, and statement of cash flows as discussed in Chapter 1.

- First, the balance sheet must balance, which it does. Also note as highlighted in Exhibit 6.1 that the ending cash balance per the statement of cash flows equals the ending cash balance per the balance sheet (again, a truth that must hold in the financial statements).
- Second, incurring a net loss does not result in the company failing. As is evident in Exhibit 6.1, not only has HSI continued to operate past 2010 (when it incurred a large loss) but it actually was able to turn a profit in 2011.
- Third, a company's net loss does not equal negative cash flow and likewise, a company's net income does not equal positive cash flow. Again, the financial statements presented highlight this extremely important concept.

HSI has audited financial statements prepared on an annual basis with an independent CPA firm and utilizes the following primary accounting policies:

Please note the reference between the letters used to summarize the primary accounting policies and the associated accounts in the balance sheet, income statement, and statement of cash flows in Exhibit 6.1. These connections are more fully explained in Chapters 7 through 18 but have been tagged here to emphasize their importance.

A. Revenue recognition: HSI bills its customers in advance for an annual ERP software license fee on the day the sales contract is executed by the customer. HSI recognizes earned revenue from the annual ERP software license fee along the following schedule:

- Seventy-five percent during the first four months after the contract is executed.
- Twenty-five percent during the remaining eight months HSI is required to support the software with the customer.

HSI and its auditors have concluded that the majority of the contract is earned during the first four months of the annual ERP software license fee as this represents the most intense period of direct customer support required to ensure that the software is properly installed and adopted by the customer.

EXHIBIT 6.1—SUMMARY FINANCIAL STATEMENTS, TWO-YEAR COMPARISON

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2011

Balance Sheet as of the Year-End		**12/31/2010**	**12/31/2011**
Assets			
Current Assets			
Cash and Equivalents		$ 354	$ 372
Accounts Receivable, Net	A	$ 1,350	$ 4,575
Inventory, LCM	C	$ 495	$ 880
Prepaid Expenses		$ 50	$ 75
Total Current Assets		$ 2,249	$ 5,902
Fixed Assets			
Property, Plant, and Equipment		$ 750	$ 1,000
Accumulated Depreciation		$ (150)	$ (350)
Net Fixed Assets		$ 600	$ 650
Other Assets			
Intangible Assets and Goodwill, Net	B	$ 2,000	$ 1,500
Other Assets		$ 75	$ 75
Total Other Assets		$ 2,075	$ 1,575
Total Assets		$ 4,924	$ 8,127
Liabilities and Stockholders' Equity			
Current Liabilities			
Accounts Payable		$ 406	$ 732
Accrued Expenses		$ 216	$ 604
Current Portion of Debt		$ 400	$ 400
Other Current Liabilities	A	$ 1,500	$ 4,313
Total Current Liabilities		$ 2,522	$ 6,049
Long-Term Liabilities			
Notes Payable, Less Current Portion		$ 1,600	$ 1,200
Other Long-Term Liabilities		$ 0	$ 0
Total Long-Term Liabilities		$ 1,600	$ 1,200
Total Liabilities		$ 4,122	$ 7,249
Stockholders Equity			
Capital Stock - 800,000 Authorized, 550,000 Outstanding → 2010		$ 3,000	$ 3,000
Retained Earnings		$(2,198)	$(2,122)
Total Owners' Equity		$ 802	$ 878
Total Liabilities and Stockholders' Equity		$ 4,924	$ 8,127

Net income or (loss) does not equal an increase or decrease in cash. Further, incurring a net loss did not result in company failure.

Notice beginning cash balance plus net increase or decrease equals ending cash balance.

The balance sheet balances.

Income Statement for the Fiscal Year Ending		**12/31/2010**	**12/31/2011**
Sales Revenue, Net	A	$ 9,207	$18,412
Costs of Goods Sold	C	$ 4,755	$ 9,156
Gross Profit		$ 4,452	$ 9,256
Selling, General, and Administrative Expenses		$ 5,000	$ 8,400
Depreciation and Amortization Expense	B	$ 650	$ 700
Operating Earnings		$(1,198)	$ 156
Other Expenses (Income)		$ 0	$ 0
Interest Expense		$ 100	$ 80
Net Income (Loss) before Income Taxes		$(1,298)	$ 76
Income Tax Expense (Benefit)		$ 0	$ 0
Net Income (Loss)		$(1,298)	$ 76
Shares Outstanding		550	550
Earnings (Loss) Per Share		$ (2.36)	$ 0.14

Statement of Cash Flows for the Fiscal Year Ending		**12/31/2010**	**12/31/2011**
Net Income (Loss)		$(1,298)	$ 76
Operating Activities, Cash Provided or Used:			
Depreciation and Amortization	B	$ 650	$ 700
Decrease (Increase) in Accounts Receivable	A	$(1,350)	$ (3,225)
Decrease (Increase) in Inventory	C	$ (495)	$ (385)
Decrease (Increase) in Other Current Assets		$ (50)	$ (25)
Increase (Decrease) in Trade Payables		$ 406	$ 326
Increase (Decrease) in Accrued Liabilities		$ 216	$ 388
Increase (Decrease) in Other Liabilities	A	$ 1,500	$ 2,813
Net Cash Flow from Operating Activities		$ (421)	$ 668
Investing Activities, Cash Provided or Used:			
Capital Expenditures		$ (750)	$ (250)
Investments in Other Assets	B	$(2,575)	$ 0
Net Cash Flow from Investing Activities		$(3,325)	$ (250)
Financing Activities, Cash Provided or Used:			
Dividends or Distributions Paid		$ 0	$ 0
Sale (Repurchase) of Equity		$ 2,000	$ 0
Proceeds from Issuance of Debt		$ 2,000	$ 0
Repayments of Long-Term Debt		$ 0	$ (400)
Other Financing Activities		$ 0	$ 0
Net Cash Flow from Financing Activities		$ 4,000	$ (400)
Other Cash Flow Adjustments		$ 0	$ 0
Net Increase (Decrease) in Cash and Equivalents		$ 254	$ 18
Beginning Cash and Equivalents Balance		$ 100	$ 354
Ending Cash and Equivalents Balance		$ 354	$ 372

When a customer is billed for the annual licensing fee, the following entry is recorded (for a sample $10,000 annual license fee):

	Debit	*Credit*
Accounts Receivable	$10,000	
Deferred Revenue		$10,000

Note: Deferred or unearned revenue is accounted for as an "other current liability" on the balance sheet.

During the first four months of supporting the license, HSI realizes revenue from the annual licensing fee by recording the following entry (in total, for four months):

	Debit	*Credit*
Deferred Revenue	$7,500	
Software System Sales Revenue		$7,500

So at the end of month four, a total of $2,500 of deferred or unearned revenue ($10,000 billed less $7,500 earned) is present, which is recorded as earned revenue over the remaining eight months of the license agreement period.

B. Software development costs: HSI separately accounts for all direct costs associated with the development of the company's proprietary software for each major revision. The last revision was completed in early 2010 and cost $2.5 million. These costs were capitalized as software development costs and it was determined these costs should be amortized over a 60-month period.

C. Inventory valuation: HSI accounts for all inventory purchased based on the original purchase price of the inventory from the third-party suppliers. Gains or losses on the sale of inventory are realized at the point of product sale or disposal.

TortTech, Inc.

Exhibit 6.2 presents TortTech, Inc.'s (TTI) financial statements for the two-year comparison period for the fiscal years ending 12/31/10 and 12/31/11.

Again and just like with HSI, the same three financial statement truths hold as well as the balance sheet balances, net losses have not resulted in the company failing, and the net loss incurred does not equal negative cash flow.

Similar to HSI, TTI has audited financial statements prepared on an annual basis with another independent CPA firm and utilizes the following primary accounting policies:

Please note the reference between the letters used to summarize the primary accounting policies and the associated accounts in the balance sheet, income statement, and statement of cash flows in Exhibit 6.2. These connections will be more fully explained in Chapters 7 through 18 but have been tagged here to emphasize their importance.

A. Revenue recognition: TTI bills its customers in advance for an annual ERP software license fee on the day the sales contract is executed by the customer. TTI recognizes earned revenue from the annual ERP software license fee along the following schedule:

- On a monthly basis, 8.333 percent of the contract's value will be recognized as sales revenue. TTI utilizes a widely accepted accounting policy based on applying a simple straight line method of realizing equal monthly sales revenue amounts over the life of the contract.

TTI and its auditors have concluded that revenue earned from the contract should be realized in equal 1/12th increments during the year to properly match required direct periodic customer support and service costs with earned revenue.

When a customer is billed for the annual licensing fee, the following entry is recorded (for a sample $10,000 annual license fee):

	Debit	***Credit***
Accounts Receivable	$10,000	
Deferred Revenue		$10,000

Note: Deferred or unearned revenue is accounted for as an "other current liability" on the balance sheet.

During the first four months of supporting the license, TTI realizes revenue from the annual licensing fee by recording the following entry (in total, for four months):

	Debit	***Credit***
Accounts Receivable	$3,333	
Software System Sales Revenue		$3,333

So at the end of month four, a total of $6,667 of deferred or unearned revenue ($10,000 billed less $3,333 earned) is

EXHIBIT 6.2—SUMMARY FINANCIAL STATEMENTS, TWO-YEAR COMPARISON

Dollar Amounts in Thousands

TortTech, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2011

Balance Sheet as of the Year-End		**12/31/2010**	**12/31/2011**
Assets			
Current Assets			
Cash and Equivalents		$ 383	$ 534
Accounts Receivable, Net	A	$ 1,350	$ 2,025
Inventory, LCM	C	$ 513	$ 684
Prepaid Expenses		$ 50	$ 75
Total Current Assets		$ 2,296	$ 3,318
Fixed Assets			
Property, Plant, and Equipment		$ 750	$ 1,000
Accumulated Depreciation		$ (150)	$ (350)
Net Fixed Assets		$ 600	$ 650
Other Assets			
Intangible Assets and Goodwill, Net	B	$ 0	$ 0
Other Assets		$ 75	$ 75
Total Other Assets		$ 75	$ 75
Total Assets		$ 2,971	$ 4,043
Liabilities and Stockholders' Equity			
Current Liabilities			
Accounts Payable		$ 515	$ 683
Accrued Expenses		$ 238	$ 340
Current Portion of Debt		$ 400	$ 400
Other Current Liabilities	A	$ 2,750	$ 4,125
Total Current Liabilities		$ 3,903	$ 5,548
Long-Term Liabilities			
Notes Payable, Less Current Portion		$ 1,600	$ 1,200
Other Long-Term Liabilities		$ 0	$ 2,000
Total Long-Term Liabilities		$ 1,600	$ 3,200
Total Liabilities		$ 5,503	$ 8,748
Stockholders Equity			
Capital Stock - 800,000 Authorized, 550,000 Outstanding ⟶ 2010		$ 3,000	$ 3,000
Retained Earnings		$(5,532)	$(7,705)
Total Owners' Equity		$(2,532)	$(4,705)
Total Liabilities & Stockholders' Equity		$ 2,971	$ 4,043

Net income or (loss) does not equal an increase or decrease in cash. Further, incurring a net loss did not result in company failure.

Notice beginning cash balance plus net increase or decrease equals ending cash balance.

The balance sheet balances.

Income Statement for the Fiscal Year Ending		**12/31/2010**	**12/31/2011**
Sales Revenue, Net	A	$ 7,969	$14,677
Costs of Goods Sold	C	$ 4,851	$ 7,980
Gross Profit		$ 3,118	$ 6,697
Selling, General, and Administrative Expenses	B	$ 7,500	$ 8,400
Depreciation and Amortization Expense	B	$ 150	$ 200
Operating Earnings		$(4,532)	$ (1,903)
Other Expenses (Income)		$ 0	$ 0
Interest Expense		$ 100	$ 270
Net Income (Loss) before Income Taxes		$(4,632)	$ (2,173)
Income Tax Expense (Benefit)		$ 0	$ 0
Net Income (Loss)		$(4,632)	$ (2,173)
Shares Outstanding		550	550
Earnings (Loss) Per Share		$ (8.42)	$ (3.95)

Statement of Cash Flows for the Fiscal Year Ending		**12/31/2010**	**12/31/2011**
Net Income (Loss)		$(4,632)	$ (2,173)
Operating Activities, Cash Provided or Used:			
Depreciation and Amortization	B	$ 150	$ 200
Decrease (Increase) in Accounts Receivable	A	$(1,350)	$ (675)
Decrease (Increase) in Inventory	C	$ (513)	$ (171)
Decrease (Increase) in Other Current Assets		$ (50)	$ (25)
Increase (Decrease) in Trade Payables		$ 515	$ 168
Increase (Decrease) in Accrued Liabilities		$ 135	$ 68
Increase (Decrease) in Other Liabilities	A	$ 2,853	$ 1,409
Net Cash Flow from Operating Activities		$(2,892)	$ (1,199)
Investing Activities, Cash Provided or Used:			
Capital Expenditures		$ (750)	$ (250)
Investments in Other Assets	B	$ (75)	$ 0
Net Cash Flow from Investing Activities		$ (825)	$ (250)
Financing Activities, Cash Provided or Used:			
Dividends or Distributions Paid		$ 0	$ 0
Sale (Repurchase) of Equity		$ 2,000	$ 0
Proceeds from Issuance of Debt		$ 2,000	$ 2,000
Repayments of Long-Term Debt		$ 0	$ (400)
Other Financing Activities		$ 0	$ 0
Net Cash Flow from Financing Activities		$ 4,000	$ 1,600
Other Cash Flow Adjustments		$ 0	$ 0
Net Increase (Decrease) in Cash and Equivalents		$ 283	$ 151
Beginning Cash and Equivalents Balance		$ 100	$ 383
Ending Cash and Equivalents Balance		$ 383	$ 534

present, which is recorded as earned revenue over the remaining eight months of the license agreement period.

B. Software development costs: TTI separately accounts for all direct costs associated with the development of the company's proprietary software for each major revision. The last revision was completed in early 2010 and cost $2.5 million. These costs were realized as research and development expense and reported as direct operating expenses in 2010.

C. Inventory valuation: TTI accounts for all inventory purchased based on the original purchase price of the inventory from the third-party suppliers. On an annual basis, TTI evaluates all inventory and makes periodic adjustments to account for potential slow moving and/or obsolete inventory.

Friendly Reminders

Each chapter in Parts Two and Three focus on explaining the key relationship or connection between the balance sheet and the income statement for those accounts that are directly correlated. For example, Chapter 7 focuses on the direct connection between a company's sales revenue and accounts receivable whereas Chapter 8 is centered on the direct connection between costs of goods sold expense and inventory. The idea is to tackle each direct connection in a separate chapter to help the reader work through the financial statements one step at a time.

Also and for each chapter, it is very helpful to understand these *friendly reminders* as it relates to presentation of the financial statements, reports, and information through the balance of the book.

- The financial statements for HSI for the fiscal year ending 12/31/11 is the base information used and referenced through the balance of the book. Providing information on all years for both companies in each chapter would be overkill. However, each chapter makes a point to provide a comparison of key financial information for both companies where appropriate and insightful.
- The income statement and balance sheet are displayed in a compressed or summarized format. For example, the income statement is a single-step statement, meaning that no lines are shown for gross margin and other intermediate measures of profit. This format is generally used when presenting financial reports and information to "external" parties that don't need or shouldn't have access to more detailed and confidential internal company information.
- When exhibits are presented, the company's statement of cash flows for the year will generally not be included (but rather addressed later in the book). At this stage, the cash flows statement would be more of a distraction.

Finally and as you work through Parts Two and Three of this book, it is extremely important to keep in mind that not only is the book attempting to educate the reader on how the financial statements interact and are dependent on one another but more importantly, just what the financial statements are telling the reader. It's one thing to understand the "debits" and "credits" of accounting. It's something completely different to understand what the financial statements are really saying!

7

SALES REVENUE, TRADE ACCOUNTS RECEIVABLE, AND DEFERRED REVENUE

Exploring One Link at a Time

There is one simple premise in operating a business—if you don't generate sales you will eventually fail! All businesses need to generate real and legitimate sales or revenue (often used interchangeably or together), in one form or another, in hopes of generating a profit, and eventually producing positive cash flow. A perfect case study in what it means to fail on the sales front is centered on the grand dot-com experiment of the late 1990s through early 2000s. This era was built on the hope of eventually being able to generate significant increases in sales from developing, launching, and building a business model based on the promise and wonders of "cyberspace." The eventual outcome of this era is well known, as the failure rate of the dot-com or technology-based businesses during this era was more than 90 percent, further supported by the fact the Nasdaq dropped from its all-time high of 5,049 reached on 3/10/2000 by a whopping 77 percent to 1,140 on 10/4/2002 (in roughly two-and-a-half years).

Real World Story

In the opening paragraph, reference is made to generating "real" or "legitimate" sales, which to the reader of this book seems like a no-brainer. However, in the early 2000s, not only did a large number of well-meaning dot-com companies fail but in addition, this era also experienced some of the most costly and best known fraud cases in history. Enron and WorldCom quickly come to mind but there were countless smaller and lesser known cases of fraud including one based in southern California with a large software company. What this company did along with a co-conspirator was arrange for a sale of a large IT/software-based system/solution between the two companies. Company A purchased a large IT/software-based system from Company B and capitalized the purchase as a fixed asset (subject to depreciation in future periods). Company B recorded the transaction as a sale on their books. Wouldn't you know it, Company B then made a similar purchase from Company A with the purchase being recorded as a fixed asset by Company B and a sale being recorded by Company A. And just like that, sales are generated. The lesson here is simple. Readers of financial statements need to pay extremely close attention to and clearly understand a company's full sales cycle to gain more insight and knowledge on just how successful the company truly is.

So now that we know "real" sales must be generated, the importance of understanding the relationship between sales and trade accounts receivable can be explored in more detail. Please refer to Exhibit 7.1, which shows the connection between *sales* or *revenue* in the income statement and trade *accounts receivable*, *an* asset account in the balance sheet.

This exhibit is taken from our case study for HSI summarized in Chapter 6. Exhibit 7.1 presents the big picture as it relates to HSI. That is, it helps connect the dots between the income statement and the balance sheet. This chapter is the first of many that focus on just one connection at a time—the one between sales revenue in the income statement and trade accounts receivable in the balance sheet.

EXHIBIT 7.1—SALES REVENUE AND ACCOUNTS RECEIVABLE

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2011

Income Statement for the Fiscal Year Ending	**12/31/2011**
Sales Revenue, Net	$18,412
Costs of Goods Sold	$ 9,156
Gross Profit	$ 9,256
Selling, General, and Administrative Expenses	$ 8,400
Depreciation and Amortization Expense	$ 700
Operating Earnings	$ 156
Other Expenses (Income)	$ 0
Interest Expense	$ 80
Net Income (Loss) before Income Taxes	$ 76
Income Tax Expense (Benefit)	$ 0
Net Income (Loss)	$ 76

Assumes roughly 89 days, or almost 3 months, of sales revenue is uncollected at the end of the year, the ending accounts receivable balance is:

$4,575/($18,412/12 months) * 30 days = 89 days.

Pay close attention to this relationship as our case study develops through the book as our sample company actively invoices it's customers in advance.

Balance Sheet as of the Year-End	**12/31/2011**
Assets	
Current Assets	
Cash and Equivalents	$ 372
Accounts Receivable, Net	$ 4,575
Inventory, LCM	$ 880
Prepaid Expenses	$ 75
Total Current Assets	$ 5,902
Fixed Assets	
Property, Plant, and Equipment	$ 1,000
Accumulated Depreciation	$ (350)
Net Fixed Assets	$ 650
Other Assets	
Intangible Assets and Goodwill, Net	$ 1,500
Other Assets	$ 75
Total Other Assets	$ 1,575
Total Assets	$ 8,127
Liabilities and Stockholders' Equity	
Current Liabilities	
Accounts Payable	$ 732
Accrued Expenses	$ 604
Current Portion of Debt	$ 400
Other Current Liabilities	$ 4,313
Total Current Liabilities	$ 6,049
Long-Term Liabilities	
Notes Payable, Less Current Portion	$ 1,200
Other Long-Term Liabilities	$ 0
Total Long-Term Liabilities	$ 1,200
Total Liabilities	$ 7,249
Stockholders' Equity	
Capital Stock - 800,000 Authorized, 550,000 Outstanding → 2011	$ 3,000
Retained Earnings	$(2,122)
Total Owners' Equity	$ 878
Total Liabilities and Stockholders' Equity	$ 8,127

Tips, Tidbits, and Traps

Two concepts related to sales and accounts receivable are important to understand.

1. First, never assume that just because an invoice has been generated, based on terms and conditions agreed to between the parties, and presented to the customer that "sales" are generated as well. A sale is generated when the earning process is complete whereas an invoice may or may not be generated when the earning process is complete. A perfect example of this relates to a construction company that may invoice a customer for 30 percent of the entire project upon signing of the contract. On day one, the invoice is generated but sales are not earned until the construction company has performed 30 percent of the project. The concept of pre- or advance billings is a focal point throughout the balance of this book as it relates to potentially misstating financial statements.
2. Second, trade accounts receivable are different from "other" receivables in one very important way. Trade accounts receivable are generated from the sale of goods or services in the normal course of business. Other receivables are produced from financial transactions that are not generally in the normal course of business. If a company has significant other receivables, then investigating further is generally in order.

The central idea in this and following chapters is that the profit-making or loss generating activities reported in the income statement drive, or determine, an asset or a liability, which, as discussed in Chapter 3, are reported in the balance sheet. For example, HSI's sales revenue for the fiscal year ending 12/31/11 was $18,412,000. Of this total sales revenue, $4,575,000 is in the accounts receivable asset account at the end of the year. The $4,575,000 is that part of annual sales and deferred revenue that had not yet been collected at the end of the year.

In the following chapters we explore each linkage between an income statement account and its connecting account in the balance sheet but for this chapter, the focus is on sales revenue and accounts receivable.

How Sales Revenue Drives Accounts Receivable

Per our business example for HSI, the company generated $18,412,000 in net sales revenue during the fiscal year ending 12/31/11. This is a sizable amount, equal to approximately $1,500,000 in average sales revenue per month. When making a sale, the total amount of the sale (sales price times the quantity of products sold or services delivered) is recorded in the *sales revenue* account. This account accumulates all sales made during the year. On the first day of the year it starts with a zero balance; at the end of the last day of the year it has an $18,412,000 balance. In short, the balance in this account at year-end is the sum of all sales for the entire year (assuming all sales are recorded properly).

For HSI, the business makes all of its sales on credit, which means that cash is not received until sometime after the time of the actual initial sales invoice is generated. This is due to the fact that the company sells to other businesses that demand credit (or payment terms). The amount owed to the company from making a sale on credit is immediately recorded in the accounts receivable asset account for the amount of each sale. Sometime later, when cash is collected from customers, the cash account is increased and the accounts receivable account is decreased.

Extending credit to customers creates a cash inflow lag. The accounts receivable balance is the amount of this lag. At year-end the balance in this asset account is the amount of uncollected sales revenue. Most of the sales made on credit during the year have been converted into cash by the end of the year. Also, the accounts receivable balance at the start of the year from credit sales made last year was collected. But, many sales made during the latter part of the year have not yet been collected by year-end. The total amount of these uncollected sales is found in the ending balance of accounts receivable.

Critical Terminology and Ratio Alert

A distinction needs to be made between gross sales revenue and net sales revenue. Gross sales revenue includes all sales made by the company during a given period. Net sales revenue represents gross sales revenue less any returns, discounts, allowances, and/or other adjustments. The difference between these two figures is important to understand as the higher level of returns, discounts, allowances, and/or other adjustments against gross sales is generally considered a negative (as nobody wants to see a high percentage of gross sales returned to the company). The ratio of sales returns, allowances, discounts, and/or other adjustments compared (i.e., divided by gross sales revenue) to gross sales revenue is often referred to as the *dilution rate* or *ratio*, with a higher rate frowned on. It should also be noted that most companies do not separately report gross sales revenue and total sales returns, allowances, discounts, and/or other adjustments but rather display one line item, net sales revenue.

Tips, Tidbits, and Traps

As a side note, readers need to understand that many companies in today's economy (e.g., as supermarkets, ecommerce based businesses) make all sales for cash, or accept electronic forms of payments such as credit and debit cards that are converted into cash immediately. This is important to understand and is a rapidly growing trend in the marketplace for smaller businesses that want to secure cash quicker, reduce bad debt expense, and don't have the resources to support large trade receivable balances. But there's a trade-off with this strategy as not only are there added expenses incurred to accept electronic forms of payments (such as the merchant fee paid to credit and debit card processing organizations such as Visa) but in addition, sales may be negatively impacted by losing customers that need credit and don't want to pay immediately. But there is no question that this is a growing trend and business as evidenced by the success of Square, a clever electronic mobile payment solution.

Some of HSI's customers pay quickly to take advantage of prompt payment discounts offered by the company. (These discounts off-list prices reduce sales prices but speed up cash receipts.) However, the average customer waits 89 days to pay HSI and forgoes the prompt payment discount. Some customers even wait longer to pay the company, despite HSI's efforts to encourage them to pay sooner. HSI puts up with these slow payers for two reasons. First, extending longer payment terms helps increase total sales revenue. Second, HSI understands one simple fact of life. Larger corporate clients often exert significant influence on smaller companies when payments are processed and basically say this is how we pay so "take it or leave it."

As you see in Exhibit 7.1, the ending balance of accounts receivable is $4,575,000; this equals almost 13 weeks of annual sales revenue. The main point is that the average sales credit period determines the size of accounts receivable. The longer the average sales credit period, the larger the accounts receivable amount.

Critical Ratio Alert

A commonly referenced and calculated critical business ratio is known as the *DSO* or *Days Sales Outstanding*. This ratio is based on the following formula:

Accounts receivable balance/(total annual sales revenue/12 months) x 30 days or expressed in numeric format.

EXHIBIT 7.2—DSO OR DAYS SALES OUTSTANDING CALCULATION

Dollar Amounts in Thousands

Days Sales O/S in Trade Receivables:	
Total Trade Receivables	$ 4,575
Total Annual Sales Revenue	$18,412
Average Monthly Sales	$ 1,534
Average Days in a Month	30
Days Sales O/S in Trade Receivables	89.45

In the above example, the company's DSO is averaging 89 days or in other words, it takes 89 days to receive payment from the customers or turn a sale into cash (almost three months). In general, if this figure increases it is viewed as a negative as it indicates the company's customers are taking longer to pay (potentially indicating financial strain with the customer). Likewise, if the figure decreases then it is generally viewed as a positive indicator.

Tips, Tidbits, and Traps

It can be easy to misread this ratio without fully understanding a company's business model. For example, a company may increase customer credit terms to entice more sales or accommodate a large customer requesting special terms. This may drive the DSO figure higher and might be initially viewed as a negative by an outside party but in fact, helps generate increased sales, which improves the overall performance of the company (assuming the sale is eventually collected). So be careful before jumping to a quick conclusion without understanding all of the facts.

In today's intensely competitive global economy, time is of the essence as the current trend is to evaluate information in much shorter and quicker data bites as opposed to evaluating information on an "annual" basis. For your receivables, knowing how many times your receivables turn over in a year is helpful but in general, most parties want to know how many days it takes to collect your receivables (and turn sales revenue into cash). However as a reference point, we also provide the calculation to determine how many times a year HSI "turns over" their account receivables in Exhibit 7.3.

EXHIBIT 7.3—ACCOUNT RECEIVABLE TURNOVER RATIO

Dollar Amounts in Thousands

Account Receivable Turnover Ratio	
Total Annual Sales Revenue	$18,412
Total Trade Receivables	$ 4,575
Accounts Receivable Turnover Ratio	4.02

Both of the calculations in Exhibits 7.2 and 7.3 really calculate the same information. The first calculation estimates that on average, it takes roughly 89 days or approximately three months to get paid. The second calculation estimates that on average, HSI turns over its accounts receivable four times a year. This makes perfect sense as with 12 months in a year and on average it takes three months to collect trade receivables, 12 divided by 3 equals 4. Our point in providing both examples is simple. Results and information are in the eye of the beholder so while the calculations produce the same real meaning, speaking the language of the "moment" is something everyone needs to understand.

For HSI business managers, and the company's creditors and investors as well, understanding how long it takes on average to turn accounts receivable into cash is a critical piece of data. The accounts receivable turnover ratio is most meaningful when it is used to determine the number of weeks (or days, as in today's must have, instantaneous information world, months and weeks are now replaced by days and even hours in terms of reporting critical business data) it takes a company to convert its accounts receivable into cash.

You may argue that 89 days or roughly 13 weeks or 3 months is way too long an average sales credit period for the company. This

is precisely the point: What should it be? The manager in charge has to decide whether the average credit period is getting out of hand. The manager can shorten credit terms, shut off credit to slow payers, or step up collection efforts.

This isn't the place to discuss customer credit policies relative to marketing strategies and customer relations, which would take us far beyond the field of accounting. But, to make an important point here, assume that without losing any sales the company's average sales credit period had been only 8 weeks or 56 days, instead of 13 weeks.

In this alternative scenario, HSI's ending accounts receivable balance would have been $1,700,000 less. The company would have collected $1,700,000 more cash during the year. With this additional cash, the company could have borrowed $1,700,000 less. At an annual 5 percent interest rate, this would have saved the business $85,000 interest before income tax. Or the owners could have invested $1,700,000 less in the business and put their money elsewhere.

The main point is that capital has a cost. Excess accounts receivable means that excess debt or excess owners' equity capital is being used by the business. The business is not as capital efficient as it should be.

A slowdown in collecting customers' receivables or a deliberate shift in business policy allowing longer credit terms causes accounts receivable to increase. Additional capital would have to be secured, or the company would have to attempt to get by on a smaller cash balance.

If you were the business manager in this example, you should decide whether the size of accounts receivable, being five weeks of annual sales revenue, is consistent with your company's sales credit terms and your collection policies. Perhaps five weeks is too long and you need to take action. If you were a creditor or an investor in the company, you should pay attention to whether the manager is allowing the average sales credit period to get out of control. A major change in the average credit period may signal a significant change in the company's policies.

A Special Link – How Accounts Receivable Drives Deferred Revenue

At this point in the book we would like to direct your attention to a connection that is becoming more and more relevant for multiple types of businesses. The connection in question is not between an income statement account and a balance sheet account as discussed previously but rather between two balance sheet accounts – trade accounts receivable and deferred or unearned revenue. Some common types of business transactions that produce this type of connection are as follows:

- A technology company that invoices a customer for an annual license fee in advance (which is a policy used by both of our case study companies).
- A service business that offers an extended five year warranty on an automobile that it charges the customer in advance.
- A construction company that produces an invoice at the start of a project for a required deposit to start a long-term development.

Other examples could be provided but the basic accounting concept behind accounts receivable and deferred revenue is simple in that since the earnings process is not complete, the revenue must be "deferred" or reflected as a liability until services or products are delivered per the terms of the sales agreement (thus triggering actual and real sales revenue). For example, if a customer purchases an extended three year warranty on an auto for $499, at the point the invoice is generated and presented to the customer for payment, the following entry is recorded:

	Debit	***Credit***
Accounts Receivable	$499	
Deferred or Unearned Revenue		$499

The customer may pay immediately, take 30 days, or pay in installments but since potential warranty-related services and repairs will be provided at some future date, the company selling the warranty cannot realize sales revenue at the point of invoicing the customer. Rather, they must use some type of systematic, reasonable, and defendable method to recognize the deferred or unearned revenue into sales revenue over the period of the warranty contract which in this case is three years. To further our example, let's say after one year, the company recognizes only 20 percent of the warranty as earned sales revenue. To do this, the following entry would be recorded:

	Debit	***Credit***
Deferred or Unearned Revenue	$99.80	
Warranty Sales Revenue		$99.80

Ok, this sounds reasonable as it would make sense that most service and repairs covered under the warranty would be back

loaded to years two and three (as the auto gets older, it would require more repairs). But is 20 percent too much, too little, or just right? Only time will tell but if it is readily apparent from this simple example, then let's highlight a critical concept. Accounting for earned sales revenue when customers are invoiced in advance for services or products to be rendered at a later date is an area that relies heavily on management estimates, data, and analysis that unfortunately can be "massaged" (for lack of a better term) when financial operating results are produced.

Referring back to Exhibit 7.1, you should notice a large balance in "other liabilities" is present on the balance sheet. This is where deferred or unearned revenue is commonly grouped on the balance sheet along with other misc. short-term liabilities, and is the same classification our case study companies utilize. As you move through the material, special attention should be paid to the balance in this account as it will have a material impact on not just earned sales revenue but more importantly, cash flows, as let's face it, one of the most common reasons why businesses invoice customers in advance and encourage early payments is to use their cash to provide a source of cheap operational funding (as opposed to having to borrow money and pay interest or sell equity in the company). The Great Recession certainly drove this point home to a number of companies that suddenly witnessed reductions in borrowing ability from banks and other lenders and had to turn to more "creative" sources to secure cash.

Accounting Issues and Our Case Study

Starting in this chapter and continuing in the following chapters that focus on the key connections between an income statement account and its corresponding balance sheet account, each chapter includes a section providing a brief discussion of the major accounting problems and challenges pertaining to the accounts discussed in the chapter. In addition, the topics addressed in the chapter are applied to both HSI and TTI to compare operating results and evaluate what each company's financial statements are really telling us.

It should be noted that these short discussions of accounting issues barely scratch the surface on all of the potential issues that may impact the connected accounts between the income statement and balance sheet. Nevertheless, you should be aware that the numbers you see in financial statements depend on the accounting methods used to generate those numbers. The CFO and/or controller are the frontline people in every business who has to decide which accounting methods to use to record sales revenue and expenses. But in the end, the "accounting" buck stops at the executive management (i.e., CEO and president) and board of directors' levels as these parties are the individuals ultimately responsible for the fair presentation of financial statements.

You may not be aware that these accounting decisions are not entirely obvious and clear-cut in most situations. As a matter of fact, accounting methods are arbitrary to one degree or another in most cases. The choice of particular accounting methods makes profit lower or higher and also makes the amounts of assets and liabilities lower or higher (which will be clearly illustrated throughout this book based on our case study provided).

So, what are the main issues in accounting for sales and accounts receivable? Let's focus on three key topics that are very sensitive in today's economy.

1. Timing: The main problem in recording sales is *timing as it is* not always clear exactly when a sale is completed and all terms are final (and have been met by both parties). Or looking at it from another angle, the question of "When Is the Earnings Process Complete?" must be constantly addressed to ensure valid sales are recognized. Is the sale actually final when the product is delivered or when the customer has validated the product as acceptable? As noted earlier in this chapter, generating a customer invoice does not equal sales revenue so the timing of recognizing revenue is one of the single most important and abused accounting practices for businesses.
2. Reserves and allowances: Reserves and allowances are utilized by companies to properly account for impairments to asset values that arise from time to time. There are a number of reasons why reserves and allowances are established, including to account for customers who can't pay (i.e., allowance for bad debts), customers who may have the right to return products they've purchased (i.e., allowance for product returns), for customers who may have the right

to take discounts from sales prices after the point of sale, and for sales prices that may still be negotiable even after the point of sale. Companies must establish reasonable reserves and allowances for these types of items in the financial statements to ensure that expenses are properly recorded and matched against net sales revenue (a subject discussed earlier in this chapter). Again and in the same vein as the timing issue, companies often "massage" (or if you like, "abuse") this calculation in order to manage financial statement results.

3. Channel stuffing: Channel stuffing is utilized by companies that are attempting to reach sales revenue goals (e.g., at the end of a quarter or year) to meet targets set by either internal management or external party expectations. Basically what happens is that large sales orders are processed at the end of a period to meet the goals established by pushing sales out the door to customers that may not need the products currently. This results in building unneeded or excessive inventory in the system as the end customer may not consume the products immediately. Further, the end customer may actually have the right to return excessive products that are not used or resold, which raises the question of establishing appropriate reserves to account for the customer's right to return products. More than a few companies have suffered mightily from employing this strategy.

Now, let's compare HSI and TTI's DSO calculations for the fiscal year ending 12/31/11 as presented in Exhibit 7.4.

EXHIBIT 7.4—CASE STUDY COMPARISON—DSO ACCOUNTS RECEIVABLE

Dollar Amounts in Thousands

DSO—HareSquared, Inc.	89.45
DSO—TortTech, Inc.	
Total Trade Receivables	$ 2,025,000
Total Annual Sales Revenue	$14,677,000
Average Monthly Sales	$ 1,223,083
Average Days in a Month	30
Days Sales O/S in Trade Receivables	49.67

Hmmmmm, interesting results for HSI, the total DSO is 89 days while for TTI, it's a more reasonable level of roughly 50 days. What could be driving such different results? As we proceed through the book, the answers become clear.

In short, there are several serious problems surrounding accounting for sales. Therefore, a business should make clear in the footnotes to its financial statements the basic accounting method it uses for recording sales revenue.

8

COST(S) OF GOODS SOLD EXPENSE AND INVENTORY

Exploring Our Second Critical Link

Chapter 7 provides a close examination on the connection between sales revenue and accounts receivable. As we progressed through the chapter, various issues were identified relating to how companies record accounts receivable and recognize sales revenue in their financial statements, which provide a company's management with, shall we say, a certain amount of leeway. But if you thought the accounting for sales revenue and accounts receivables was flexible, you haven't seen anything yet as differing (but completely valid) costs of goods sold expense and inventory accounting methods are available for use (as well as abuse) by company management, which can significantly impact a businesses operating results.

Countless examples, case studies, and other articles have been presented over the years related to inventory fraud and include everything from electronics (Crazy Eddie's) to salad oil (the famous Salad Oil Swindle) to copper wire (Laribee Wire Manufacturing Company not valuing inventory to market). Unfortunately, the reason for so many examples is based on the fact that when companies get desperate, inventory manipulation is often one of the easier areas to fool the auditors with (as auditing inventory is difficult, complex, and often cumbersome).

Similar to the concepts discussed in Chapter 7 on sales and accounts receivables, the idea behind providing the examples on various types of unsavory accounting issues is to highlight the importance of not just understanding the connection between the income statement and balance sheet accounts but more importantly, to help you really understand what the financial statements of a company are saying about its results.

So to start this chapter, we present Exhibit 8.1, which, as noted in Chapter 7, highlights the key connection between *cost of goods sold expense* in the income statement and the *inventory* asset in the balance sheet.

As the material in this chapter is reviewed in more detail, it is important to recall that HSI sells both products and services to its customers. This is an important concept to remember as costs of goods sold expense does not just relate specifically to just products sold but also includes the direct costs for employee wages and other expenses incurred to support the "service" segment of their business.

EXHIBIT 8.1—COSTS OF GOODS SOLD AND INVENTORY

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2011

Income Statement for the Fiscal Year Ending	**12/31/2011**
Sales Revenue, Net	$18,412
Costs of Goods Sold:	
Direct Product Costs	$ 5,280
Wages, Burden, and Other Direct Costs	$ 3,876
Total Costs of Goods Sold	$ 9,156
Gross Profit	$ 9,256
Selling, General, and Administrative Expenses	$ 8,400
Depreciation and Amortization Expense	$ 700
Operating Earnings	$ 156
Other Expenses (Income)	$ 0
Interest Expense	$ 80
Net Income (Loss) before Income Taxes	$ 76
Income Tax Expense (Benefit)	$ 0
Net Income (Loss)	$ 76

Assumes roughly 60 days, or a little over one month, of inventory is on hand at the end of the year to support product sales into the next year.

$880/$(5,280/12) * 30 Days = 60 Days

Balance Sheet as of the Year-End	**12/31/2011**
Assets	
Current Assets	
Cash and Equivalents	$ 372
Accounts Receivable, Net	$ 4,575
Inventory, LCM	$ 880
Prepaid Expenses	$ 75
Total Current Assets	$ 5,902
Fixed Assets	
Property, Plant, and Equipment	$ 1,000
Accumulated Depreciation	$ (350)
Net Fixed Assets	$ 650
Other Assets	
Intangible Assets and Goodwill, Net	$ 1,500
Other Assets	$ 75
Total Other Assets	$ 1,575
Total Assets	$ 8,127
Liabilities and Stockholders' Equity	
Current Liabilities	
Accounts Payable	$ 732
Accrued Expenses	$ 604
Current Portion of Debt	$ 400
Other Current Liabilities	$ 4,313
Total Current Liabilities	$ 6,049
Long-Term Liabilities	
Notes Payable, Less Current Portion	$ 1,200
Other Long-Term Liabilities	$ 0
Total Long-Term Liabilities	$ 1,200
Total Liabilities	$ 7,249
Stockholders' Equity	
Capital Stock—800,000 Authorized, 550,000 Outstanding → 2011	$ 3,000
Retained Earnings	$(2,122)
Total Owners' Equity	$ 878
Total Liabilities and Stockholders' Equity	$ 8,127

What Is in Costs of Goods Sold Expense?

Cost of goods sold expense means just that—the costs of all products, services, and related expenses sold to customers during the year, which are directly related to the generation of sales revenue. The revenue from the sales is recorded in the sales revenue account, which is reported just above the cost of goods sold expense in the income statement (see Exhibit 8.1). Cost of goods sold expense is generally the largest expense (but not always) in a company's income statement, which for HSI is 110 percent of its selling, general, and administrative expenses for the year.

Putting cost of goods sold expense first, at the head of the expenses, is logical because it's the most direct and immediate cost of selling products and services. Please recall that this expense is deducted from sales revenue in income statements so that *gross margin* is reported there—see Exhibit 8.2 for an example of the top portion of an income statement that reports gross margin. Although gross margin is not shown on a separate line in Exhibit 8.1, in order to focus on the key connections of income statement and balance sheet accounts, we can't emphasize enough the importance of gross margin (which is also commonly referred to as *gross profit* but different as profit is generally associated with dollars and margins with percentages).

The word *gross* emphasizes that certain additional expenses have not been deducted from sales revenue yet. There are more expenses that must be deducted to arrive at bottom-line profit (net income). Gross profit is the starting point for earning an adequate final, bottom-line profit for the period. In other words, the first step is to sell products for enough gross profit so that all other expenses can be covered and still leave an adequate remainder of profit. Chapters 10 and 11 discuss the company's other expenses.

You can do the arithmetic and determine that cost of goods sold expense equals 49.7 percent of sales revenue. Therefore,

Tips, Tidbits, and Traps

Costs of goods sold expense come in all shapes, sizes, forms, and structures and are not limited to just products sold from inventory. For a large service company such as a law firm, costs of goods sold includes the direct labor costs incurred for staff that are billed to a customer. For an Internet-based social media company, costs of goods sold expense generally includes the direct costs of "hosting" the site (for expenses incurred from a company such as Rackspace). The point is, each company and industry include different types of expenses in costs of goods sold expense to properly capture its true gross profit and gross margin. While there are no set and fast rules as to what should be recorded as costs of goods sold expense versus say general and administrative expense, the basic concept is that any expense incurred that is directly related (and varies specifically with sales revenue) to the generation of sales revenue would be considered costs of goods sold expense.

EXHIBIT 8.2—GROSS MARGIN CALCULATION

Dollar Amounts in Thousands

Gross Margin:	
Sales Revenue, Net	$18,412
Costs of Goods Sold Expense	$ 9,156
Gross Profit	$ 9,256
Gross Margin	50.3%

gross margin equals 50.3 percent of sales revenue. Exhibit 8.2 provides a quick calculation to support these results.

The business sells different products and services, some for more than 50.3 percent gross margin and some for less. In total, for all products and services sold during the year, its average gross margin is 50.3 percent—which is fairly typical for a broad cross section of businesses that sell both products and services. It should be noted that gross margins can vary widely by industry type as for Internet-based tech giants such as Facebook, gross margins can reach and exceed 70 percent whereas for a large retail company like Best Buy, gross margins are often south of 25 percent. The real key in understanding costs of goods sold expense is to be familiar with the norms and standards for reporting this expense by industry.

Holding Products in Inventory before They Are Sold

In this section, we focus on explaining and examining the more classic direct link between inventory (of tangible products) and costs of goods sold expense for product costs only. Additional direct links between costs of goods sold expense and current liabilities are examined in Chapters 9 and 10, which provide an additional perspective on how costs of goods sold expense is connected to the balance sheet.

So to start, let's refer to Exhibit 8.1 for our case study company HSI as if you recall from Chapter 6, the company sells both products and services to its customers. To sell products, most businesses including HSI must keep a stock of products on hand, which is called *inventory*. If a company sells products, it would be a real shock to see no inventory in its balance sheet (it is possible, but highly unlikely). Notice in Exhibit 8.1 that the line of connection is not between sales revenue and inventory, but between costs of goods sold expense and inventory. The inventory asset is reported at cost on the balance sheet, not at its sales value.

The inventory asset account accumulates the cost of the products purchased or manufactured over time. Acquisition cost stays in an inventory asset account until the products are sold to customers. At the time of sale, the cost of the products is removed from inventory and charged out to cost of goods sold expense. As a side note, products may become nonsalable, be stolen or damaged, and/or lose value in some other capacity, in which case their cost should be written down or removed from inventory and the amount is charged to cost of goods sold or some other expense. This event is discussed at the end of the chapter.

Critical Terminology Alert

Inventory values often include a reference to LCM, which stands for Lower of Cost or Market. The concept behind LCM is to ensure that if at any time, the value of the inventory drops below the net realizable sales value, the inventory value must be reduced or written down to reflect the lower value. For example, if a technology retailer purchased computers for resale at $700 per item and then as a result of rapid technology change, the retail fair market value of these items (i.e., what the customer would be willing to pay) decreased to $600, the technology retailer must per generally accepted accounting principles (GAAP) reduce the value of inventory to an amount below $600 to recognize the decrease in market value. But I might caution the reader that it's one thing for a company to understand LCM accounting guidelines but applying them on a consistent basis is an entirely different manner.

HSI's inventory balance at year-end—$880,000 in the example—is the cost of products awaiting sale next year. The $9,156,000 deducted from sales revenue in the income statement is the cost of goods that were sold during the year, which includes both products sold and direct costs of services provided to customers. The product portion of the costs of goods sold is $5,280,000. For presentation purposes in Exhibit 8.1, we have broken out the portion of costs of goods sold that relates directly to product sales and that

which relates to the sale and support of annual software licenses (referred to as wages, burden, and other direct costs of sales). None of the products sold were on hand in year-end inventory.

HSI maintains a warehouse for storage of the inventory until the goods are sold and delivered to customers. Some products are sold quickly, almost as soon as purchased from the supplier. Other products sit in the warehouse many weeks before being sold. This business, like most companies, sells a mix of different products—some of which have short holding periods and some relatively long holding periods.

In the example, the company's *average* inventory holding period for all products is 60 days, or roughly 8.5 weeks on average. This time interval includes any acquisition and production process time and the warehouse storage time. For example, a product may take two weeks to secure and configure for sale and then be held in storage three weeks, or vice versa.

Tips, Tidbits, and Traps

Our case study company, HSI, operates a business that is more of a distributor or reseller of products as opposed to a manufacturer of products (as it buys products to resell rather than manufacturing the products from the ground up). So for this company, you would generally see one type of inventory accounted for, that is, "finished goods" (as the products it buys from other companies in a readily salable condition does not require further manufacturing). For manufacturers, they generally report three types of primary inventory including "raw material" (base material that will be eventually used to produce finished products but which has not yet been released to the manufacturing process), "work-in-process" inventory (products still in the process of being manufactured), and "finished goods" (completed inventory ready for delivery to customers).

Usually only one combined inventory account is reported in an external balance sheet, as shown in Exhibit 8.1. Internally, however, many separate inventory accounts are reported to managers for more detailed evaluation and analysis purposes (a topic discussed further in Chapter 23).

Critical Ratio Alert

As with accounts receivable, the same commonly used and critical business ratio is used to evaluate how many days of inventory are on hand at any given time. This is also referred to as the *days sales outstanding* but is applied to inventory compared to costs of goods sold as opposed to accounts receivable compared to sales revenue. Exhibit 8.3 calculates the number of days sales HSI has outstanding in inventory at the end of the year.

EXHIBIT 8.3—DSO OR DAYS SALES OUTSTANDING IN INVENTORY

Dollar Amounts in Thousands

Days Sales O/S in Inventory:	
Total Inventory	$ 880
Total Annual Costs of Goods Sold Expense, Products	$5,280
Average Monthly Costs of Goods Sold Expense	$ 440
Average Days in a Month	30
Days Sales O/S in Inventory	60.00

Notice in Exhibit 8.1 that the company's ending inventory balance is $880,000. The main point is that the average inventory holding period determines the size of inventory relative to

EXHIBIT 8.4—INVENTORY TURNOVER RATIO

Dollar Amounts in Thousands

Inventory Turnover Ratio	
Total Annual Costs of Goods Sold Expense	$5,280
Total Inventory	$ 880
Inventory Turnover Ratio	6.00

annual cost of goods sold expense. The longer the manufacturing and warehouse holding period, the larger is the inventory amount. Business managers prefer to operate with the lowest level of inventory possible, without causing lost sales due to products being out of stock when customers want to buy them. The reason for this is twofold. First, investing in excess inventory consumes capital or cash (which costs the company money). Second, holding inventory too long increases the risk of obsolescence (a hot issue in the technology world given the speed of change and innovation) and resulting losses.

In addition to the inventory DSO ratio calculation, we can also evaluate and calculate HSI's inventory turnover ratio as presented in Exhibit 8.4.

Just like our analysis of accounts receivable, time is of the essence, as generally the quicker or faster the inventory turns over, the more positive this will be received by various parties. What interests internal managers, as well as the company's creditors and investors, is how long the company holds inventory before products are sold. We think the inventory turnover ratio is most meaningful when used to determine the number of weeks (or days if you prefer) that it takes before inventory is sold.

Is 8.5 weeks too long? Should the company's average inventory holding period be shorter? These are precisely the key questions business managers, creditors, and investors should get answers to.

Tips, Tidbits, and Traps

It is important for readers of financial statements that a clear understanding of what constitutes costs of goods sold is obtained. In Exhibit 8.1, if the DSO inventory calculation was based on the total costs of goods sold figure of $9,156,000, the output would have resulted in a DSO for inventory of roughly 35 days. This compares to 60 days when the product only portion of costs of goods sold is used. The results are very different and emphasize the need to drill into financial statements and reports to ensure the most accurate and meaningful analyzes are completed.

If the holding period is longer than necessary, too much capital is being tied up in inventory. Or, the company may be cash poor because it keeps too much money in inventory and not enough in the bank.

To demonstrate this key point, suppose that with better inventory management (e.g., implementing a JIT or just in time inventory management system) the company could have reduced its average inventory holding period to, say, five weeks. This would be a rather dramatic improvement. But modern inventory management techniques such as supply-chain management promise such improvement. If the company had reduced its average inventory holding period to just 5 weeks or 35 days, its ending inventory would have been approximately $508,000 ($5,280,000 * 5/52).

In this scenario ending inventory would be $372,000 smaller ($880,000 versus $508,000). The company would have needed $372,000 less capital, or would have had this much more cash balance at its disposal.

Caution: With only five weeks' inventory, the company may be unable to make some sales because certain products might not

be available for immediate delivery to customers. In other words, if overall inventory is too low, stock-outs may occur. Nothing is more frustrating, especially to the sales staff, than having willing customers but no products to deliver to them. The cost of carrying inventory has to be balanced against the profit opportunities lost by not having products on hand ready for sale.

In summary, business managers, creditors, and investors should watch that the inventory holding period is neither too long nor too short. Call this the Goldilocks test, if you would. If too long, capital is being wasted; if too short, profit opportunities are being missed. Comparisons of a company's inventory holding period with those of its competitors and with historical trends provide useful benchmarks.

Accounting Issues and Our Case Study

Accounting for cost of goods sold expense and the cost of inventory is beset with many problems and challenges with the following three topics being extremely tricky:

1. Inventory valuation methods: Let's throw a few terms and acronyms at you including FIFO, LIFO, standard cost, average cost, LCM (previously discussed), and yes, even FMV or fair market value (an inventory valuation method used in the precious metals industry). Each one of these acronyms and terms represent a valid GAAP-approved accounting costing method to determine the cost of inventory. What makes inventory valuation methods so tricky lies not in just trying to understand what each one of these valuation methods really means but more importantly, realizing that two like businesses can use different inventory costing methods to calculate operating results (thus producing different gross profit and gross margin results).

   Suppose a business has acquired two units of a product, the first for $100 and the second for $104. The business sells one unit of the product. What is the correct cost to remove from the inventory asset account and to record in cost of goods sold expense? Accountants have come up with different ways to answer this question: $100 (first-in, first-out or FIFO); $102 (average cost); and, $104 (last-in, first-out or LIFO). All three methods are acceptable. Different businesses use different methods.

   It should be noted that because a business has a choice of inventory accounting methods, it should reveal its cost of goods sold expense and inventory costing method in the footnotes to its financial statements (as well as when significant adjustments are made to valuing inventory). Unfortunately, inventory footnotes are often very technical and difficult to understand. We discuss footnotes to financial statements in Chapter 21.

2. Inventory costing: Businesses that manufacture the products they sell can have serious challenges in determining the total cost per unit of the different products they produce. Believe us, calculating the actual total costs of manufacturing a product is no walk in the park, all direct, indirect, and overhead costs must be accounted for when determining the ending inventory cost per unit. By this we mean that all direct raw material consumed, all labor costs incurred, and all overhead required to produce products must be accounted for in the ending inventory cost per unit (in some capacity). To say that accountants use a fair amount of subjective estimates or "judgment" with this process might be the understatement of the year as adding even further complexity to this issue is that product costs fluctuate over time as period to period, year to year, product costs move up or down based on internal and external factors that are constantly changing.

College and university accounting programs offer one entire course on this topic (usually called *cost accounting*), which needless to say can really punish nonaccountant types (that for some reason, elect to take this course). A primary problem that this course attempts to tackle is how indirect production costs are allocated. That is, how should the allocation of *indirect* production costs to the different products produced be determined? For example, how should you allocate the cost of security guards who patrol many production departments, or the depreciation on the production plant in which hundreds of different products are manufactured? The answer, my friend, may be best understood by referring to the song lyrics written by Bob Dylan "The answer, my friend, is blowin' in the wind."

3. Inventory reserves: The same concept as discussed with sales revenue and accounts receivable as it relates to establishing reserves to account for potential valuation impairments applies to inventory as well. If you remember, a reserve or allowance is a contra account used to account for and record potential losses or decreases in value of an asset like inventory over a period of time. Two terms you should become very familiar with as it relates to calculating and recording reserves against the value of inventory are *slow moving* and *obsolete* inventory. Slow-moving inventory are items that still have a market but tend to not sell quickly and have lower inventory turnover ratios (refer to previous discussion). Obsolete inventory is exactly what it sounds like. That is, the inventory is obsolete and basically has no viable market to sell the items into. The point with each is that a company must establish reserves or valuation allowances to account for this type of inventory to ensure the financial statements are fairly presented.

Special attention really needs to be paid to the concept of inventory reserves not just at the "accounting" level but just as importantly, at the "reporting" level. For example, let's say a company reduces or "writes down" the value of inventory due to losses from falling sales prices, lower replacement costs, technological obsolescence, damage and spoilage, and shrinkage (shoplifting and employee theft). The losses may be recorded in the cost of goods sold expense account by one company, or be put in another expense account and reflected as a one-time "hit" to the income statement by another. Companies do not always disclose where the losses from these write-downs are recorded.

Again, let's compare HSI and TTI's DSO calculations for the fiscal year ending 12/31/11, as presented in Exhibit 8.5.

In this case, there is no difference between the two companies, which is very different from our DSO in calculation for accounts receivable presented in Exhibit 7.4. This would appear to indicate

EXHIBIT 8.5—CASE STUDY COMPARISON—DSO INVENTORY

Dollar Amounts in Thousands

DSO—HareSquared, Inc.—Exhibit 8.3	60.00
DSO—TortTech, Inc.	
Total Inventory	$ 684
Total Annual Costs of Goods Sold Expense, Products	$4,104
Average Monthly Costs of Goods Sold Expense	$ 342
Average Days in a Month	30
Days Sales O/S in Inventory	60.00

that both companies are utilizing similar inventory management methods (which may include both companies receiving the same basic terms from the product supplier). Yet when the P&Ls for both companies are compared for the fiscal year ending 12/31/11, HSI is generating a profit while TTI is incurring large losses. Another mystery in the accounting world, which is fully explained as you move the remaining chapters.

In summary, you might think that a business would select the method that gives it the best match with its sales revenue, to get the best measure of gross margin. Generally speaking, the best method would be the one that is most consistent with how the business sets its sales prices. But this logic does not always prevail. A business selects a cost of goods sold method for other reasons, and the method may or may not jibe with its sales pricing policies.

9

INVENTORY AND ACCOUNTS PAYABLE

Examining Our Third Link, with a Twist

In Chapters 7 and 8, the primary link or connection examined was between the balance sheet and income statement (i.e., accounts receivable to sales and inventory to costs of goods sold expense). In this chapter, our attention turns to discussing a connection, which is of critical importance but only deals with the balance sheet. That is, the link between inventory and accounts payable. But before we delve into the more technical aspects of the connection, one key concept needs to be understood as to why this connection is so important—*cash*!

Anyone who has managed a business understands that when operating conditions get tight and cash balances come under stress, one of the most common and easy areas to target to improve cash levels is to take it out on your vendors. Whether these vendors supply just inventory or extend terms to pay for professional services, companies of all shapes, sizes, and forms will look to "leverage" their vendors as much as possible to increase the time they have to pay the outstanding invoices, thus holding onto cash longer (which can be utilized in other areas of the business). And by the way, this strategy is not limited to just companies that are experiencing a rough patch as some of the biggest and baddest global businesses have taken this strategy to an entirely new level.

Pay particular close attention to any section titled "Seller Beware" as this section spells out that basically, you will get paid when your product actually sells. This type of strategy is not just limited to QVC as some of the largest retailers in the world also lean heavily on vendors to provide favorable terms with a very simple trade-off being present—provide extended terms to get your products in front of millions of customers.

Acquiring Inventory on the Cuff

To start with, please refer to Exhibit 9.1, which highlights the connection between inventory and accounts payable. This chapter focuses primarily on the connection between the *inventory* asset account in the balance sheet and the *accounts payable* liability in the balance sheet but will also make reference to how accounts payable levels can greatly influence cash.

Virtually every business reports accounts payable in its balance sheet, which is a short-term, noninterest-bearing liability arising from buying services, supplies, materials, and products on credit. One main source of accounts payable is from making *inventory* purchases on credit, which our case study company HSI uses aggressively. A second source of accounts payable is from *expenses* that are not paid immediately. Therefore, at this point we divide the total balance of the company's accounts payable liability into two parts, one for each source (refer to Exhibit 9.1 again).

The previous two chapters connect an income statement account with a balance sheet account. In this chapter we look at a connection between two balance sheet accounts. The linkage explained in this chapter is not about how sales revenue or an expense drives an asset, but rather how inventory drives its corresponding liability.

In our example HSI purchases all of the products it sells. That is, HSI is a reseller or distributor of products and not the primary manufacturer of the products. HSI's purchases are made on credit; the company doesn't pay for these purchases right away. Also, other product inventory management costs are bought on credit. For example, once a month the public utility sends a bill for the gas and electricity used during the month on the warehouse where the products are stored, and the company takes several weeks before paying its utility bills. As you probably know, a business has to maintain its credit reputation and good standing to continue buying supplies, materials, and products on credit.

Retailers and wholesalers (distributors) don't make the products they sell; they buy products and resell them. The products they buy are in a condition ready for resale or nearly ready for resell as in our example, HSI must complete some basic configuration on the products prior to final shipment to the customers. Unless they have lousy credit ratings retailers and wholesalers buy on credit and they have accounts payable from inventory purchases.

On the balance sheet shown in Exhibit 9.1, the company's $403,000 liability for inventory purchases on credit is presented as the first of two accounts payable amounts. The company's selling, general, and administrative expenses also generate accounts payable; the total amount of these unpaid bills ($329,000) is shown as the second accounts payable liability amount (see Exhibit 9.1 again). We discuss the second source of accounts payable in Chapter 10.

Typically, a company's inventory holding period is considerably longer than its purchase credit period. In other words, accounts payable are paid much quicker than it takes to sell inventory bought on credit. In this example, the company's average inventory holding period from the point of purchase to final sale of products averages 66 days or roughly 9 weeks. But the company has to pay its accounts payable in approximately 27 days or a little under four weeks, on average. How do we know this? Exhibit 9.2 provides the answer.

EXHIBIT 9.1—INVENTORY AND ACCOUNTS PAYABLE

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2011

Income Statement for the Fiscal Year Ending	12/31/2011
Sales Revenue, Net	$18,412
Costs of Goods Sold:	
Direct Product Costs	$ 5,280
Wages, Burden, and Other Direct Costs	$ 3,876
Total Costs of Goods Sold	$ 9,156
Gross Profit	$ 9,256
Selling, General, and Administrative Expenses	$ 8,400
Depreciation and Amortization Expense	$ 700
Operating Earnings	$ 156
Other Expenses (Income)	$ 0
Interest Expense	$ 80
Net Income (loss) before Income Taxes	$ 76
Income Tax Expense (Benefit)	$ 0
Net Income (Loss)	$ 76

Approximately 66 days, or roughly two months worth of inventory is on hand compared to accounts payable (for inventory). $880/$403 * 30 days = 66 Days What this means is that inventory vendors and suppliers are providing roughly 50 percent of the financial support related to the inventory asset.

Balance Sheet as of the Year-End	12/31/2011
Assets	
Current Assets	
Cash and Equivalents	$ 372
Accounts Receivable, Net	$ 4,575
Inventory, LCM	$ 880
Prepaid Expenses	$ 75
Total Current Assets	$ 5,902
Fixed Assets	
Property, Plant, and Equipment	$ 1,000
Accumulated Depreciation	$ (350)
Net Fixed Assets	$ 650
Other Assets	
Intangible Assets and Goodwill, Net	$ 1,500
Other Assets	$ 75
Total Other Assets	$ 1,575
Total Assets	$ 8,127
Liabilities and Stockholders' Equity	
Current Liabilities	
Accounts Payable, Inventory	$ 403
Accounts Payable, Operating Expenses	$ 329
Accrued Expenses	$ 604
Current Portion of Debt	$ 400
Other Current Liabilities	$ 4,313
Total Current Liabilities	$ 6,049
Long-Term Liabilities	
Notes Payable, Less Current Portion	$ 1,200
Other Long-Term Liabilities	$ 0
Total Long-Term Liabilities	$ 1,200
Total Liabilities	$ 7,249
Stockholders' Equity	
Capital Stock - 800,000 Authorized, 550,000 Outstanding → 2011	$ 3,000
Retained Earnings	$(2,122)
Total Owners' Equity	$ 878
Total Liabilities & Stockholders' Equity	$ 8,127

Critical Ratio Alert

In Chapters 7 and 8, we calculate the days sales outstanding (DSO) for accounts receivable and inventory, respectively. We can use the same logic when analyzing inventory and costs of goods sold expense for products against accounts payable as well with the calculations presented in Exhibit 9.2

EXHIBIT 9.2—INVENTORY HOLDING PERIOD AND SUPPLIER PAYMENT TERMS

Dollar Amounts in Thousands

Inventory Holding Period:	
Inventory, LCM	$ 880
Total Accounts Payable—Inventory	$ 403
Average Days in a Month	30
Average Days Inventory Held from Point of Purchase	66
Inventory Supplier Payment Terms:	
Total Annual Costs of Goods Sold, Products	$5,280
Average Monthly Costs of Goods Sold, Products	$ 440
Total Accounts Payable—Inventory	$ 403
Average Days in a Month	30
Average Inventory Supplier Payment Terms	27

The inventory holding period is derived by taking the ending inventory balance of $880,000, divided by the total accounts payable balance for inventory of $403,000 and then multiplying this figure by 30 days (in an average month). This produces a result of roughly 66 days, which means that it is taking HSI a little more than two months from the point of original inventory purchase to sell the inventory.

The inventory supplier payment terms is focused on evaluating just how much credit is being provided to the company by its product suppliers. This calculation takes total annual costs of goods sold expense for products of $5,280,000 divided by 12 months to come up with an average monthly costs of goods sold expense for products of $440,000. Then, the total accounts payable balance for inventory of $403,000 is divided by $440,000 and multiplied by 30 days (in an average month) to produce a result of 27 days and indicates that in short, HSI gets a free ride for the first 27 days or roughly four weeks of holding inventory because it waits this long before paying for its purchases on credit. However, the remaining 39 days or roughly five weeks of its inventory holding period have to be financed from debt and stockholders' equity sources of capital.

It should be noted that for most businesses, purchases are paid over a wide range of periods. Some purchases may be paid for quickly to take advantage of prompt payment discounts offered by vendors. For other purchases, the business may take six weeks or longer to pay vendor invoices. Based on its experience and policies, a business knows the average purchase credit period for its inventory-related purchases.

Critical Terminology Alert

A common term you will hear as it relates to vendors when they provide payment terms to customers is the reference to *Net30* or *N30* (for example). What this is referring to is that payments are due for the net amount of the invoice in 30 days from the invoice date (thus the reference to *N*). N40 would indicate that payments are due in 40 days from the invoice. To expand on this, you may see a reference to the term *1%10*, *N30*. This indicates that if the customer pays within 10 days of the invoice date, a 1 percent discount can be taken on the net amount of the invoice. If not, the full amount of the invoice is due within 30 days of the invoice date. So if $150,000 was owed on an invoice with these terms and paid within 10 days, the payment to the vendor would be reduced by $1,500 with a payment of $148,500 forwarded. The reason discounts are provided by suppliers is to primarily accelerate payments and also, some larger customers are given added incentives and benefits (as a result of their importance and large purchasing commitments). Needless to say, the benefits to the purchaser are squarely centered on receiving a handsome discount, which should reduce costs and increases profits. For cash-rich customers who have no better use for excess cash balances, paying early and taking discounts is often an attractive alternative to parking excess cash in a money market account earning less than 1 percent (as taking a 1 percent discount to pay 20 days early roughly equates to an equivalent borrowing rate of 18 percent per annum).

Economists are fond of saying that "there's no such thing as a free lunch." With this in mind, calling the four-week delay in paying for purchases on credit a free ride is not entirely accurate. Sellers that extend credit set their prices slightly higher to compensate for the delay in receiving cash from their customers. In other words, a small but hidden interest charge is built into the cost paid by the purchasers.

Accounting Issues and Our Case Study

Several serious accounting issues concerning inventory are discussed at the end of Chapter 8. In sharp contrast, there are relatively few accounting problems (when compared to inventory) concerning the accounts payable liability. But there are some and they are primarily centered on disclosure, classification, and seniority/security related issues.

- Disclosure: Financial statement readers are entitled to assume that the amount reported for accounts payable is the amount that will be paid in the near future (generally three months or less). Suppose, however, that a business is in the middle of negotiations with one or more of its accounts payable creditors regarding prices and other terms and that disagreements are present that involve material (significant) amounts. In this situation, the business should make a disclosure about these negotiations in the footnotes to its financial statements.
- Classification: Here is another important point: Financial statement readers are entitled to assume that the accounts payable are *current*, which means that the liabilities are not seriously overdue (i.e., way beyond their due dates for payment). Suppose, for instance, that half of the company's accounts payable are two or three months overdue. In this situation the business should disclose the overdue amount in the footnotes to its financial statements. If large enough or if in fact the payment of accounts payable is renegotiated to extend past one year (a common occurrence during the Great Recession), then the proper classification of accounts payable between current and long-term should be presented in the financial statements.
- Seniority/security: Financial statement readers are generally entitled to assume that the company's accounts payable creditors (the parties to whom it owes money) do *not* have senior or prior claims ahead of other creditors and debt holders of the business. In other words, the accounts payable creditors are assumed to be *general* creditors of the business, with no special claims on the assets of the business (i.e., unsecured creditors). If in fact the accounts payable creditors have unusual rights for payment against the business, these abnormal claims should be disclosed in the footnotes to its financial statements.

Tips, Tidbits, and Traps

Prior to the Great Recession, which started in 2008, the issue of accounts payable creditors securing senior position in claims against company assets was generally not a problem (as credit was readily available). However, the financial meltdown really forced creditors to rethink this strategy as once capital and liquidity dried up, everyone quickly learned how important it was to have some type of security claim against another company's assets (when applicable). For certain creditors such as professional service providers (think lawyers and accountants), this strategy really doesn't work but for other creditors that provide tangible products or material, having a "secured" claim against the assets, which are delivered to a customer (operating on shaky ground) provided just a little more assurance and support that payment would be received.

The following real world story highlights just how important this issue was for two companies.

Real World Story

Company A was in the business of operating a number of retail jewelry stores in certain markets. Company B was in the business of providing Company A with base and finished products. The Great Recession hammered both companies but particularly Company A, which saw sales slide, losses increase, and cash resources dwindle to a point where supplier payments had to be restricted. In order to solve this problem, Company B agreed to continue to provide Company A with product but under a new agreement that basically "consigned" the inventory to Company A, which was documented by Company B filing public Uniform Commercial Code (UCC) statements to disclose to the market that it had a secured interest in the products. Further, Company A restructured certain large account payable liabilities into long-term repayment plans (requiring separate disclosure), which assisted with cash flow management. This story had a happy ending as both companies were able to survive and prosper (with this agreement being an important part of the survival strategy) while their competitors fell by the wayside.

EXHIBIT 9.3—CASE STUDY COMPARISON—INVENTORY HOLD PERIODS AND SUPPLIER PAYMENT TERMS

Dollar Amounts in Thousands

HareSquared, Inc.:	
Average Days Inventory Held from Point of Purchase	66
Average Inventory Supplier Payment Terms	27
TortTech, Inc.:	
Inventory, LCM	$ 684
Total Accounts Payable—Inventory	$ 376
Average Days in a Month	30
Average Days Inventory Held from Point of Purchase	55
Inventory Supplier Payment Terms:	
Total Annual Costs of Goods Sold, Products	$4,104
Average Monthly Costs of Goods Sold, Products	$ 342
Total Accounts Payable—Inventory	$ 376
Average Days in a Month	30
Average Inventory Supplier Payment Terms	33

Exhibit 9.3 catches up on our case study comparison, which compares the inventory holding periods and inventory supplier payment terms for both HSI and TTI.

In summary, it would appear that TTI is selling its inventory a little quicker (55 days compared to 66 days) and getting slightly better terms from its suppliers than HSI (27 days compared to 33 days). Or, it may indicate that HSI is taking advantage of supplier provided early payment discounts and paying quicker. Again, the ability to really delve into the detailed financial information for both companies would provide external parties with a clearer picture (before incorrect conclusions are drawn).

We may not need to emphasize this, but accounts payable are noninterest-bearing and should not be intermingled with the interest-bearing debts of the business. As you see in Exhibit 9.1, interest-bearing liabilities (notes payable) are reported in separate liability accounts. By the way, long-overdue accounts payable may begin to accrue interest at the option of the creditor, again an event that took on an entirely new meaning during the Great Recession.

We should mention that the disclosure standards we discuss here for accounts payable are not necessarily complied with in actual financial reports. You don't see much disclosure about accounts payable in business financial statements. We think a business should make full disclosure in its financial reports. But in fact companies are cut a lot of slack in the area of accounts payable. You don't find detailed information about its accounts payable liability in a company's financial statements, even though this particular liability may be more than 10 percent of a company's total assets and may be larger than its cash balance at the balance sheet date (as it is in our business example).

10

OPERATING EXPENSES AND ACCOUNTS PAYABLE

The Connection Is Important but Let's Start with the Basics

All businesses incur *operating expenses*. Alternatively, these expenses are commonly referred to as *Op. Ex.*, *selling, general, and administrative expenses* (SG&A), just general and administrative expenses (G&A), or a hybrid of these names. The name really isn't what is as important as understanding what an operating expense is versus what a costs of goods sold expense is. On the surface, this may appear to be very straightforward but when investigated further, you see as many different interpretations of what should be an operating expense versus what should be accounted for as costs of goods sold expense, as there are political opinions expressed in Washington, DC on a weekly basis. A boatload!

The following mini–real world–based case study highlights two companies that treat the exact same expense in a different manner.

Mini–Real World Case Study

Company A and B operated with similar business models but accounted for one expense in a different manner—merchant credit card fees. Merchant credit card fees are fees incurred by any company that accepts credit cards (and debit cards or PayPal for that matter) as a form of payment. Although these fees may vary significantly, for smaller businesses the fees tend to average around 2.5 percent to 3 percent of the amount collected. Company A accounted for this expense as a direct cost of goods sold as a large percentage of customers elected to pay using credit cards (and thus, this expense tended to vary directly with sales levels). Company B accounted for this expense as SG&A as a smaller percentage of customers elected to pay with credit cards. The end result was that Company A's gross profit and margin (refer to Chapter 8) was slightly lower than Company B's gross profit and margin due to this classification decision. But when looking further, Company B not only had higher operating expenses (given that the merchant credit card fees were classified as SG&A expenses) but, in addition, had a slightly higher interest expense (as Company B had to borrow more to support higher trade accounts receivable balances compare to Company A, which secured quicker payments via accepting credit card payments).

Three questions come to mind. First, why is this type of example even provided? Well the answer is simple in that as any business owner, manager, executive, and/or employee has witnessed during the past five years, the economy is quickly moving toward utilizing more and more types and forms of electronic payments that all will carry different risks and expense structures (that must be evaluated by each business in terms of determining what forms of payments will be accepted).

Second, you may ask why Company A elected to accept a large amount of payments via credit cards because sacrificing 2 percent to 3 percent from each sales dollar appears high. Well the answer is simple and is based on two key concepts—improved cash flow and lower collection management expenses. Not only could Company A accelerate payments, thus having lower accounts receivable levels requiring reduced levels of borrowing (driving down interest

expense), but more importantly, losses from bad debts and associated collection costs (both internal staff and external collection services) are reduced as more assured forms of payments are received. This trade-off needs to be evaluated by all companies in order to determine what is the appropriate strategy to utilize.

Third and last, you may ask why this classification is even important as in the end, whether these expenses are accounted for as costs of goods sold expense versus operating expenses, the company's net income will be the exact same. The answer lies in how external parties may interpret results. If one company has a gross margin of 61 percent, and another company has a gross margin of 59 percent (both not unusual margin levels for technology companies), the higher gross margin company may be viewed more "favorably" by external financing types and assume a higher value proposition is present with the company that has the higher gross margin.

Again, the concept of how financial information is presented and what story (and value proposition) it tells needs to always be considered when reading financial reports.

Recording Expenses before They Are Paid

So now that we have explored the expense classification issue (and that both inventory accounted for as costs of goods sold and noninventory items accounted for costs of goods sold are connected to trade accounts payable) we turn our attention to the link between o*perating expenses* in the income statement and the second of the two *accounts payable* components in the balance sheet (as highlighted in Exhibit 10.1 on accounts payable and operating expenses).

Recall from Chapter 9 the two sources of accounts payable—from inventory purchases on credit, and from expenses not paid immediately. Chapter 9 explains the connection between inventory and accounts payable. This chapter explains how expenses drive the accounts payable liability of a business.

Every business in the world has a wide variety of *operating* expenses. The term *operating* does *not* include cost of goods sold, interest, income tax expenses, and a variety of other nonoperating type expenses (too many to list but almost always present for businesses). Also, in our example the company's depreciation expense is reported separately. All other operating expenses are combined into one conglomerate account labeled *Selling, General, and Administrative Expenses* (see the income statement in Exhibit 10.1).

Day in and day out, many operating expenses are recorded when they are paid, at which time an expense account is increased and the cash account is decreased. But some operating expenses have to be recorded *before* they are paid—which is the focus of this chapter.

Operating expenses is the convenient term that we use in the collective sense to refer to many different specific expenses of running (operating) a business enterprise. In this business example, the annual depreciation expense on the company's long-lived, fixed assets is shown as a separate expense. So, the $8,400,000 total amount of selling, general, and administrative expenses does not include depreciation. (It would if the depreciation expense were not reported separately.) And, to remind you, the $8,400,000 total for operating expenses does not include cost of goods sold, interest, and income tax expenses, which are reported separately in the income statement.

Operating expenses include the following specific expenses (in no particular order):

- Rental of buildings, copiers, trucks and autos, telephone system equipment, and other assets (not used in the direct manufacturing process).
- Wages, salaries, commissions, bonuses, and other compensation paid to managers, office staff, salespersons, warehouse workers, security guards, and other employees. (Compensation of production employees is included in the cost of goods manufactured and becomes part of inventory cost and eventually costs of goods sold.)
- Payroll taxes and fringe benefit costs of labor (commonly referred to as *payroll burden*), such as health and medical plan

EXHIBIT 10.1—OPERATING EXPENSES AND ACCOUNTS PAYABLE

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2011

Income Statement for the Fiscal Year Ending	**12/31/2011**
Sales Revenue, Net	$18,412
Costs of Goods Sold	$ 9,156
Gross Profit	$ 9,256
Selling, General, and Administrative Expenses	$ 8,400
Depreciation and Amortization Expense	$ 700
Operating Earnings	$ 156
Other Expenses (Income)	$ 0
Interest Expense	$ 80
Net Income (Loss) before Income Taxes	$ 76
Income Tax Expense (Benefit)	$ 0
Net Income (Loss)	$ 76

Key relatonship and connection but better understood when compared to both accounts payable and accrued expenses.

Balance Sheet as of the Year-End	**12/31/2011**
Assets	
Current Assets	
Cash and Equivalents	$ 372
Accounts Receivable, Net	$ 4,575
Inventory, LCM	$ 880
Prepaid Expenses	$ 75
Total Current Assets	$ 5,902
Fixed Assets	
Property, Plant, and Equipment	$ 1,000
Accumulated Depreciation	$ (350)
Net Fixed Assets	$ 650
Other Assets	
Intangible Assets and Goodwill, Net	$ 1,500
Other Assets	$ 75
Total Other Assets	$ 1,575
Total Assets	$ 8,127
Liabilities and Stockholders' Equity	
Current Liabilities	
Accounts Payable, Inventory	$ 403
Accounts Payable, Operating Expenses	$ 329
Accrued Expenses	$ 604
Current Portion of Debt	$ 400
Other Current Liabilities	$ 4,313
Total Current Liabilities	$ 6,049
Long-Term Liabilities	
Notes Payable, Less Current Portion	$ 1,200
Other Long-Term Liabilities	$ 0
Total Long-Term Liabilities	$ 1,200
Total Liabilities	$ 7,249
Stockholders' Equity	
Capital Stock—800,000 Authorized, 550,000 Outstanding → 2011	$ 3,000
Retained Earnings	$(2,122)
Total Owners' Equity	$ 878
Total Liabilities & Stockholders' Equity	$ 8,127

contributions by the employer and the cost of employee retirement plans (a difficult cost to measure for defined benefit plans but not so difficult to 401[k] and other types of defined contribution plans). Again, if the payroll burden is associated with wages paid to production employees, it would be captured as a cost of goods manufactured and becomes part of inventory costs and eventually costs of goods sold.

- Office and data processing supplies.
- Telecommunication expenses including telephone (hard and mobile lines), fax (for those out there that still use faxes), Internet, and website costs.
- Inventory shrinkage due to shoplifting and employee theft or careless handling and storage of products; the cost of goods stolen and damaged may be recorded in the cost of goods sold expense or, alternatively, classified as an operating expense.
- Liability, fire, accident, and other insurance costs.
- Utility costs of electricity and fuel.
- Advertising and sales promotion costs, which are major expenditures by many businesses.
- Bad debts, which are past-due accounts receivable that turn out to be not collectible and have to be written off.
- Transportation and shipping costs.
- Travel and entertainment costs.

This list is not all-inclusive. We're sure you could think of many more expenses of operating a business. Even relatively small businesses keep 100 or more separate accounts for specific operating expenses. Larger business corporations keep thousands of specific expense accounts. In their external financial reports, however, most publicly owned corporations report only one, two, or three operating expenses. For instance, advertising expenses are reported internally to managers, but you don't see this particular expense in many external income statements.

As we mention earlier, some operating expenses are recorded when they are paid—not before, nor after. The business records an expense and decreases cash. This chapter focuses on another basic way that operating expenses are recorded—by increasing the accounts payable liability. (Following chapters explain other ways of recording operating expenses and the asset and liability accounts involved.)

Tips, Tidbits, and Traps

Let's face it, one of the most tried and proven methods to improve cash balances and internal cash flows when "things are tight" is to look straight to your vendors and request (or push) for longer payment terms. First, a week is added, then two, and before you know it, payment terms have been stretched from Net20 (meaning the total payment is due in 20 days from invoice date) into whatever the customer feels like paying. Watching trade payable balances for unreasonable and/or unusual increases can be an excellent tip-off that the company is experiencing some type of internal pressure to improve its liquidity.

It would be convenient if every dollar of operating expenses were a dollar actually paid out in the same period. But, as this and later chapters demonstrate, running a business is not so simple. The point is that for many operating expenses a business cannot wait to record the expense until it pays the expense. As soon as a

liability is incurred, the amount of expense should be recorded. The term *incurred* means that the business has a definite responsibility to pay a third party, outside the business.

A liability is incurred when a company takes on an obligation to make future payment and has received the economic benefit of the cost in operating the business. Recording the liability for an unpaid expense is one fundamental aspect of *accrual-basis accounting*. Expenses are *accrued* (i.e., recorded before they are paid) so that the amount of each expense is deducted from sales revenue in order to measure profit correctly for the period. You may want to quickly review Chapter 4 that explains recording expenses (and profit accounting in general).

For an example, suppose on December 15 a business receives an invoice from its attorneys for legal work done for the company over the previous two or three months. The end of the company's accounting (fiscal) year is December 31. The company will not pay its lawyers until next year. This cost belongs in this year, and should be recorded in the legal expense account. Therefore, the company records an increase in the accounts payable liability account to record the legal expense.

This is just one example of many; other examples include bills from newspapers for advertisements that have already appeared in the papers, telephone bills, and so on. Generally speaking, liabilities for unpaid expenses are for short credit periods, typically one month or less and do not carry any type of interest charges.

In Exhibit 10.2, note that the year-end amount for this component of accounts payable is $329,000 for HSI. When compared to the average monthly operating expenses of $700,000, the estimated days of operating expenses outstanding in trade payables is just 14 days (or two weeks). To a naked eye, this would appear to be very low as it basically states that on average, vendors are only providing roughly two weeks of credit payment terms to the company. But this is where this calculation can be misleading as remember, operating expenses include all types of expenses, which do not receive extended credit payment terms including employee wages, facility rents (almost always paid in advance), and other items. So a word of warning with this calculation as the results can be misleading.

In summary, operating costs that are not paid immediately are recorded in the accounts payable liability account both to recognize the obligation of the business to make payment for these costs, and to record expenses that have benefited the operations of the business so that profit is measured correctly for the period.

Critical Ratio Alert

Similar to calculating days sales outstanding in accounts receivable and inventory, a similar analysis can be completed for selling, general, and administrative expenses and accounts payable as displayed in Exhibit 10.2.

EXHIBIT 10.2—DAYS OPERATING EXPENSES O/S IN TRADE PAYABLES

Dollar Amounts in Thousands

Days Operating Expenses O/S in Trade Payables

Total Trade Payables—Operating Expenses	$ 329
Total Selling, General, and Administrative Expenses	$8,400
Average Monthly SG&A Expenses	$ 700
Average Days in a Month	30
Days SG&A Expenses O/S in Trade Payables	14.12

In other words, there is both an income statement and a balance sheet reason for recording unpaid expenses.

There's no question that accounts payable should be recorded for expenses that haven't been paid by the end of the accounting year. However, the recording of unpaid expenses does not immediately decrease cash. Actual cash outflow occurs later, when the accounts payable are paid. Chapter 4 briefly introduced the cash flows side of revenue and expenses. Chapter 17 is a comprehensive explanation of the cash flow aspects of making profit and the statement of cash flows.

Accounting Issues and Our Case Study

One may not think that a large number of accounting issues are related to operating expenses and accounts payable but as noted at the start of this chapter, this is a false assumption. A number of accounting issues are potentially present with these items as summarized in three areas:

1. Operating expense classification: As summarized at the start of this chapter, proper and consistent classification of operating expenses is essential to understanding a company's real economic operating performance. Changing, moving, or reclassifying operating expenses (from above the operating income or earnings before interest, [income] tax, depreciation, and amortization [EBITDA] line to below the operating income or EBITDA line) is a common tactic used by businesses to ensure the desired operating results are achieved on a periodic basis.
2. Cutoff and materiality: One of the most common and challenging issues confronting accountants is based on the concept of implementing proper cutoff procedures to ensure all liabilities (including trade payables) are properly accounted for in the correct period. This is often much easier said than done, especially for larger companies that deal with thousands of third-party vendors, all with different invoicing processes. Further, all accountants must deal with the concept of materiality when determining whether an obligation should be recorded or not (in a specific period). For a company that generates $100 million a year in revenue, booking an expense telecommunication services for $860 in one period or the next period is not going to make much of a difference. However, overlooking (whether intentional or not) a $14,000 invoice from an attorney that was billed late represents a much more serious question.
3. Balance sheet classification: Accounts payable are by default, very short-term unsecured debt obligations that should be

EXHIBIT 10.3 CASE STUDY COMPARISON—DAYS OPERATING EXPENSE O/S

Dollar Amounts in Thousands

Days Operating Expenses O/S in Trade Payables —HareSquared, Inc.	14.12
Days Operating Expenses O/S in Trade Payables —TortTech, Inc.	
Total Trade Payables—Operating Expenses	$ 307
Total Selling, General, and Administrative Expenses	$8,400
Average Monthly SG&A Expenses	$ 700
Average Days in a Month	30
Days SG&A Expenses O/S in Trade Payables	13.17

paid within 90 days or less (and carry no interest). Although this is generally the case, economic conditions can change that result in what were previously reported accounts payable now becoming something more of an installment debt. Numerous companies during the Great Recession had to resort to working out longer-term repayment deals with vendors and suppliers (to work through a period of very tight liquidity and credit availability), thus turning an account payable into a hybrid long-term debt instrument (some taking years to repay). So be aware of aging and increasing account payable balances as this is indicative of a company having cash flow issues and pushing on vendors that may actually result in long-term debt being created (without anyone even realizing it).

Exhibit 10.3 compares our two case study companies, which really tells the same basic story when looking at the average days of operating expenses outstanding in accounts payable.

11

ACCRUING LIABILITIES FOR INCURRED BUT UNPAID EXPENSES

Understanding Hidden Risks with This Connection

Chapter 10 is dedicated to understanding the connection between known operating expenses and accounts payable. That is, when a vendor or supplier presents an invoice to a company for payment (for inventory, operating expenses, etc.), the invoice is processed and recorded directly into accounts payable. This chapter dives into the much more "subjective" concept of accruing liabilities for incurred but unpaid expenses. For some incurred but unpaid expenses, there really isn't much subjectivity present as the expense can be easily quantified and calculated to determine within a high degree of reason what the final expense will be.

A perfect example of this is based on commission expense for sales representatives who are paid when cash payment for the trade receivable is actually received. For example, if $2,000,000 of trade receivables are outstanding at the end of the month and a company pays a 5 percent commission to the sales representatives when final payment from the customer is received, a total of $100,000 of accrued commission expense would be present and recorded as an accrued liability in the balance sheet. The reason for this accrual is based on the matching principle as if sales revenue of $2,000,000 has been recorded, all associated expenses with this sales revenue need to be recorded and properly matched against sales revenue.

But now let's move from understanding relatively easy accruals for incurred but unpaid expenses to far more complex subjects, one of which is near and dear to Tage's heart (based on his past accounting experience), mining reclamation costs. In a nutshell, large mining operations (think coal, gold/silver, base metals, timber, etc.) must reclaim the land they mine back to a state of original condition and environmental safety after the mining effort is completed. Alright, this is easy enough to understand and it makes perfect sense but think about this for a moment. Some mines will be in an operating status for decades and are required to estimate the total amount of mine reclamation costs that will be incurred sometime in the future, and then realize a portion of these costs each year in their financial statements to properly match the future cost of reclaiming the land against the current cost of producing the material. That is, these mining companies can't simply mine all of the viable materials from the site and record earnings based only on its current direct and known costs (which would grossly overestimate the profitability of the operation), and then at the very end, take a "charge" or expense to account for the final known reclamation costs. Again, the matching principle must be adhered to in order to ensure the reporting of periodic profits and losses are as accurate as possible.

Newmont Mining Corporation is one of the world's largest gold mining companies and brings to light the potential hidden risks with this connection (between operating expenses and accrued liabilities). That is, accruing for unknown future expenses is highly subjective and based on numerous future factors, events, and/or conditions that can quickly change and result in large adjustments to previously recorded accrued liabilities (but which at the original time of estimating the liability, were considered accurate and

highly defendable). And to make matters even more complicated, the accrual of these expenses then needs to be reported in the balance sheet as either current (anticipated to be paid within one year) or long-term (anticipated to be paid after one year). While most companies do report accrued expenses as a current liability, there are a number of situations that require the expense accrual to be allocated between current and long term where the long-term portion is significantly higher than the current portion.

The mother of all potential accrued liability time bombs is centered squarely on the problems faced by a large number of municipalities, states, and even companies as it relates to underfunding of pension obligations.

Recording the Accrued Liability for Operating Expenses

Please refer to Exhibit 10.1 at the start of Chapter 10, which highlights the connections between *selling, general, and administrative expenses* in the income statement and both trade payables and the *accrued expenses* liability in the balance sheet. This connection is based on the same concept discussed with our mining reclamation example noted earlier—unpaid expenses at year-end are recorded so that the full, correct amount of expense is recognized in measuring profit for the year.

Chapter 10 explains that a business records certain expenses as soon as the bills (invoices) are received for these operating costs, even though it doesn't pay the bills until weeks later. This chapter explains that a business has to go looking for certain unpaid expenses at the end of the period. No bills or invoices are received for these expenses; they build up, or *accrue* over time.

For instance, the business in our example pays its salespersons commissions based on their individual sales each month. Commissions are calculated at the end of each month, but are not paid until the following month. At year-end, the sales commissions earned for the final month of the year have not been paid. To record the increase in this expense, the company makes an entry in the liability account *accrued expenses payable*, which is a different sort of liability than accounts payable.

The accountant should know which expenses accumulate over time and make the appropriate calculations for these unpaid amounts at year-end. A business may not receive an invoice (bill) for these expenses from an outside vendor or supplier and if it does, it may take weeks, months, or in some cases even years to receive (thus the need for the accrued liability). In the case of a commission, a business has to generate its own internal invoices to itself, as it were. Its accounting department must be especially alert to which specific expenses need to be accrued.

In addition to sales commissions payable, a business has several other accrued expenses that should be recorded at the end of the period; the following are typical examples:

- Accumulated vacation and sick leave pay owed to employees, which can add up to a sizable amount.
- Partial-month telephone and electricity costs that have been incurred but not yet billed to the company.
- Property taxes that should be charged to the year, but the business has not received the tax bill by the end of the year.
- Warranty and guarantee work on products already sold that will be done in the future; the sales revenue has been recorded this year, so these postsale expenses also should be recorded in the same period to match all expenses with sales revenue.
- Any potential legal and/or professional fees that have been incurred but not yet received (as professional firms are notorious slow billers).

- Potential contingencies and commitments that may arise from reasonably assured but currently unknown future obligations (e.g., mining reclamation, settlement of a law suit).

Tips, Tidbits, and Traps

As noted in Chapter 10, companies often look to their vendors and receive extended payment terms on accounts payable balances when extra cash is required. This same logic holds for accrued liabilities as well as for companies that have become extremely creative and clever when it comes to using strategies that defer and/or extend cash payments related to expenses recorded in the current income statements. The following real world story highlights how one company implements this type of strategy.

Real World Story

The personnel staffing industry or as it is more commonly known, the *temp* industry, has a relatively simple business model. That is, it bills a temporary employee at $25 per hour and pays the temporary employee $15 an hour to earn a gross markup per hour of $10. However, this is far from the actual net markup earned per hour as the staffing company is responsible for payroll taxes, unemployment insurance, worker's compensation insurance (our focal point here), and other benefits. The bottom line is that $10 per hour earnings can quickly be whittled down to $5 after all costs are considered.

This industry has had to face a number of challenges over the past decade, two of which have directly impacted cash balances and accrued liabilities. The first issue deals with how customers pay or more precisely, how they tend to stretch payments to staffing companies (and, in effect, use them as a financing company). The problem for the staffing company is that its cash flow gets squeezed as customers take longer to pay. To add insult to injury, the industry has had to endure numerous increases in worker's compensation insurance costs, which have further squeezed margins (and earnings that eventually turn into cash).

So what a number of stronger staffing companies have done is implement what is known as a *self-funded* worker's compensation insurance program to help manage expenses and cash flows. Traditional worker's compensation insurance is provided to staffing companies in the form of an estimated premium paid each month, in advance. This is just like home owners insurance premiums you might pay on your home (in advance, for the year). With self-funded worker's compensation insurance programs, a much smaller premium is paid in advance and then when actual injury claims are incurred and eventually paid, the staffing company pays the claims at that future date (and not in advance). This offers two benefits. First, cash payments are deferred 12 to 36 months (improving current cash balances) depending on how the claim settles. Second, the staffing company has the opportunity to proactively manage safety and claims activity, which hopefully reduces the actual expenses (compared to a regular insurance program).

You may ask how this impacts accrued liabilities and the question is relatively straightforward. The staffing company is required to estimate and record future worker's compensation insurance claims as an expense against current earnings, thus building a liability for future claims. This strategy is not for the faint of heart and financially weak is it requires internal resources to implement and execute but it does highlight how a company can use an accrued liability to improve cash balances (and hopefully reduce expenses).

Failure to record accrued liabilities for unpaid expenses could cause serious errors in a company's annual financial statements—liabilities would be understated in its balance sheet and expenses would be understated in its income statement for the year (just think of our staffing company story but without any expenses accrued for potential injury claims). A business definitely should identify which expenses accumulate over time and record the appropriate amounts of these liabilities at the end of the year.

Critical Ratio Alert

Expanding on our theme in chapter 10 and as presented in Exhibit 10.2, we now offer Exhibit 11.1 which calculates the days of operating expenses outstanding for both trade payables—operating expenses and accrued expenses.

EXHIBIT 11.1—DAYS OPERATING EXPENSES O/S IN TRADE PAYABLES AND ACCRUED EXPENSES

Dollar Amounts in Thousands

Days Operating Expenses O/S in Trade Payables and Accrued Expenses	
Total Trade Payables—Operating Expenses	$ 329
Total Accrued Expenses	$ 604
Subtotal	$ 933
Total Selling, General, and Administrative Expenses	$8,400
Average Monthly SG&A Expenses	$ 700
Average Days in a Month	30
Days SG&A Expenses O/S in Trade Payables and Accrued Expenses	40.00

One thing that should quickly jump out is that the figure calculated in Exhibit 10.2 of 14.1 days is much lower than the 40 days calculated in Exhibit 11.1 (or just under six weeks). The reason for this is that HSI has a much larger accrued expense figure that has helped "balance" this calculation. That is, by combining both trade payables and accrued expenses, we obtain a more complete picture of the current liability structure of the company in relation to operating expenses. The fact is, some companies have more trade payables than accrued expenses while others have less but by combining these figures, the results tend to get smoothed out and make more sense.

So is roughly six weeks right for a typical business? Well, it's difficult to generalize from business to business. We'd say that six weeks is more or less average, but keep in mind that every business is different.

We might mention that it is not unusual that the ending balance of a company's accrued expenses payable is larger than its accounts payable for unpaid operating expenses. In our business example, the ending balance of its accounts payable for operating expenses is $329,000 (from Exhibit 11.1), which is a little less than half as much as its $604,000 accrued expenses payable at the end of the year.

Speaking of accounts payable, some businesses merge accrued expenses payable with accounts payable and report only one liability in their external balance sheets. Both types of liabilities are noninterest-bearing. Both emerge out of the operations of the business, and from manufacturing or purchasing products. For this reason they are sometimes called *spontaneous liabilities*, which means they arise on the spot, not from borrowing money but from operating the business. Grouping both types of liabilities in one account is acceptable under financial reporting standards, although many companies report them separately.

Changes in accounts payable and accrued liability balances can have significant impacts on cash flow, which we explain in Chapter 17. The changes in the balances of these two liabilities have cash flow impacts that are important to understand.

Accounting Issues and Our Case Study

Accruing incurred but unpaid expense as liabilities is a much trickier issue than accounting for normal and recurring accounts payable for a number of reasons. We focus on three issues that can be particularly nasty:

1. Use of estimates: The single largest accounting issue associated with accruing liabilities for operating expenses is based on the use of estimates. We have to tell you that the accrual of the liability for unpaid expenses depends on the good faith of the business in doing the calculations of these amounts—many of which involve arbitrary estimates and forecasts. This step in the accounting process can be easily used for *massaging the numbers*. This pejorative term refers to the deliberate manipulation of amounts recorded for sales revenue and expenses in order to record a higher (or lower) amount of profit for the period. (See also our discussion of this unsavory topic in Chapter 25.)

   All we can do here is caution you that some businesses lay a heavy hand on the amounts recorded in their sales revenue and expense accounts, in order to smooth profit year to year or to give the profit for the year an artificial boost. These companies do not disclose in their financial statements that they have manipulated their accounting numbers to nudge profit up (or down).

2. Reliance on outside experts: A number of estimates and information used to calculate accrued liabilities are straightforward and require just basic math and business knowledge. However, more complicated estimates generally require the use of external professionals such as actuarial experts (project future insurance claims), financial professionals (project pension plan obligations), and others. Although these parties may be expert on a specific subject matter, they may not be familiar with the economic structure of a business and/or can be inappropriately influenced by a heavy-handed regulatory group (think bank regulators right now). Translation, their estimates and projections can be ripe with potential errors, just like with the use of internal estimates.

3. Changing economic and industry conditions: Finally, dramatic changes in economic, legislative, legal positions, environmental, and/or legal conditions can have a significant impact when estimating future expenses and recording the appropriate accrued liability. A perfect example of this lies in battles fought between multinational corporations to protect patents and other trade secrets. At the end of one period, a strong position may be held that a company has not infringed on a patent and has little legal exposure (and potential settlement risk). The next year, when tried in another country with different or new laws, the case could have a significantly different outcome. Just ask Apple and Samsung.

The bottom line when accounting for incurred but unpaid expenses and recording accrued liabilities is simple. The longer time period until the liability must be paid and the more complex the potential liability is, the greater chance of a material misstatement in the financial statements. So when reviewing financial statements, place extra scrutiny on these types of accruals and expenses to really understand the potential impact on operating results.

As for our case study, let's compare the results of the expanded days of operating expenses outstanding in both trade payables and accrued expenses in Exhibit 11.2.

Here, a slightly different result is produced compared to the figures calculated in Exhibit 10.3 as based on this calculation, HIS has roughly 14 days of operating expenses outstanding in just trade payables compared to TTI's figure of 13 days (not much of a difference at all). Now, HSI has closer to 40 days compared to TTI's 28 days which amounts to 12 extra days, or almost two full weeks, of added extra support (for lack of a better term) available from various third-party vendors, suppliers, and other parties.

Please refer to Chapter 13, which provides an update on our companies and overviews the operating results for both in more detail (as it relates to the critical ratios and performance measurements calculated in Chapters 7 through 12).

EXHIBIT 11.2—CASE STUDY COMPARISON—DAYS OPERATING EXPENSES O/S AND ACCRUED EXPENSES

Dollar Amounts in Thousands

Days Operating Expenses O/S in Trade Payables and Accrued Expenses—HareSquared, Inc.	40.00
Days Operating Expenses O/S in Trade Payables and Accrued Expenses—TortTech, Inc.	
Total Trade Payables—Operating Expenses	$ 307
Total Accrued Expenses	$ 340
Subtotal	$ 647
Total Selling, General, and Administrative Expenses	$8,400
Average Monthly SG&A Expenses	$ 700
Average Days in a Month	30
Days SG&A Expenses O/S in Trade Payables and Accrued Expenses	27.74

12

INCOME TAX EXPENSE—A LIABILITY AND ASSET?

Why the Income Tax Connection Can Be Very Confusing

We've all heard it, time and time again, to everyone's (or at least most everyone's) amazement and frustration: How do some of the world's largest and most profitable companies pay little or no income tax in the United States?

Although the purpose of this chapter is not to focus on explaining and educating the reader on just how some of the largest U.S. corporations minimize income tax liabilities to basically zero (while reporting record profits) the goal of the chapter is to delve into the relatively complex subject matter of income tax expense and how it can impact different sections of the balance sheet, including both assets and liabilities, current or long term. It's really quite rare that one income statement expense account has the ability to impact so many sections of the balance sheet but then again, this should come as no surprise given the complexity of the Internal Revenue Code.

But before we dive into the muck and really get our hands dirty, a somewhat expanded understanding of taxes (not just income) is worth covering to put you in the proper frame of mind (or should I say, frustrated state of mind) and gain a little more insight on just how burdensome and complex tax compliance can be.

Tips, Tidbits, and Traps

Over the past 10 years, the following acronym has worked its way into the vocabulary of most businesses: SALT. This stands for state and local taxation. The reason for this is based on the fact that almost all states, cities, counties, and municipalities across the country have been starved for cash to support continued operations. So their response to this cash shortage has been to become even more aggressive on the tax compliance and collection efforts, pursuing receipts for everything from sales and use taxes, to property taxes, to payroll taxes, to excise taxes, to unclaimed property taxes, to you name it (taxing a business at every opportunity). The good news is this chapter does not address these subjects in any detail as it is beyond the scope of the book. As for our tip, well this is simple. First, if you are a business owner, make sure you secure proper professional support to proactively manage SALT-related matters. Parties that review the financial statements and observe added liabilities for SALT matters, or increased disclosures in footnotes related to SALT matters, should realize that could be just the tip of the iceberg for the company. (One nasty SALT matter tends to fester into multiple matters.) But the reason SALT has been mentioned is that all too often parties are consumed with the IRS being the biggest tax headache for a business when in fact, it's every state, city, county, and so on that can quickly become the nightmare.

Taxation of Business Profit

To start, please refer to Exhibit 12.1, which highlights the connection between *income tax expense* in the income statement and the *income tax payable* liability in the balance sheet for HSI for the two years ending 12/31/11 and 12/31/12. The connection highlighted in Exhibit 12.1 represents what would be considered the most normal and customary relationship between income tax expense and income tax liability (Chapter 4 explained the accounting entry for recording income tax expense). That is, income tax expense is increased and the income tax liability is increased when a company generates a taxable income. The liability account is decreased as cash payments are made (and cash is decreased). Typically, not all of the income tax expense for the year is paid by the end of the year. In this company example, roughly 33 percent of its income tax expense for 2012, which is based on its *taxable income* for the year, has not been paid at year-end. This remaining balance, if classified as a current liability, should be paid in the near future. The unpaid portion stays in the company's income tax payable liability account until paid.

The business in our example is incorporated as a regular C corporation; the business decided on this form of legal organization (instead of a partnership, limited liability company, or subchapter S corporation). A C corporation, being a separate person in the eyes of the law, has several important advantages. However, profit-motivated business corporations have one serious disadvantage—they are subject to federal and state income tax on their profits, or, to be more accurate, they owe tax based on their *taxable income*, which is earnings before income tax.

Critical Terminology Alert

From a taxation standpoint, there are basically two types of businesses. Those that pay income taxes at the entity level and those that pass through taxable income or losses to the owners of the company (and thus, the income taxes are paid at the owner or individual level, which includes subchapter S corporations, most partnerships, and limited liability companies, although LLCs do have the option to be treated as a taxable entity or a pass-through entity). So when you hear the phrase or term *A Pass-Through Entity*, this refers to a business legal structure that has the taxable income or loss allocated to the owners or individuals of the company (where the any tax liability is addressed). This is why there generally is no income tax expense reported in the income statement for pass through entities, as no income taxes are due by the entity itself.

The business in this example is a regular, or so-called C corporation. This type of income tax entity is subject to double taxation of business profit—first in the hands of the business corporation, and second in the hands of its stockholders (but only to the extent that net income after income tax is distributed as cash dividends to the shareholders). Other types of legal business entities avoid the double taxation feature, but all their annual taxable income passes through to their owners who have to include their respective

EXHIBIT 12.1—INCOME TAX EXPENSE AND INCOME TAXES PAYABLE

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2011
and
12/31/2012

Income Statement for the Fiscal Year Ending	12/31/2011	12/31/2012
Sales Revenue, Net	$18,412	$38,281
Costs of Goods Sold	$ 9,156	$17,950
Gross Profit	$ 9,256	$20,331
Selling, General, and Administrative Expenses	$ 8,400	$13,800
Depreciation and Amortization Expense	$ 700	$ 750
Operating Earnings	$ 156	$ 5,781
Other Expenses (Income)	$ 0	$ 0
Interest Expense	$ 80	$ 0
Net Income (Loss) before Income Taxes	$ 76	$ 5,781
Income Tax Expense (Benefit)	$ 0	$ 1,288
Net Income (Loss)	$ 76	$ 4,493

Notice two items:
– For 2011, HSI generated a profit but realized no income tax expense and had no income tax payable liability.
– For 2012, HSI generated a profit, realized income tax expense, and had an income tax payable liability of roughly 1/3rd of the total year's expense.

Balance Sheet as of the Year-End	12/31/2011	12/31/2012
Assets		
Current Assets		
Cash and Equivalents	$ 372	$ 9,053
Accounts Receivable, Net	$ 4,575	$ 6,800
Inventory, LCM	$ 880	$ 2,640
Prepaid Expenses	$ 75	$ 100
Total Current Assets	$ 5,902	$18,593
Fixed Assets		
Property, Plant, and Equipment	$ 1,000	$ 1,250
Accumulated Depreciation	$ (350)	$ (600)
Net Fixed Assets	$ 650	$ 650
Other Assets		
Intangible Assets and Goodwill, Net	$ 1,500	$ 1,000
Other Assets	$ 75	$ 75
Total Other Assets	$ 1,575	$ 1,075
Total Assets	$ 8,127	$20,318
Liabilities and Stockholders' Equity		
Current Liabilities		
Accounts Payable, Inventory	$ 403	$ 728
Accounts Payable, Operating Expenses	$ 329	$ 595
Accrued Expenses	$ 604	$ 945
Current Portion of Debt	$ 400	$ 0
Income Taxes Payable	$ 0	$ 429
Other Current Liabilities	$ 4,313	$ 8,250
Total Current Liabilities	$ 6,049	$10,947
Long-Term Liabilities		
Notes Payable, Less Current Portion	$ 1,200	$ 0
Other Long-Term Liabilities	$ 0	$ 0
Total Long-Term Liabilities	$ 1,200	$ 0
Total Liabilities	$ 7,249	$10,947
Stockholders' Equity		
Capital Stock—800,000 Authorized, 550,000 Outstanding → 2011	$ 3,000	$ 7,000
Retained Earnings	$(2,122)	$ 2,371
Total Owners' Equity	$ 878	$ 9,371
Total Liabilities & Stockholders' Equity	$ 8,127	$20,318

shares of the company's taxable income with their other sources of taxable income.

The first point to keep in mind is that a business corporation must earn *taxable income* to owe income tax. The simplest way to pay no income tax is to have no taxable income, or to have a loss for tax purposes. A business wants to earn profit, but earning a profit comes with the burden of sharing pretax profit with Uncle Sam and with the states that levy a tax on business profit earned within their borders.

A second point to keep in mind is that there are many loopholes and options in the federal income tax code—to say nothing about state income tax laws—that reduce or postpone income tax. We're sure that you're aware of the complexity of the federal income tax law. That's an understatement, if we've ever heard one.

It takes thousands of pages of tax law to define taxable income. Most businesses use income tax professionals to help them determine their taxable income, and to advise them how to minimize the income taxes they must pay. In any one year, a business might take advantage of several different features of the tax code to minimize its taxable income for the year, or to shift taxable income to future years. But basically, taking advantage of the features boils down into one of two main types—timing versus permanent differences between generally accepted accounting principles (GAAP) determined income and taxable income.

1. Timing differences: Timing differences are based on being able to take certain deductions in one period at the expense of another. A perfect example of this is based on different depreciation rates used for GAAP and tax reporting.
2. Permanent differences: Permanent differences are just like they sound, a permanent difference between GAAP and taxable income. One of the most common types of permanent differences relates to the deductibility of meals & entertainment expense (restricted for tax purposes).

While certainly not all inclusive, the aforementioned items due highlight some of the most common business timing and permanent tax differences but at the same time, fail to explain why certain large U.S. corporations have no income tax expense.

For our purposes, let's keep things simple with the following two key assumptions for our sample company, HSI.

1. The business pays both federal and state income taxes based on its taxable income (with both being lumped into one line item on the income statement, income tax expense).
2. The accounting methods used to prepare its income statement are exactly the same methods used to determine its annual taxable income.

In our case study for HSI, the company's earnings before income tax, for both GAAP and tax purposes, is $76,000 for 2011 and $5,781,000 for 2012 (refer to Exhibit 12.1). As you see in Exhibit 12.1, the income tax for 2011 is $0, which is 0 percent of taxable income for 2011 and $1,288,000 for 2012, which is 22 percent of taxable for 2012 (which captures both federal and state income taxes).

Exhibit 12.2 expands on this analysis further and highlights a simple but important ratio that parties evaluate: the effective tax rate.

Critical Ratio Alert

Although easy to calculate, a company's effective tax rate is widely monitored as an indication of just how well a company is managing its income tax liabilities compared to its peers, in addition to potentially identifying where added risks may be present in the financial statements. (If the income tax expense is unreasonably low, this could be viewed in a negative fashion and indicate the company is being too aggressive on the tax front.) Exhibit 12.2 calculates the effective tax rate for HSI for 2011 through 2013.

EXHIBIT 12.2—EFFECTIVE INCOME TAX RATE

Dollar Amounts in Thousands

	FYE 12/31/2011	FYE 12/31/2012	FYE 12/31/2013
Net Income before Tax	$76,000	$5,781,000	$(1,285,000)
Income Tax Expense	$ 0	$1,288,000	$ (450,000)
Effective Income Tax Rate	0%	22%	35%

Well, these are interesting results with three distinct issues warranting further discussion.

1. No income tax expense is present for 2011 but yet HSI generated a profit. This is due to the fact that HSI had what's called a net operating loss (NOL) carry-forward available from a previous year to offset current year income taxes.
2. The effective income tax expense for 2012 of 22 percent is relatively low (compared to the highest federal and state income tax rates which combined, often reach 40 percent). The reason for this is that the company used a portion of its NOL to offset 2012 taxable income, along with using various tax credits received.
3. Notice a negative income tax expense or a benefit for 2013. Is this possible? Well the answer is yes, as what HSI is indicating is that the company is going to receive a refund of income tax expenses paid during 2012 by "carrying back" its 2013 loss to the previous year.

As for the liability side of the equation, it's important to note that the federal income tax law requires that a business make installment payments during the year so that close to 100 percent of its annual income tax should be paid by the end of the tax year (or shortly thereafter). Actually, a small amount of the total annual income tax may not be paid by year-end without any penalty (although this can get very complicated).

The company in this example paid most of its income taxes during the year. At year-end it still owes the federal and state tax authorities $429,000 of its annual income tax. The unpaid portion is reported in the *income tax payable* liability account, as you see in Exhibit 12.1.

In summary, it is important to note that the federal income tax law changes year to year. Congress is always tinkering with, or, shall we say, fine-tuning the tax code. Old loopholes are shut down; new loopholes open up. Tax rates have changed over time. For these reasons the fraction of annual income tax that is unpaid at year-end is hard to predict. However, if the year-end income tax liability were a large fraction of the income tax expense for the year, we'd advise you to take a closer look.

Accounting Issues and Our Case Study

The number of accounting issues associated with income taxes are, needless to say, extensive. So we attempt to summarize the primary areas of concern in three main subject areas:

1. Book/tax differences: A business may opt to use certain accounting methods to determine its annual taxable income that are different from the accounting methods used to report sales revenue and expenses in its GAAP income statement. Financial reporting standards require that the amount of income tax expense in the income statement be consistent with the amount of earnings before income tax in the income statement. The idea is to recognize a "normal" amount of income tax expense relative to the sales revenue and expenses above the income tax expense line (even if it is not currently due and payable). This normal amount of income tax is deducted to determine bottom-line net income after income tax.

   For example, suppose a business reports $10,000,000 earnings before income tax in its income statement, and that the normal income tax would be $3,500,000 on this amount of taxable income. However, the business uses different accounting methods for income tax, and its actual income tax owed for the year is only, say, $2,500,000. Further, let's assume that this difference is only temporary and will eventually reverse itself such that in future years the business will owe more income tax than will be reported in its future income statements.

   In this situation the business records the full $3,500,000 amount of income tax, even though it owes only $2,500,000 for the year. The additional $1,000,000 needed to get the income tax expense up to the full $3,500,000 normal amount is recorded in a *deferred income tax liability* account—on the grounds that sooner or later the business will have to pay the additional $1,000,000 to the government. This situation leads us to our next point.

2. Income tax classification on the balance sheet: As noted to start this chapter, income tax expense can impact multiple sections of the balance sheet. If income taxes are due at the end of the year for the current year income tax expense, then this remaining balance due would be classified as a *current liability*. If, however, a deferred income tax expense is present (as outlined in the previous bullet point), this may be recorded as a current liability or a *long-term liability* (if the eventual liability will be payable beyond 12 months). On the flip side, if an overpayment of income tax payments has been made and a refund is due, then this overpayment

would be treated as a *current asset* in the balance sheet. This may occur when a company made estimated income tax payments of say $1,000,000 and at the end of the year, actually only owed $800,000. The $200,000 would be recorded as a current asset that could be returned via a refund request or applied to the next year's income tax obligations. Finally, if a deferred income tax benefit is present (e.g., long-term tax credits available to the company, which will be used over a five-year period), then a *long-term asset* may be impacted by income tax expense (or in this case, benefit) in the balance sheet.

So to help readers of financial statements, a company's financial report should include a schedule reconciling the actual income tax owed for the year (based on taxable income for the year) with the normal income tax expense reported in the income statement. We regret to tell you that this is one of the most difficult schedules you'll find in financial reports.

3. Interpreting and changing rules and regulations: Rules and regulations are constantly changing as a result of numerous factors, but primarily based on economic considerations. These changes may occur at the federal, state, and/or local levels, as well as with GAAP (which frequently update accounting rules). To make matters worse, a number of rules and regulations are subject to a fairly wide range of "interpretations" by different parties. These types of uncertainties can create a number of problems including the situation where the amount of income tax expense recorded for the year and the corresponding balance sheet liability are subject to revision after the close of the year. The Internal Revenue Service (IRS) may have disagreements with the income tax returns filed by the business, which could lead to a revision to the income taxes due and even worse, lead to an IRS full-scale audit.

   I know it's hard to believe but some businesses may actually push the envelope in interpreting the income tax law for determining annual taxable income. Or on the other hand, a business may play it straight in how it reads the law. Even so, the income tax law is very complex and not clear-cut on many points. In short, there's always the possibility that the IRS may claim more income tax (or perhaps even make a refund).

There are many other problems in reporting income tax expense and income tax liabilities in business financial statements. These topics are very technical and beyond the scope of this book but do reinforce the concept that accounting for income tax expense is an example of the *conditional* and *tentative* nature of financial statements. The numbers reported in financial statements might seem to be the final word on profit performance for the year and financial condition at the end of the year. But, in fact, financial statements are always provisional and subject to later revision. If errors are found sometime after the financial statements were first released to stakeholders in the business, and if these errors resulted in material misstatements of profit, cash flows, or financial condition, then the business is obligated to correct the errors and reissue its financial statements for the periods affected by the errors. All too often restatements are the result of fraud that wasn't discovered until later.

We close this section with a comparison of our two case study companies' effective tax rates as summarized in Exhibit 12.3.

EXHIBIT 12.3—CASE STUDY COMPARISON—EFFECTIVE INCOME TAX RATE

Dollar Amounts in Thousands

Effective Income Tax Rate—HareSquared, Inc.	0%	22%	35%
	FYE	FYE	FYE
Effective Income Tax Rate—TortTech, Inc.	12/31/2011	12/31/2012	12/31/2013
Net Income before Tax	$(2,173,000)	$2,351,000	$1,204,000
Income Tax Expense	$ 0	$ 0	$ 0
Effective Income Tax Rate	0%	0%	0%

What's interesting about our comparison is the fact that TTI has not realized or paid one dollar of income tax expense for the three-year period of 2011 through 2013. Did they hire General Electric's tax accountants (a company well known for minimizing income tax liabilities)? I think not, as the answer is presented in Chapter 13 when we provide updates to our case study.

Part Three

FINANCIAL CAPITAL CONNECTIONS AND CASH FLOWS

13

OUR CASE STUDY—COMPANY UPDATES AND ASSESSMENTS

The Big Picture—Comparing Both Companies

To start our comparison we should note that it might be helpful to fast forward to Chapter 22, which discusses key financial statement ratios and performance measurements. A number of the ratios and measurements covered in this chapter are used as a base reference point when comparing the operating results of HSI and TTI.

Exhibit 13.1 provides a macro-level comparison of our two case study companies' operating results for the fiscal year ending 12/31/12. We've only summarized certain key operating results and trends for ease of presentation and to emphasize certain points. Please refer to Exhibits 13.2 to 13.3 later in this chapter for more detailed support on how the results in Exhibit 13.1 were calculated.

The long and short of our summary analysis appears to be straightforward. That is, with every measurement, HSI has outperformed TTI for the fiscal year ending 12/31/12 as noted below:

- Sales revenue for HSI of $38,281,000 compared to $31,977,000 for TTI (20 percent higher).
- Return on sales of 11.74 percent for HSI compared to 7.35 percent for TTI.
- Net income of $4,493,000 generating basic EPS of $6.42 for HSI compared to net income of $2,351,000 and basic EPS of $4.27 for TTI.
- HSI finished the year with a positive net working capital position of $7,646,000, a current ratio of 1.70, and a debt to equity ratio of 1.17. This compares to negative working capital of $2,779,000, a current ratio of .77, and a negative debt to equity ratio of 3.60 for TTI.

So a simple conclusion on the performance of each company should be relatively clear in that HSI's performance and outlook for the coming years is much better than TTI. But a word of caution is extended here as it relates to analyzing financial statements and the operating results of companies. Simply put, when evaluations, examinations, analyses, and so on are completed, they are almost always based on "historical" operating results and financial information. What has already happened! And while historical financial and operating information is important to analyze and understand, the Great Recession taught us just how quickly market conditions can change creating significant upheaval and quickly turn a company's fortunes into ruins, just like that. So the following tip is offered to assist you with gaining a more complete understanding of operating results by peeking into the future to gain more insight on the prospects of a business.

EXHIBIT 13.1—CASE STUDY COMPANIES COMPARATIVE OPERATING RESULTS FOR THE FYE 12/31/12

Dollar Amounts in Thousands

The Income Statement:	HareSquared, Inc.	TortTech, Inc.
Sales Revenue Growth Rate—CPAGR:	12/31/2012	12/31/2012
Sales Revenue, Net—2010	$ 9,207	$ 7,969
Sales Revenue, Net—2011	$18,412	$ 14,677
Sales Revenue, Net—2012	$38,281	$ 31,977
Compounded Annual Growth Rate	104%	100%
Return on Sales:		
Net Income	$ 4,493	$ 2,351
Sales Revenue, Net	$38,281	$ 31,977
Return on Sales	11.74%	7.35%
Return on Average Equity:		
Net Income	$ 4,493	$ 2,351
Average Equity—(End Balance Prior Year Plus End Balance Current Year)/2	$ 5,125	$ (4,280)
Return on Equity	87.68%	N/A
Earnings per Share Basic		
Net Income	$ 4,493	$ 2,351
Shares Outstanding	700	550
Basic Earnings per Share	$ 6.42	$ 4.27
The Balance Sheet:		
Net Working Capital:		
Total Current Assets	$18,593	$ 9,304
Total Current Liabilities	$10,947	$ 12,083
Net Working Capital	$ 7,646	$ (2,779)
Current Ratio:		
Total Current Assets	$18,593	$ 9,304
Total Current Liabilities	$10,947	$ 12,083
Current Ratio	1.70	0.77
Debt to Equity:		
Total Liabilities	$10,947	$ 13,883
Total Stockholders' Equity	$ 9,371	$ (3,854)
Debt to Equity Ratio	1.17	(3.60)

Tips, Tidbits, and Traps

Securing enough business accounting and financial information to prepare forward looking financial statements, or proformas as they are commonly referred to, is the key piece to the puzzle when evaluating the complete financial condition and prospects of a company. There's no doubt that understanding historical operating results and critical economic drivers of a business are important but the ability to take this understanding and build forecasts and projections to evaluate under what scenarios a business will survive and prosper versus under what conditions extreme financial stress will arise is the missing link with our current comparison of HSI and TTI.

Years ago, the idea was to build forecasts or projections assuming low-, medium-, and high-case operating scenarios. Well, one more scenario has now been added, which is simply referred to as *ARM*. This stands for Armageddon or what happens to a business when all hell breaks loose.

HareSquared, Inc. Update

Exhibit 13.2 presents HareSquared, Inc.'s (HSI) financial statements for the three-year comparison period for the fiscal years ending 12/31/10 through 12/31/12.

The following key financial statement highlights should be noted with HSI's results (reference the letter below to the letter in Exhibit 13.2 to understand the topic):

The Income Statement

A. Sales revenue: Very impressive sales revenue growth has been achieved from $9,207,000 in 2010 to $38,281,000 in 2012 (representing a compounded annual growth rate of 104 percent).

B. Net income and earnings per share: HSI's net income has improved from a net loss of $1,298,000 resulting in a negative earnings per share of $2.36 to a net profit of $4,493,000 resulting in a positive earnings per share of $6.42. Again, very impressive as the company's return on sales is 11.74 percent for 2012 resulting in an ROE, or return on average equity, of 87.68 percent.

The Balance Sheet

C. Working capital: HSI has a positive working capital balance of $7,646,000 at 12/31/12 and a current ratio of 1.70 to 1.00. Both relatively good and indicative of both a solvent and liquid company.

D. Long-term debt and stockholders' equity: HSI raised $4,000,000 in new equity in 2012 and repaid all long-term and short-term debt. This has helped reduce the company's financial leverage resulting in a debt to equity ratio of 1.17 to 1.00 at 12/31/12.

The Statement of Cash Flows

E. Net cash flow from operating activities: HSI generated $6,531,000 of cash flow from operating activities of which net income contributed $4,493,000 (or 69 percent of the total). Very strong results again.

F. Net increase (decrease) in cash and equivalents: In total, HSI increased its cash balances by $8,681,000 during the year of which the majority was generated from operating activities and the balance from financing activities. Wow! HSI's cash balances increased from just $372,000 at the end of 2011 to $9,053,000 at the end of 2012, an increase of more than 2,000 percent!

So in summary, HSI has strong revenue growth, high earnings, strong cash flow, but yet decided to raise more cash from selling

EXHIBIT 13.2—SUMMARY FINANCIAL STATEMENTS, THREE YEARS

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Years Ending
12/31/2012

Balance Sheet as of the Year-End		**12/31/2010**	**12/31/2011**	**12/31/2012**
Assets				
Current Assets				
Cash and Equivalents		$ 354	$ 372	$ 9,053
Accounts Receivable, Net		$ 1,350	$ 4,575	$ 6,800
Inventory, LCM		$ 495	$ 880	$ 2,640
Prepaid Expenses		$ 50	$ 75	$ 100
Total Current Assets	C	$ 2,249	$ 5,902	$18,593
Fixed Assets				
Property, Plant, and Equipment		$ 750	$ 1,000	$ 1,250
Accumulated Depreciation		$ (150)	$ (350)	$ (600)
Net Fixed Assets		$ 600	$ 650	$ 650
Other Assets				
Intangible Assets and Goodwill, Net		$ 2,000	$ 1,500	$ 1,000
Other Assets		$ 75	$ 75	$ 75
Total Other Assets		$ 2,075	$ 1,575	$ 1,075
Total Assets		$ 4,924	$ 8,127	$20,318
Liabilities and Stockholders' Equity				
Current Liabilities				
Accounts Payable		$ 406	$ 732	$ 1,323
Accrued Expenses		$ 216	$ 604	$ 945
Current Portion of Debt		$ 400	$ 400	$ 0
Other Current Liabilities		$ 1,500	$ 4,313	$ 8,679
Total Current Liabilities	C	$ 2,522	$ 6,049	$10,947
Long-Term Liabilities				
Notes Payable, Less Current Portion		$ 1,600	$ 1,200	$ 0
Other Long-Term Liabilities		$ 0	$ 0	$ 0
Total Long-Term Liabilities	D	$ 1,600	$ 1,200	$ 0
Total Liabilities		$ 4,122	$ 7,249	$10,947
Stockholders' Equity				
Capital Stock—800,000 Authorized, 550,000 Outstanding → 2010	D	$ 3,000	$ 3,000	$ 7,000
Retained Earnings		$(2,198)	$ (2,122)	$ 2,371
Total Owners' Equity	D	$ 802	$ 878	$ 9,371
Total Liabilities and Stockholders' Equity		$ 4,924	$ 8,127	$20,318

Income Statement for the Fiscal Year Ending		**12/31/2010**	**12/31/2011**	**12/31/2012**
Sales Revenue, Net	A	$ 9,207	$18,412	$ 38,281
Costs of Goods Sold		$ 4,755	$ 9,156	$ 17,950
Gross Profit		$ 4,452	$ 9,256	$ 20,331
Selling, General, and Administrative Expenses		$ 5,000	$ 8,400	$ 13,800
Depreciation and Amortization Expense		$ 650	$ 700	$ 750
Operating Earnings		$(1,198)	$ 156	$ 5,781
Other Expenses (Income)		$ 0	$ 0	$ 0
Interest Expense		$ 100	$ 80	$ 0
Net Income (Loss) before Income Taxes		$(1,298)	$ 76	$ 5,781
Income Tax Expense (Benefit)		$ 0	$ 0	$ 1,288
Net Income (Loss)	B	$(1,298)	$ 76	$ 4,493
Shares Outstanding		550	550	700
Earnings (Loss) Per Share	B	$ (2.36)	$ 0.14	$ 6.42

Statement of Cash Flows for the Fiscal Year Ending		**12/31/2010**	**12/31/2011**	**12/31/2012**
Net Income (Loss)		$(1,298)	$ 76	$ 4,493
Operating Activities, Cash Provided or Used:				
Depreciation and Amortization		$ 650	$ 700	$ 750
Decrease (Increase) in Accounts Receivable		$(1,350)	$ (3,225)	$ (2,225)
Decrease (Increase) in Inventory		$ (495)	$ (385)	$ 1,760)
Decrease (Increase) in Other Current Assets		$ (50)	$ (25)	$ (25)
Increase (Decrease) in Trade Payables		$ 406	$ 326	$ 591
Increase (Decrease) in Accrued Liabilities		$ 216	$ 388	$ 341
Increase (Decrease) in Other Liabilities		$ 1,500	$ 2,813	$ 4,366
Net Cash Flow from Operating Activities	E	$ (421)	$ 668	$ 6,531
Investing Activities, Cash Provided or Used:				
Capital Expenditures		$ (750)	$ (250)	$ (250)
Investments in Other Assets		$(2,575)	$ 0	$ 0
Net Cash Flow from Investing Activities		$(3,325)	$ (250)	$ (250)
Financing Activities, Cash Provided or Used:	D			
Dividends or Distributions Paid		$ 0	$ 0	$ 0
Sale (Repurchase) of Equity	D	$ 2,000	$ 0	$ 4,000
Proceeds from Issuance of Debt		$ 2,000	$ 0	$ 0
Repayments of Long-Term Debt	D	$ 0	$ (400)	$ (1,600)
Other Financing Activities		$ 0	$ 0	$ 0
Net Cash Flow from Financing Activities	F	$ 4,000	$ (400)	$ 2,400
Other Cash Flow Adjustments		$ 0	$ 0	$ 0
Net Increase (Decrease) in Cash and Equivalents	F	$ 254	$ 18	$ 8,681
Beginning Cash and Equivalents Balance		$ 100	$ 354	$ 372
Ending Cash and Equivalents Balance		$ 354	$ 372	$ 9,053

shares in the company, all without paying a dividend to the shareholders. Hmmmmh. An interesting strategy to say the least as with rapidly growing revenue, strong profitability, and ample liquidity, why would HSI raise $4,000,000 in new equity? Do they expect continued rapid growth and need the cash to finance the growth or is something else on the horizon?

Refer to the end of this chapter in the section entitled "What's Next?" to gain a glimpse of what HSI and TTI will have to deal with in 2013.

TortTech, Inc. Update

Exhibit 13.3 presents TortTech, Inc.'s (TTI) financial statements for the three-year comparison period for the fiscal years ending 12/31/10 through 12/31/12.

The following key financial statement highlights should be noted with TTI's results (reference the letter below to the letter in Exhibit 13.3 to understand the topic):

The Income Statement

A. Sales revenue: Similar to HSI, very impressive sales revenue growth has been achieved from $7,969,000 in 2010 to $31,977,000 in 2012 (representing a compounded annual growth rate of 100 percent).

B. Net income and earnings per share: HSI's net income has improved from a net loss of $2,173,000 resulting in a negative earnings per share of $3.95 to a net profit of $2,351,000 resulting in a positive earnings per share of $4.27. A solid showing as the company's return on sales amounted to 7.35 percent for 2012 (with the ROE or return on average equity not being calculated due to TTI's negative stockholders' equity balance).

The Balance Sheet

C. Working capital: TTI has a negative working capital balance of $2,779,000 at 12/31/12 and a current ratio of just .77 to 1.00. Neither represents a positive sign as short-term liquidity issues may be present for the company.

D. Long-term debt and stockholders' equity: In 2011, TTI secured a $2,000,000 bridge loan from company shareholders to support continued operations. The repayment terms for this note are based on the company earning at least $1,000,000 of net income, which requires an annual principal payment on the bridge loan of $1,000,000. TTI did not raise any new equity in 2012, repaid $1,400,000 of debt in 2012 ($1,000,000 for a bridge loan secured in 2011 and $400,000 for its regular annual debt service payment), and issued a dividend of $1,500,000 in 2012 as well. An interesting strategy by the company given that TTI's stockholders' equity remains negative as of the end of 2012, indicating the company may be insolvent.

The Statement of Cash Flows

E. Net cash flow from operating activities: TTI generated $3,875,000 of cash flow from operating activities of which net income contributed $2,351,000 (or 61 percent of the total). A solid showing and significant improvement over 2011.

F. Net increase (decrease) in cash and equivalents: In total, TTI increased its cash balances by just $725,000 during the year compared to producing net operating activity cash

EXHIBIT 13.3— SUMMARY FINANCIAL STATEMENTS, THREE YEARS

Dollar Amounts in Thousands

TortTech, Inc.
Audited Financial Statements
for the Fiscal Years Ending
12/31/2012

Balance Sheet as of the Year-End		12/31/2010	12/31/2011	12/31/2012
Assets				
Current Assets				
Cash and Equivalents		$ 383	$ 534	$ 1,259
Accounts Receivable, Net		$ 1,350	$ 2,025	$ 5,950
Inventory, LCM		$ 513	$ 684	$ 1,995
Prepaid Expenses		$ 50	$ 75	$ 100
Total Current Assets	C	$ 2,296	$ 3,318	$ 9,304
Fixed Assets				
Property, Plant, and Equipment		$ 750	$ 1,000	$ 1,250
Accumulated Depreciation		$ (150)	$ (350)	$ (600)
Net Fixed Assets		$ 600	$ 650	$ 650
Other Assets				
Intangible Assets and Goodwill, Net		$ 0	$ 0	$ 0
Other Assets		$ 75	$ 75	$ 75
Total Other Assets		$ 75	$ 75	$ 75
Total Assets		$ 2,971	$ 4,043	$ 10,029
Liabilities and Stockholders' Equity				
Current Liabilities				
Accounts Payable		$ 515	$ 683	$ 1,219
Accrued Expenses		$ 238	$ 340	$ 839
Current Portion of Debt		$ 400	$ 400	$ 400
Other Current Liabilities		$ 2,750	$ 4,125	$ 9,625
Total Current Liabilities	C	$ 3,903	$ 5,548	$ 12,083
Long-Term Liabilities				
Notes Payable, Less Current Portion		$ 1,600	$ 1,200	$ 800
Other Long-Term Liabilities		$ 0	$ 2,000	$ 1,000
Total Long-Term Liabilities	D	$ 1,600	$ 3,200	$ 1,800
Total Liabilities		$ 5,503	$ 8,748	$ 13,883
Stockholders' Equity				
Capital Stock—800,000 Authorized, 550,000 Outstanding → 2010	D	$ 3,000	$ 3,000	$ 3,000
Retained Earnings (Deficit)		$(5,532)	$(7,705)	$ (6,854)
Total Owners' Equity	D	$(2,532)	$ 4,705	$ (3,854)
Total Liabilities and Stockholders' Equity		$ 2,971	$ 4,043	$ 10,029

Income Statement for the Fiscal Year Ending		12/31/2010	12/31/2011	12/31/2012
Sales Revenue, Net	A	$ 7,969	$14,677	$ 31,977
Costs of Goods Sold		$ 4,851	$ 7,980	$ 16,966
Gross Profit		$ 3,118	$ 6,697	$ 15,011
Selling, General, and Administrative Expenses		$ 7,500	$ 8,400	$ 12,300
Depreciation and Amortization Expense		$ 150	$ 200	$ 250
Operating Earnings		$(4,532)	$ (1,903)	$ 2,461
Other Expenses (Income)		$ 0	$ 0	$ 0
Interest Expense		$ 100	$ 270	$ 110
Net Income (Loss) before Income Taxes		$(4,632)	$ (2,173)	$ 2,351
Income Tax Expense (Benefit)		$ 0	$ 0	$ 0
Net Income (Loss)	B	$(4,632)	$ (2,173)	$ 2,351
Shares Outstanding		550	550	550
Earnings (Loss) Per Share	B	$ (8.42)	$ (3.95)	$ 4.27

Statement of Cash Flows for the Fiscal Year Ending		12/31/2010	12/31/2011	12/31/2012
Net Income (Loss)		$(4,632)	$ (2,173)	$ 2,351
Operating Activities, Cash Provided or Used:				
Depreciation and Amortization		$ 150	$ 200	$ 250
Decrease (Increase) in Accounts Receivable		$(1,350)	$ (675)	$ (3,925)
Decrease (Increase) in Inventory		$ (513)	$ (171)	$ (1,311)
Decrease (Increase) in Other Current Assets		$ (50)	$ (25)	$ (25)
Increase (Decrease) in Trade Payables		$ 515	$ 168	$ 536
Increase (Decrease) in Accrued Liabilities		$ 135	$ 68	$ 392
Increase (Decrease) in Other Liabilities		$ 2,853	$ 1,409	$ 5,607
Net Cash Flow from Operating Activities	E	$(2,892)	$ (1,199)	$ 3,875
Investing Activities, Cash Provided or Used:				
Capital Expenditures		$ (750)	$ (250)	$ (250)
Investments in Other Assets		$ (75)	$ 0	$ 0
Net Cash Flow from Investing Activities		$ (825)	$ (250)	$ (250)
Financing Activities, Cash Provided or Used:				
Dividends or Distributions Paid	D	$ 0	$ 0	$ (1,500)
Sale (Repurchase) of Equity	D	$ 2,000	$ 0	$ 0
Proceeds from Issuance of Debt	D	$ 2,000	$ 2,000	$ 0
Repayments of Long-Term Debt	D	$ 0	$ (400)	$ (1,400)
Other Financing Activities		$ 0	$ 0	$ 0
Net Cash Flow from Financing Activities	F	$ 4,000	$ 1,600	$ (2,900)
Other Cash Flow Adjustments		$ 0	$ 0	$ 0
Net Increase (Decrease) in Cash and Equivalents	F	$ 283	$ 151	$ 725
Beginning Cash and Equivalents Balance		$ 100	$ 383	$ 534
Ending Cash and Equivalents Balance		$ 383	$ 534	$ 1,259

flow of a positive $3,875,000. So basically, the company consumed $3,150,000 of operating cash flow in its financing activities which was primarily centered in paying a dividend of $1,500,000 and repaying debt of $1,400,000. Wow, but for the opposite reasons from HSI! That is, TTI elected to deploy its cash balances to provide a return to the shareholders and repay debt.

So to summarize TTI's strategy, it's clear the company has a different outlook for 2013 than HSI given how it has distributed capital (to external parties rather reserved to support internal operating needs) resulting in a balance sheet that has considerably more financial "stress" than HSI. By stress we mean the company's financial leverage is higher and has fewer assets to support required debt payments. TTI appears to be anticipating a relatively stable operating environment with continued growth, solid (but not spectacular) positive operating cash flow, and strong earnings.

Note: Refer to the section titled "What's Next?" to gain a glimpse of what HSI and TTI will have to deal with in 2013.

What's Next?

Both HSI and TTI had solid 2012 operating performances punctuated by increased revenue, impressive earnings and EPS, and strong internal cash flows. But although there are plenty of similarities between the income statements for both companies, the ending balance sheets paint a different picture.

HSI's balance sheet is relaying one of the following messages:

- Rapid internal or organic growth: Significant increases in sales revenue are being forecast and the company needs cash resources to support rapid growth in accounts receivable, inventory, and internal product research and development. Seems reasonable given the rapid growth the company has realized over the past two years.
- Growth driven from external sources: Quite possibly, the company might be anticipating a slowdown from sales revenue generated from its proprietary software and associated products and is anticipating looking to buy or acquire a business to fuel growth (and offer its customers a broader range of products and technology solutions). Under this scenario, the company would need access to additional cash and debt resources to complete acquisitions.
- Trouble ahead: Or maybe the company sees a challenging environment ahead, one where sales revenue is anticipated to decrease due to industry or general economic turmoil, product lifecycles are turning over quicker than anticipated resulting in expanded product investments being required, and as a result, a strong balance sheet will be required to manage through a challenging period.

One thing appears certain is that based on the company's historical performance and balance sheet position as of the end of 2012, HSI is anticipating a very active and volatile market moving forward (as companies are in business to deploy cash to drive above average investment returns to the shareholders rather than hold cash and invest it in U.S. Treasuries).

For TTI, the opposite appears to hold (as it relates to the last two messages) as the balance sheet does not appear to be structured to support potential growth strategies through external acquisitions or to weather a potential economic storm. TTI may still be anticipating future growth, which will be supported in a similar fashion to previous years (i.e., billing customers in advance for a one-year software license and recording a large amount of deferred revenue in other current liabilities) but does not appear to be anticipating much volatility.

So who's right? Tune into Chapter 24 for further information to see how HSI and TTI compare when 2013's results are evaluated (spoiler alert, significant changes are realized).

14

LONG-TERM ASSETS AND DEPRECIATION, AMORTIZATION, AND OTHER EXPENSES

A Brief Review of Expense Accounting

To start this chapter, a refresher on expense accounting in the financial statement is warranted and based on the *timing* for recording expenses—to record expenses in the correct period, nether too soon or too late. The two overriding principles for recording expenses are as follows:

- ***First, match expenses with sales revenue:*** Cost of goods sold expense, sales commissions expense, and any other expense directly connected with making particular sales are recorded in the same period as the sales revenue. This is straightforward; all direct expenses of making sales should be matched against sales revenue. It would be foolhardy to put revenue in one period and the expenses of that revenue in another period. You agree, don't you?
- ***Second, match other expenses with the period benefited:*** Many expenses are not directly identifiable with particular sales, such as office employees' salaries, rental of warehouse space, computer processing and accounting costs, legal and audit fees, interest on borrowed money, and many more. Nondirect expenses are just as necessary as direct expenses. But nondirect expenses cannot be matched with particular sales. Therefore, nondirect expenses are recorded in the period in which the benefit to the business occurs.

As we look back through the book thus far, we see that Chapter 4 explains that the recording of an expense involves the decrease of an asset or the increase of a liability. Chapter 8 explains the use of the inventory asset account to hold the cost of products that are manufactured or purchased until the goods are sold, at which time cost of goods expense is recorded and the inventory asset account is decreased (a decrease in an asset). Chapter 10 explains the use of the accounts payable liability account to record unpaid costs that should be recorded as expenses in the current period (or an increase in a liability).

This chapter explains that the costs of the long-lived operating assets of a business, tangible or intangible, in theory should be recorded to expense over the span of their useful lives. Tangible assets (i.e., machinery, equipment, buildings, computers, furniture, fixtures, but with the exception of land) tend to gradually lose their usefulness to a business over time. The allocation of the cost of tangible long-term operating assets to expense over the useful life of the asset is called *depreciation*.

Intangible assets (i.e., goodwill, patents, intellectual property, long-term licenses) also lose their usefulness to a business over time but quite often, in a different manner. That is, machinery purchased to support the manufacturing of various products over an extended time period might be depreciated in equal, pro-rata amounts on an annual basis (e.g., $500,000 piece of equipment

might be depreciated over 10 years at a rate of $50,000 per year). For intangible assets, the implied or inherent value of these assets can change dramatically from one year to the next and as such, an intangible asset that originally was thought to have a useful life of say 15 years, might all of a sudden have to be written down or off after three years because it became worthless. You see this quite often with intellectual property, such as with a patent that no longer has any value because another company invented a new and improved method (making the patent obsolete). Another perfect example resides with what is commonly referred to as *goodwill* (often resulting from the purchase of a business at a price far greater than the net recorded value of its assets).

The allocation of the cost of intangible long-term operating assets to expense over the useful life of the asset is called *amortization*. This is really not much different than depreciation in theory but it needs to be remembered that amortization expense generally relates to intangible assets and depreciation expense relates to tangible assets. In accounting, depreciation or amortization means the multiyear *allocation of the costs of long-term assets* as an expense on a periodic basis.

Through the remainder of this chapter, our attention focuses on both tangible and intangible assets as the latter has become much more prevalent over the past 30 years as the U.S. economy has migrated from a manufacturing base to an informational/technology/service base.

Fixed Assets and Depreciation Expense

Please refer to Exhibit 14.1, which shows the connections between *property*, *plant*, *and equipment* in the balance sheet and *depreciation expense* in the income statement, and from depreciation expense back to *accumulated depreciation* in the balance sheet. In brief, the costs of the company's long-term operating assets are allocated (in theory) over their estimated economic lives, and the periodic depreciation expense is accumulated in a separate contra (offset) account that is deducted from the cost of the assets.

Critical Terminology Alert

It is important for readers to understand the difference between an operating lease versus a capital lease. In our example, HSI needs certain specialized machinery, equipment, and tools that are rented under multiyear lease contracts (typically three to seven years). Legally the business doesn't own the leased assets. As such, the monthly rents paid on these leases are charged to expenses on a periodic basis. In addition, leased assets are not reported in a company's balance sheet as an asset because HSI does not own the assets. This is what is known as an *operating lease*, which although is not reported as an asset in the balance sheet, disclosure of rental payment commitments of its operating leases should be present in the footnotes to its financial statements.

A capital lease is present when the legal and economic risk of ownership of the leased asset does in fact belong to the lessor. For example, a lease may be structured with 60 equal monthly payments and then one final payment for $1 (to purchase the asset at the end of the lease). This is what is commonly referred to as a *dollar out* lease, which is basically nothing more than an alternative way of the lessor effectively buying the equipment on an installment basis (as what company wouldn't pay one additional dollar to own the equipment).

The key difference between a capital lease and an operating lease is that the capital lease must be recorded as an asset and liability, or debt, on the balance sheet, with the asset then depreciated over its useful life and the value of the debt reduced over the life of the payments (with interest calculated). You may ask why companies even care about this issue, well the answer lies in the perception of a company's financial statements by external parties. That is, the more capitalized leases present, the more assets and debt a company has to report, which in turn gives the appearance that the company is taking on too much debt and is overly leveraged. This would raise a flag with external parties and could create negative comments/reviews if debt levels grow too high. (*Note:* Accounting rule-makers are currently considering a proposal to report most leases in the balance sheet as an asset with a corresponding liability for future rental payments.)

EXHIBIT 14.1—DEPRECIATION AND AMORTIZATION EXPENSE AND LONG-TERM ASSETS

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2011

Income Statement for the Fiscal Year Ending	12/31/2011
Sales Revenue, Net	$18,412
Costs of Goods Sold	$ 9,156
Gross Profit	$ 9,256
Selling, General, and Administrative Expenses	$ 8,400
Depreciation and Amortization Expense:	
Depreciation Expense	$ 200
Amortization Expense	$ 500
Operating Earnings	$ 156
Other Expenses (Income)	$ 0
Interest Expense	$ 80
Net Income (Loss) before Income Taxes	$ 76
Income Tax Expense (Benefit)	$ 0
Net Income (Loss)	$ 76

Notice two key connections as follows:
— Depreciation expense of $200k resulted in a corresponding increase in accumulated depreciation of $200k between 2010 and 2011.
— Amortization expense of $500k resulted in a corresponding net decrease in intangible assets & goodwill of $500k between 2010 and 2011.

Balance Sheet as of the Year-End Assets	12/31/2010	12/31/2011
Current Assets		
Cash and Equivalents	$ 354	$ 372
Accounts Receivable, Net	$ 1,350	$ 4,575
Inventory, LCM	$ 495	$ 880
Prepaid Expenses	$ 50	$ 75
Total Current Assets	$ 2,249	$ 5,902
Fixed Assets		
Property, Plant, and Equipment	$ 750	$ 1,000
Accumulated Depreciation	$ (150)	$ (350)
Net Fixed Assets	$ 600	$ 650
Other Assets		
Intangible Assets and Goodwill, Net	$ 2,000	$ 1,500
Other Assets	$ 75	$ 75
Total Other Assets	$ 2,075	$ 1,575
Total Assets	$ 4,924	$ 8,127
Liabilities and Stockholders' Equity		
Current Liabilities		
Accounts Payable, Inventory	$ 223	$ 403
Accounts Payable, Operating Expenses	$ 183	$ 329
Accrued Expenses	$ 216	$ 604
Current Portion of Debt	$ 400	$ 400
Other Current Liabilities	$ 1,500	$ 4,313
Total Current Liabilities	$ 2,522	$ 6,049
Long-Term Liabilities		
Notes Payable, Less Current Portion	$ 1,600	$ 1,200
Other Long-Term Liabilities	$ 0	$ 0
Total Long-Term Liabilities	$ 1,600	$ 1,200
Total Liabilities	$ 4,122	$ 7,249
Stockholders' Equity		
Capital Stock—800,000 Authorized, 550,000 Outstanding → 2011	$ 3,000	$ 3,000
Retained Earnings	$(2,198)	$(2,122)
Total Owners' Equity	$ 802	$ 878
Total Liabilities and Stockholders' Equity	$ 4,924	$ 8,127

The company in our example also owns long-term operating assets including furniture and fixtures, computers, forklifts and shelving in the warehouse, and automobiles used by its salespersons. The business buys these assets, uses them for several years, and eventually disposes of them. Because of their long-term nature, accountants call them *fixed assets*, although this term is not used in the formal financial statements of a business.

The long-term operating assets owned by a business usually are grouped into one inclusive account for balance sheet reporting. One common title is *Property, Plant, and Equipment*, which we use. (A detailed breakdown of fixed assets may be disclosed in a footnote to the financial statements, or in a separate schedule.) At the end of its most recent year, the business reports that the total cost of its fixed assets (property, plant, and equipment) is $1,000,000—see Exhibit 14.1. This amount is the total of the original costs of its fixed assets, or how much they cost when the business bought them.

Fixed assets are used for several years, but eventually they wear out or lose their utility to a business. In short, these assets have a limited life span—they don't last forever. For example, delivery trucks may be driven 200,000 or 300,000 miles, but are replaced eventually.

The cost of a delivery truck, for instance, is prorated over the years of expected use to the business. How many years, exactly? A business has its experience to go on in estimating the useful lives of fixed assets. In theory, a business should make the most realistic forecast possible regarding how long each fixed asset will be used, and then spread the asset's cost over this life span. However, theory doesn't count for much on this score. Most businesses turn to the federal income tax code and regulations for the useful lives of their fixed assets, because these lives are permitted for calculating the depreciation expense amounts that can be deducted in their federal income tax returns.

In the federal income tax system, every kind of fixed asset is given a minimum life over which its cost can be depreciated. The cost of land is not depreciated, on grounds that land never wears out and has a perpetual life. (The market value of a parcel of real estate can fluctuate over time; and floods and earthquakes can destroy land—but that's another matter.)

The federal income tax permits (but does not require) *accelerated depreciation* methods. The term *accelerated* means two different things. First, for income tax, fixed assets can be depreciated over lives that are considerably *shorter* than their actual useful lives. For example, automobiles and light trucks can be depreciated over five years even though these fixed assets typically last longer than five years (except perhaps taxicabs in New York City). Buildings placed in service after 1993 can be depreciated over 39 years, but most buildings stand longer. In writing the income tax law, Congress decided that allowing businesses to depreciate their fixed assets faster than they actually wear out is good economic policy.

Second, "accelerated" means *front-loaded*; more of the cost of a fixed asset is depreciated in the first half of its useful life than in its second half. Instead of a level, uniform amount of depreciation expense year to year (which is called the *straight-line* method), the income tax law allows a business to deduct higher amounts of depreciation expense in the front (early) years and less in the back (later) years.

A business can reduce its taxable income in the early years of its fixed assets by choosing accelerated depreciation methods. But these effects don't necessarily mean it's the best depreciation method in theory or in actual practice. Accelerated depreciation methods, given the imprimatur of the income tax code, are very popular.

A business must maintain a depreciation schedule for each of its fixed assets and keep track of original cost and how much

depreciation expense is recorded each year. Only cost can be depreciated. Once the total cost of a fixed asset has been depreciated, no more depreciation expense can be recorded. At this point, the fixed asset is fully depreciated even though it still may be used several more years.

In our company example, the depreciation expense for its most recent year is $200,000—see Exhibit 14.1. Its fixed assets (e.g., trucks, computers, equipment) are being depreciated using a straight-line method.

The amount of depreciation expense charged to each year is quite arbitrary compared with most other operating expenses. The main reason is that useful life estimates are arbitrary. For a six-month insurance policy, there's little doubt that the total premium cost should be allocated over exactly six months. But long-lived operating assets such as office desks, display shelving, file cabinets, computers, and so on present much more difficult problems. Past experience is a good guide but leaves a lot of room for error.

Given the inherent problems of estimating useful lives, financial statement readers are well advised to keep in mind the consequences of adopting ultraconservative useful life estimates. If useful life estimates are too short (the assets are actually used many more years), then depreciation expense is recorded too quickly. Keep this point in mind.

A business is allowed to keep two sets of depreciation books. It could depreciate fixed assets over short lives for income tax, and use longer, more realistic lives for financial reporting. However, most businesses use the income tax depreciation lives in their financial statements (especially for smaller businesses that don't want the hassle of maintaining two sets of accounting records). Rapid (accelerated) depreciation is the norm in financial reporting.

Recording depreciation expense does *not*—we repeat, does *not*—decrease cash; cash is not involved in recording depreciation. Rather, recording depreciation expense has the effect of decreasing a fixed asset. To understand this point, you have to understand the accumulated depreciation account, which we explain next.

The amount of depreciation each period is *not* recorded directly as a decrease in the fixed asset account. Yet, decreasing the asset account would seem to make sense because the whole point of depreciation is to recognize the wearing out of the fixed asset over time. So, why not decrease the fixed asset account?

Well, the universal practice throughout the accounting world is to accumulate depreciation expense in a companion account called *accumulated depreciation.* This account does what its name implies—it accumulates, period by period, the amounts recorded as depreciation expense. In Exhibit 14.1, notice that the balance in this account at the end of the company's most recent year is $350,000.

Compared to the $1,000,000 cost of its fixed assets, the accumulated depreciation balance indicates that the company's fixed assets are not very old. Furthermore, the company recorded $200,000 depreciation expense in its most recent year. At this clip, roughly two years' depreciation has been recorded on its property, plant, and equipment (fixed assets).

As you see in Exhibit 14.1, the balance in accumulated depreciation is deducted from the original cost of fixed assets. In our business example, the $1,000,000 cost of fixed assets minus the $350,000 accumulated depreciation equals $650,000. Cost less accumulated depreciation is referred to as the *net book value* of fixed assets.

Generally the entire cost of a fixed asset is depreciated, assuming the business holds on to the asset until the end of its depreciation life. In one sense, book value represents future depreciation expense, although a business may dispose of some of its fixed assets before they are fully depreciated. (And keep in mind that the cost of land, which is included in the property, plant, and equipment account, is not depreciated.)

Finally, remember that the $350,000 accumulated depreciation balance is the total depreciation that has been recorded during all years the fixed assets have been used. It's not just the depreciation expense from the most recent year.

After recording depreciation expense for its most recent year, the book value of the company's long-term operating (fixed) assets is $650,000 (see Exhibit 14.1). Suppose that the business could determine the current replacement costs at the balance sheet date of the same exact fixed assets in the same used condition. (This might not be entirely realistic.)

Would you expect that the current market replacement costs would be exactly the same as the book values of the fixed assets? Chances are that the current replacement costs would be higher than the book value of the fixed assets—due to general inflation and the use of accelerated depreciation methods.

The original costs of fixed assets reported in a balance sheet are not meant to be indicators of the current replacement costs of the assets. Original costs are the amounts of capital invested in the assets that should be recovered through sales revenue over the years of using the assets in the operations of the business. Depreciation accounting is a cost-recovery-based method—not a mark-to-market method. In short, fixed asset accounting does not attempt to record changes in current replacement cost.

We should point out that business managers shouldn't ignore the current replacement values of their fixed assets. Fixed assets can be destroyed or damaged by fire, flooding, riots, terrorist acts, tornadoes, explosions, and structural failure. Quite clearly, business managers should be concerned about insuring fixed assets for their current replacement costs. However, in financial reporting a business does not write up the recorded value of its fixed assets to reflect current replacement costs. (There's no rule prohibiting the disclosure of the estimated current replacement costs of its fixed assets, but businesses don't do this.)

You see criticism of financial statement accounting on grounds that depreciation expense is based on the historical cost of fixed assets—instead of current replacement costs. Someday Congress might consider changing the income tax law to allow replacement-cost-basis depreciation (without taxing the gain from writing up fixed assets to their higher replacement costs). We don't see any evidence of Congress making such a radical change in the federal income tax.

We must admit, though, that anything is possible regarding fixed-asset depreciation within the federal income tax law. For instance, we would not be surprised if Congress were to change the useful lives of fixed assets for business income tax purposes—which Congress has done in the past. But Congress has not been willing to abandon the actual cost basis for fixed-asset depreciation.

Intangible Assets and Amortization Expense

So far in the chapter we have focused on the depreciation of *tangible* fixed assets. Many businesses invest in *intangible* assets, which have no physical existence. You can't see or touch these assets. For example, a business may purchase a valuable patent that it will use in its production process over many years. Or a business may buy an established trademark that is well known among consumers. When a business buys patents or trademarks, the costs of these particular assets are recorded in long-term asset accounts called *Patents* and *Trademarks*. Further, a business may "capitalize" research expenditures that lead to the development of intangible assets. A perfect example of this is based on our case study as supported by Exhibit 14.1 as HSI has a large intangible asset recorded on the balance sheet ($2,000,000 at the end of 2010 and $1,500,000 at the end of 2011).

At the present time, accounting standards for intangible assets are not quite as defined as with tangible assets when requiring the systematic allocation of the cost of an intangible asset to expense (called *amortization* expense). In some cases, such as the value of an acquired patent that has only 12 years of protected life left, a company may elect to amortize the cost of the patent over 12 years using a straight line basis. For a value assigned to a three-year noncompete agreement, that value would be amortized over three years. Countless examples of differing amortization policies could be cited from different companies but the primary principal remains the same. That is, the value associated with the intangible asset should be amortized into expense over the estimated economic useful life of the asset.

In our case study example for HSI, the company originally capitalized $2,500,000 of technology development costs incurred for the enterprise solution software it sells to the market. Further, HSI has elected to amortize this intangible asset over a period of five years at a rate of $500,000 as the company has estimated its product will have a five-year useful life. Thus after two full years of amortization, the intangible asset's net value has been reduced from $2,500,000 to $1,500,000 (as two years of amortization expense has been recorded at $500,000 per year). And one final point of note relates to how the intangible asset is reported on the balance sheet. Unlike tangible fixed assets (where the gross cost is presented and then reduced by accumulated depreciation), intangible assets tend to be presented in a "net" fashion (which simply means the original gross cost is reduced by accumulated amortization to offer a net value). This is generally the prepared method for most companies to report intangible asset values.

Most intangible asset types fall into the category previously discussed (i.e., what is commonly referred to as *intellectual property* (IP), which captures everything from patents to trademarks to trade secrets and other internally developed intangible assets) or the second primary type, which is centered on business acquisitions.

Tips, Tidbits, and Traps

Business acquisitions are usually structured along one of two methods—an asset deal or a stock deal (or a merger). Exploring these two types of acquisition strategies in detail is beyond the scope of this book but most readers should understand the basic differences between these two types of acquisitions as there are numerous pros and cons with each type. However, the general rule of thumb is that for larger transactions, which involve publicly traded entities and more reliable business information, a stock deal is preferred. For smaller transactions that involve private companies and less reliable business information, asset deals are preferred.

When a business purchases another going business as a whole or in parts, and pays more than the sum of its identifiable assets (minus its liabilities), an intangible asset is created. Often the company to be acquired has been in business for many years and it has built up a trusted name, reputation, and above all, the ability to contribute to ongoing earnings growth (i.e., has strong cash flow). It may have a large list of loyal customers that will continue to buy the company's products in the future. The experience and loyalty of the acquired company's employees may be the main reason to pay for more than the identifiable assets being acquired in the purchase of the business. Or the business being bought out may have secret processes and product formulas that give it a strong competitive advantage (i.e., trade secrets).

There are many reasons to pay more for an established, going-concern business than just the sum of its identifiable assets (minus the liabilities being assumed when buying the business). When a business pays more than the sum of the specific assets (less liabilities) of the business being acquired, the excess is generally recorded in the asset account called *goodwill*. Whether to systematically charge off the cost of goodwill and other intangible assets has been a vexing issue over the years. We won't bore you here with an extended discussion of the various arguments but instead leave you with this thought.

Real World Story

When an intangible asset such as goodwill has suffered an observable loss of value, a business should (and we emphasize *should* here as some companies avoid dealing with this issue for "earnings" reasons) make an entry to write down the recorded value of the intangible asset. Businesses should make yearly assessments of whether their intangible assets have been impaired and, if so, record an expense for the effect of the impairment. To understand just how painful this can be, please review Hewlett Packard's acquisition of Autonomy, which resulted in an $8.8 billion asset write-down.

Accounting Issues and Our Case Study

There's a multitude of accounting problems regarding the depreciation of long-term operating assets, as well as other accounting problems concerning fixed assets. A company's fixed assets are typically a sizable part of its total assets, so these accounting problems are important.

- What should be capitalized? There are accounting problems in drawing the line between the costs of routine maintenance of fixed assets, which should be expensed as you go, versus major outlays that extend the life or improve the appearance or efficiency of fixed assets. The costs of major improvements should be recorded in the fixed asset account and depreciated over future years. Similar issues are present with intangible assets such as determining what costs should be capitalized with the development of a major software development project versus what should be expensed and routine updates and upgrades.
- What expense period should be used? What is correct? While it would be easy to use a straight-line, five-year depreciation period for all fixed assets or base depreciation expense on tax rules, this may not be the most appropriate method. Many books have been written on the theory of depreciation, arguing the merits of different methods. As we mention in the chapter, most businesses resort to the income tax ground rules for depreciating their fixed assets. This is a practical and expedient answer to depreciation accounting questions but doesn't necessarily mean it is the correct method (just convenient and easy to defend).
- When should asset impairments be recorded? A business should write down a fixed asset if its economic value has become impaired. An airline, for example, could have surplus jets that it no longer needs, or a manufacturer may shut down an entire plant because of a falloff in demand for the products made in the plant. When a business has excess capacity, it should take a hard look at whether its fixed assets should be written down. Making write-downs of fixed assets due to loss of economic value is painful, and can put a big dent in profit, and herein lies a key problem. Nobody ever wants to surprise external parties (i.e., the Street or Wall Street) with poor operating results so more than a few companies have somewhat manipulated asset impairments and recording to meet external expectations.

  Another example is based in a situation where a business may self-insure some of its fixed assets, instead of buying casualty insurance coverage, making it vulnerable to huge write-offs if it suffers an actual loss. When a business self-insures its fixed assets, should it record an estimated expense each year for a future loss that hasn't yet happened, and may never happen? Most businesses do not.

In summary, there are many serious accounting problems surrounding fixed assets. Therefore, a business definitely should explain its depreciation and other fixed asset accounting policies in the footnotes to its financial statements. Also, a company should disclose how it accounts for its intangible assets, especially when it makes a major write-down in one or more of these assets during the year.

In Chapter 8 we argue that the company's cost of goods sold expense accounting method should be consistent with how the business sets sales prices. Likewise, we would argue that choosing the depreciation expense method should be guided mainly by the number of years over which the business plans to recoup the costs invested in its fixed assets through sales revenue. If the business adopts a sales pricing policy for recapturing the cost of a fixed asset over, say, 20 years, we would argue that a 20-year depreciation life should be used. But it may depreciate the cost over 10 years, as permitted by the income tax law. Talk about a mismatch between sales revenue and expenses!

As for our case study, you can see from Exhibit 14.2 that depreciation expense is consistent between the two companies over the past three years but amortization expense is vastly different. The reason is simple and can be found in Chapter 6 when we presented our two companies as if you recall, HSI capitalized its software development costs (thus making it subject to future amortization) whereas TTI expensed all software development costs in the year incurred. Thus, TTI has no intangible asset balances that require amortization expense to be realized on a periodic basis.

EXHIBIT 14.2 CASE STUDY COMPARISON—DEPRECIATION AND AMORTIZATION EXPENSE

Dollar Amounts in Thousands

HareSquared, Inc.	12/31/2010	12/31/2011	12/31/2012
Depreciation Expense	$150,000	$200,000	$250,000
Amortization Expense	$500,000	$500,000	$500,000
Asset Impairment Expense	$ 0	$ 0	$ 0
Total	$650,000	$700,000	$750,000
TortTech, Inc.			
Depreciation Expense	$150,000	$200,000	$250,000
Amortization Expense	$ 0	$ 0	$ 0
Asset Impairment Expense	$ 0	$ 0	$ 0
Total	$150,000	$200,000	$250,000

15

LONG-TERM LIABILITIES, INTEREST, AND OTHER EXPENSES

Debt, Debt, and More Debt—Multiple Financial Report Connections

Unless you've had your head in the sand during the past five years, everyone realizes that the world is awash in debt. Public debt (now more than $17 trillion just for the United States federal government) is growing at alarming rates, which has more than a few world leaders concerned.

But our job in this chapter isn't to address the moral, economic, and political implications of how a country such as the United States will be able to manage its debt levels, rather our goal is to focus on the multiple financial statement connections between the different types of debt and interest expense. But we couldn't really leave this subject without providing one more reference, this time to not just the stated United States public debt level of $17 trillion but to the real debt level, when all guarantees, commitments, and contingencies are actually accounted for.

This chapter helps the reader understand total long-term debt, both debt that has been secured in a formal manner (such as business lines of credit and notes payable supported by legal agreements/documentation) and debt that is considered more of a contingency or commitment.

EXHIBIT 15.1— INTEREST EXPENSE, NOTES PAYABLE, AND CURRENT PORTION OF DEBT

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2011

Income Statement for the Fiscal Year Ending	12/31/2011
Sales Revenue, Net	$18,412
Costs of Goods Sold	$ 9,156
Gross Profit	$ 9,256
Selling, General, and Administrative Expenses	$ 8,400
Depreciation and Amortization Expense:	
Depreciation Expense	$ 200
Amortization Expense	$ 500
Operating Earnings	$ 156
Other Expenses (Income)	$ 0
Interest Expense	$ 80
Net Income (Loss) before Income Taxes	$ 76
Income Tax Expense (Benefit)	$ 0
Net Income (Loss)	$ 76

Focus on two key connections as follows:
– Interest expense of $80,000 in 2011 resulted in an accrued interest liability of $15,000 representing the portion of interest incurred in 2011 but paid in 2012.
– The debt balances highlighted in grey represent both the current portion of debt due within the next 12 months and the long-term portion due past one year.

Balance Sheet as of the Year-End **Assets**	**12/31/2010**	**12/31/2011**
Current Assets		
Cash and Equivalents	$ 354	$ 372
Accounts Receivable, Net	$ 1,350	$ 4,575
Inventory, LCM	$ 495	$ 880
Prepaid Expenses	$ 50	$ 75
Total Current Assets	$ 2,249	$ 5,902
Fixed Assets		
Property, Plant, and Equipment	$ 750	$ 1,000
Accumulated Depreciation	$ (150)	$ (350)
Net Fixed Assets	$ 600	$ 650
Other Assets		
Intangible Assets and Goodwill, Net	$ 2,000	$ 1,500
Other Assets	$ 75	$ 75
Total Other Assets	$ 2,075	$ 1,575
Total Assets	$ 4,924	$ 8,127
Liabilities and Stockholders' Equity		
Current Liabilities		
Accounts Payable, Inventory	$ 223	$ 403
Accounts Payable, Operating Expenses	$ 183	$ 329
Accrued Expenses, Operating	$ 196	$ 589
Accrued Expenses, Interest	$ 20	$ 15
Current Portion of Debt	$ 400	$ 400
Other Current Liabilities	$ 1,500	$ 4,313
Total Current Liabilities	$ 2,522	$ 6,049
Long-Term Liabilities		
Notes Payable, Less Current Portion	$ 1,600	$ 1,200
Other Long-Term Liabilities	$ 0	$ 0
Total Long-Term Liabilities	$ 1,600	$ 1,200
Total Liabilities	$ 4,122	$ 7,249
Stockholders' Equity		
Capital Stock—800,000 Authorized, 550,000 Outstanding → 2011	$ 3,000	$ 3,000
Retained Earnings	$(2,198)	$(2,122)
Total Owners' Equity	$ 802	$ 878
Total Liabilities and Stockholders' Equity	$ 4,924	$ 8,127

Understanding Debt Basics and Its Location in the Balance Sheet

To start, some basic concepts on legal or contractual debt need to be addressed to assist with gaining a more complete understanding of how this type debt is structured, accounted for, and can potentially impact the ongoing operations of a business. The following six debt characteristics have been summarized to assist with understanding our debt connections:

1. Debt types: Basically, debt for most businesses comes in one of two forms: lines of credit and term debt (or long-term debt). Under either scenario, a note or similar legal instrument is signed when borrowing. Lines of credit (which are sometimes referred to as *revolvers*) are generally short-term loans that are used to support a business's working capital needs. For example, if a business is growing rapidly and sales are increasing creating much higher account receivable balances, a business could borrow on its line of credit to support the higher trade receivables balance. Long-term debt (commonly referred to as *notes payable*) are loan agreements with set repayment terms over an extended period of time such as five years. Generally, term debt is used to finance long-term assets whereas lines of credits are used to finance working capital needs. If you refer to Exhibit 15.1 you will notice that our case study company has structured long-term debt or notes payable but is not currently utilizing a line of credit.
2. Security: Most debt requires security. That is, a business generally has to provide collateral to support the different types of debt to secure the loan. In the case of a line of credit, the security is the company's accounts receivable. In the case of long-term debt, the security could be machinery used in a production process. In either case, the key point is that the debt extended to a business is "secured" by an actual asset the lender can liquidate (if needed) to have the debt repaid. When debt is extended that has a priority claim against company assets, this is referred to as being *senior* debt. If debt is extended to a company with no secured interest in an asset, this is generally referred to as *junior* or *subordinated* debt. It should go without saying that senior debt is less risky and generally carries lower interest rates than junior debt (higher risks resulting in increased borrowing costs).
3. Maturity: When debt is classified on the balance sheet, the simple rule of thumb to follow is this: Any debt that is due within one year is classified as current liability (or often noted in the financial statements in the balance sheet as current portion of long-term debt). Therefore, any debt that is due after one year is classified as *long-term liability*.
4. Covenants: Almost all debt agreements include covenants that the borrower must adhere to. Covenants are negotiated between the borrower and the lender and are designed to give the lender more comfort that the company is managing its business affairs correctly and not jeopardizing the loans ability to be repaid. For example, a bank may set a covenant

where the company has to maintain a current ratio of at least 1.5 to 1.0 to ensure proper operating capital is maintained to fund operations. Needless to say there are literally hundreds of different types of covenants (both quantitative and qualitative) but the concept really remains the same—to provide the lender with more comfort that the loan is secure and can be repaid.

As a rule of thumb, lenders are looking for a debt service coverage ratio in excess of 1.00 and prefer an even higher

Tips, Tidbits, and Traps

Covenants are an extremely important element of any loan agreement and should be a key negotiation point by both the borrower and lender. Overly restrictive covenants can wreak havoc on a borrower. Poorly constructed covenants can wreak havoc with a lender. On top of this, if a borrower violates a covenant, the outcome could be that the loan is in default and could become due and payable immediately (thus requiring the entire loan balance to be classified as a current liability). Most companies should fully disclose the loan agreement and associated covenants in the financial statement footnotes to assist outside parties with a better understanding of the risks present.

Critical Terminology and Ratio Alert

One of the most common covenants used by lenders is what is called a *debt service coverage ratio*. What the lender is attempting to calculate is the amount of earnings generated before taxes, depreciation, amortization, and interest expense (or EBITDA, covered in Chapter 20), which can then be used to cover the required periodic debt service requirement (both principal and interest payments on the debt). Exhibit 15.2 calculates the debt service coverage ratio for our case study company HSI.

EXHIBIT 15.2—DEBT SERVICE COVERAGE RATIO

Dollar Amounts in Thousands

	12/31/2011
Net Income After Tax	$ 76
Plus:	
Amortization Expense	$500
Depreciation Expense	$200
Interest Expense	$ 80
Income Tax Expense	$ 0
EBITDA— (Z)	$856
Total Debt Service:	
Principal Payments Due in Next 12 Months	$400
Interest Expense	$ 80
Total Debt Service Payments (X)	$480
Debt Service Coverage Ratio (Z divided by X)	1.78

figure of 1.25 to 1.50 (as this provides more assurance that the company's internal operations can support the annual debt payment requirements). In Exhibit 15.2, you can see that HSI is at a comfortable level of 1.78 to 1.00 for 2011.

5. Guarantees: PGs and CGs stand for personal guarantees and corporate guarantees. Basically what guarantees represent is another layer of security for the borrower that the loan will be repaid. If the primary assets securing the loan are not adequate to repay the outstanding balance due and other company assets are not available, then the lender will look to the party providing the guarantee to collect payments. For smaller businesses, this usually comes in the form of a PG (as the lender is going to look to the owner of the business to stand behind the loan). For larger businesses, CGs are used to support a loan that might be extended to a weaker business unit and the stronger, parent business unit has to support. Be careful with CGs as disclosure of any guarantees extended are usually buried in the financial statement footnotes and could have a material impact on the company providing the guarantee (if the primary business responsible for paying the loan defaults).
6. Commitments and contingencies: Finally, we offer a brief word on commitments and contingencies. These are primarily associated with long-term obligations or liabilities that are noninterest bearing, offer little or no security, and have variable or contingent payment terms (if A happens then your payment will be B). An example of this may be the need for a company to accrue a commitment for damages incurred for a legal or environmental settlement that won't be paid immediately and subject to final adjustments (based on future events). Accounting for commitments and contingencies is generally treated as other long-term liabilities presented after long-term debt in the liability section of the balance sheet.

Exhibit 15.1 at the start of this chapter provides more insight as to what debt our case study company, HSI, has incurred (shaded in gray). For the fiscal year ending 12/31/10, the company has a total balance due in notes payable of $2,000,000, of which $400,000 is classified as current (due within one year) and $1,600,000 due past one year. Moving one year out, we can see that the total balance due in notes payable is now $1,600,000, of which $400,000 is classified as current and $1,200,000 long term. This makes sense given that the loan must be repaid at a rate of $400,000 of principal payments each year.

Two other points need to be made in relation to HSI's use of loans. First, the company is not currently borrowing on a line of credit to support working capital growth. This does not mean HSI does not have a line of credit available but rather it is just not utilizing it currently. If the company does have a line of credit available for use, it should be disclosed in the footnotes. Second, simply by reviewing the financial statements and more specifically, the balance sheet, it cannot be determined if the note payable is secured by any company assets such as accounts receivables, inventory, fixed assets, or intangible assets. Again, this should be disclosed in the financial statement footnotes as it is very relevant information to external parties.

Bringing Interest Expense Up to Snuff

As discussed in Chapters 10 and 11, virtually all businesses have liabilities for accounts payable and accrued expenses payable—which are part and parcel of carrying on its operations. And most businesses borrow money from a bank or from other sources that lend money to businesses. Interest is paid on borrowed money, whereas no interest is paid on accounts payable (unless the amount is seriously past due and an interest penalty is added by the creditor). Lines of credit and notes payable are always reported separately and not mixed with noninterest-bearing liabilities.

Interest is a charge per day for the use of borrowed money. Each and every day that money is borrowed increases the amount of interest owed to the lender. The ratio of interest to the amount borrowed is called the *interest rate*, and is stated as a percent. Percent means "per hundred." If you borrow $100,000 for one year and pay $6,000 interest for the use of the money for one year, the interest rate is:

$6,000 Interest / $100,000 Borrowed = $6 per $100,
or 6.0 Percent Annual Interest Rate

Interest rates are stated as annual rates, even though the term of a loan can be shorter or longer than one year.

Interest is reported as a separate expense in income statements. It's not the size of the interest expense, but rather the special nature of interest that requires separate disclosure. Interest is a *financial* expense, as opposed to operating expenses. Interest depends on how the business is financed, which refers to the company's mix of capital sources. The basic choice is between debt capital and equity (the generic term for all kinds of ownership capital).

You may ask: When is interest paid? It depends. For lines of credit, interest is usually paid monthly based on the amount of money borrowed during the previous period. On short-term notes (one year or less), interest is commonly paid in one amount at the maturity date of the note, which is the last day of the loan period, at which time the amount borrowed and the accumulated interest are due. On long-term notes payable (longer than one year), interest can be paid monthly, quarterly, semiannually, or possibly annually (depending on the terms of the agreement). In any case, on both short-term and long-term notes there is a lag or delay in paying interest. Nevertheless, interest expense should be recorded for all days the money has been borrowed.

The accumulated amount of unpaid interest expense at the end of the accounting period is calculated and recorded in an accrued expenses payable type of account. In Exhibit 15.1, accrued interest payable at year-end is the second component of the accrued expenses payable liability. In our example, the amount of unpaid interest expense at year-end is fairly small, only $20,000 as of 12/31/10 and $15,000 as of 12/31/11. Generally speaking, accrued interest payable is not reported as a separate liability in external financial statements, although there is no rule against it (we've just pulled it out in Exhibit 15.1 to highlight the direct connection).

Critical Ratio Alert

It is sometimes helpful to calculate a company's average cost of debt or average interest rate. This is a fairly simple calculation but can be helpful in determining the perceived credit worthiness of a business as if the average interest rate is increasing, then it may indicate the credit worthiness of the company is deteriorating. Exhibit 15.3 calculates HSI's average interest rate for 2011.

EXHIBIT 15.3 AVERAGE INTEREST RATE

Dollar Amounts in Thousands

	12/31/2011
Interest Expense (A)	$ 80
Outstanding Notes Payable, Beg. of Year:	
Long-Term Notes Payable	$1,600
Current Portion of Long-Term Debt	$ 400
Outstanding Notes Payable, End of Year:	
Long-Term Notes Payable	$1,200
Current Portion of Long-Term Debt	$ 400
Total Outstanding Notes Payable	$3,600
Average Outstanding Notes (B)	$1,800
Average Interest Rate (A divided by B)	4.44%

Accounting Issues and Our Case Study

There can be some real messy accounting issues related to the different types of debt, especially as noted in our third bullet point related to a business in serious financial trouble, and/or which has defaulted on a note payable. But before we dive into this scenario, a couple of accounting issues warrant a quick discussion.

- Interest expense. What's included? One accounting issue concerns what to include in interest expense. In addition to interest paid to lenders, borrowing involves other types of costs to the business, such as loan application and processing fees, so-called points charged by lenders, and other incidental costs such as legal fees and so on. Also, an argument could be made that fees paid to process payments from electronic sources such as credit cards and debits cards should be included as interest expense (as the reason a company is using these forms of payments is to accelerate receipts and lower borrowing usage). While there is no hard and fast rule, any ability for companies to increase EBITDA by pushing expenses below this performance measurement, including the aforementioned items, will often be pursued. So watch this line item carefully and again, refer to the disclosures in the footnotes to gain a complete understanding of how all loan costs and expenses are accounted for.
- Classification—current versus long term: Proper classification of debt between current and long term is important in the balance sheet. The reason for this is that numerous covenants are based on working capital levels (current assets less current liabilities). So if a company can successfully record more loans and notes payable as long-term liabilities, this has the effect of increasing working capital calculations (as current liability balances would be lower).

Real World Story

This is a story for you to choose the proper reporting. A large service organization secured a line of credit, which it used to finance accounts receivables. The line of credit loan was structured with a two-year term but the company could never borrow more than 80 percent of eligible accounts receivables. So even though the line of credit had a maturity date two years in the future, its ability to borrow was directly associated with accounts receivable levels, which is considered a current asset. So what's the right classification, as a current liability due to the fact the line of credit was directly associated and varied with a current asset (accounts receivable)? Or as a long-term liability due to the fact that the line of credit had a two-year maturity date?

As we alluded to earlier in the chapter, accrued interest payable usually is not reported as a separate liability in a company's year-end balance sheet. However, if this particular liability were large, it very well should be reported separately in the balance sheet. If a business is seriously behind in paying interest on its debts, the liability for unpaid interest should be prominently reported in its balance sheet, to call attention to this situation.

- Defaults and disclosures. What should be recorded and when? As noted throughout this chapter, disclosures related to notes payable, contingencies, and commitments are of critical importance. In fact, just think how difficult it was to properly disclose the environment impact and costs of the oil well rig disaster for British Petroleum in the Gulf of Mexico in 2010.

  But things can really get messy if a default occurs on a note payable and/or the company begins to experience severe financial distress. This last comment segues into the messy topic regarding how to present the financial statements of a business that is in serious financial trouble and is in default on its debt. One basic premise of financial statement accounting is the *going concern assumption*. The accountant assumes that unless there is clear evidence to the contrary, the business will continue to operate in a normal manner and will not be forced into involuntary termination and liquidation of its assets. When a company is in serious default on its debt obligations, the creditors have the right to enforce their claims and in the extreme case shut the business down.

  To stave off the drastic effects from unpaid creditors who may force it to shut down, the business can file for bankruptcy protection. This is a complicated area of law, way beyond the scope of this book. If there is a serious threat of such legal actions by creditors against the business, the financial statements of the business should make full disclosure of its precarious financial situation.

The bottom line to remember with the types of formal debt discussed in this chapter is two simple words: maturity and security. That is, when does the debt mature (and must be paid) and what security is associated with the debt? If the debt really never matures and/or has no security, then you could argue that this should be accounted for as equity. One thing is for sure in today's economic environment, the creativity of financial types is ever expanding, which is having the effect of really blurring the lines between the different types of debt, classifications, and if debt is really equity.

Exhibit 15.4 compares our two case study companies that highlights and in the words of Tom Hanks who played astronaut Jim Lovell in the movie *Apollo 13*, "Houston, we have a problem."

EXHIBIT 15.4 CASE STUDY COMPARISON—DEBT SERVICE COVERAGE RATIO

Dollar Amounts in Thousands

Debt Service Coverage Ratio—HareSquared, Inc.	1.78
Debt Service Coverage Ratio—TortTech, Inc.	
	12/31/2011
Net Income After Tax	$(2,173)
Plus:	
Amortization Expense	$ 0
Depreciation Expense	$ 200
Interest Expense	$ 270
Income Tax Expense	$ 0
EBITDA—(Z)	$(1,703)
Total Debt Service:	
Principal Payments Due in Next 12 Months	$ 400
Interest Expense	$ 270
Total Debt Service Payments (X)	$ 670
Debt Service Coverage Ratio (Z divided by X)	N/A

While HSI's debt service coverage ratio is a healthy 1.78 × 1.00, TTI's cannot even be calculated because it is negative (thus the reference to N/A as it is negative). To the naked eye this would be considered a serious problem as any external party would most likely be deeply concerned about this ratio. Chapter 24 provides an updated assessment of both companies, which specifically addresses this ratio.

16

NET INCOME, RETAINED EARNINGS, EQUITY, AND EARNINGS PER SHARE (EPS)

The All-Important EPS

When it comes to evaluating a company's financial performance, without question the most focused on and analyzed financial results relate to the company's net income and earnings per share (EPS). While other measurements and results may be emphasized and highlighted by parties, including Wall Street's fixation on net sales revenue, financial analyst's focus on earnings before interest, tax, depreciation, and amortization (EBITDA), and others, sooner or later, everyone ends up at the same place. How much profit or loss did the company generate? What were the earnings generated per share? Google's second quarter 2013 results' announcement highlights its key operating metrics with revenue, net income, and EPS being the focal point.

Two things you notice about Google's second quarter results are as follows. First, Google prepared the announcement and has specifically focused on performance measurements that are important to the industry. For example, in the web/Internet/social media world, the concept of TAC (traffic acquisition costs) is extremely important as this is a key measurement of how much it costs these companies to acquire customers. There is no doubt that this is an important figure but remember also that when the companies report earnings, they often will *emphasize* (and we use this term carefully) results that tend to be more positive and *de-emphasize* results that may not be viewed so well. There is no doubt that companies often utilize selective presentation to help sell—strike that—tell their story.

Second, constant reference is made to both GAAP and non-GAAP figures. The dual reporting of financial results using both GAAP and non-GAAP methods is becoming increasingly popular with more and more large corporations as a means to provide more information to external parties to better decipher operating results. While this may be true to a large extent, this also adds to the confusion surrounding operating results as if the reporting company does not specifically identify what the difference is between generally accepted accounting principles (GAAP) and non-GAAP figures, external parties may even become more frustrated with interpreting results.

So as you work through this chapter, remember that companies reference different types of net income and EPS as a means to both provide proper and complete disclosure to the parties as well as to highlight or emphasize certain operating results and/or one-time events that may negatively or positively impact its operating results.

Net Income into Retained Earnings

Exhibit 16.1 highlights the connection from *net income* in the income statement to *retained earnings* in the balance sheet, and from net income to a new piece of information that we show for the first time—*earnings per share* (EPS). This chapter explains that earning profit increases the retained earnings account. And, we introduce earnings per share (EPS).

Suppose a business has $10 million total assets and $3 million total liabilities (including both noninterest-bearing operating liabilities such as accounts payable and interest-bearing notes payable). Over the years, its owners invested $4 million capital in the business. Therefore, liabilities plus capital from owners provide a total of $7 million of the company's total assets. Where did the other $3 million of assets come from?

Assets don't just drop down like "manna from heaven." All assets have a source, and one job of accountants is to keep track of the sources of assets of the business. The source of the other $3 million of assets must be from profit the business earned but did not distribute—from *retained earnings*.

Two basic types of owners' equity accounts are needed for every business—one for capital invested by the owners and one for retained earnings. In our example the business is organized legally as a corporation, and it issues *capital stock shares* to its owners when they invest money in the business. As you see in Exhibit 16.1 the company uses the account called *Capital Stock* to record the investment of money by stockholders in the business. Whenever a business distributes money to its owners, it must distinguish between returning capital they have invested in the business (which is not taxable to them) versus dividing profit among them (which is taxable). A business corporation is required to keep separate accounts for capital stock and retained earnings, as you see in Exhibit 16.1.

The income statement reports that the business earned $4,493,000 bottom-line profit, or net income for the year ending 12/31/12 (see Exhibit 16.1). Chapter 4 explains that at the end of the period the amount of net income is recorded as an increase in the retained earnings account. The retained earnings account is so named because annual profit is entered as an increase in the account, and distributions to owners from profit are entered as decreases in the account.

During the year, the business paid no cash dividends from net income to its stockholders as it retained all earnings (hmmm?). Does management and the board of directors know something about the coming year they're not quite comfortable with and thus want to conserve cash balances? (We shall see.) Therefore, its retained earnings increased by the entire amount of net income or $4,493,000 during the year: [$4,493,000 net income – $0 dividends = $4,493,000 net increase in retained earnings]. At the end of the year, its retained earnings balance stands at $2,371,000,

EXHIBIT 16.1—NET INCOME, RETAINED EARNINGS, AND EARNINGS PER SHARE

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2011
&
12/31/2012

Income Statement for the Fiscal Year Ending	**12/31/2011**	**12/31/2012**
Sales Revenue, Net	$18,412	$38,281
Costs of Goods Sold	$ 9,156	$17,950
Gross Profit	$ 9,256	$20,331
Selling, General, and Administrative Expenses	$ 8,400	$13,800
Depreciation and Amortization Expense	$ 700	$ 750
Operating Earnings	$ 156	$ 5,781
Other Expenses (Income)	$ 0	$ 0
Interest Expense	$ 80	$ 0
Net Income (Loss) before Income Taxes	$ 76	$ 5,781
Income Tax Expense (Benefit)	$ 0	$ 1,288
Net Income (Loss)	$ 76	$ 4,493
Shares Outstanding	550	700
Basic Earnings (Loss) Per Share	$ 0.14	$ 6.42

Focus on the following two connections:
– Net income plus the prior year's retained earnings balance less dividends should equal the current year's retained earnings balance $4,493 + <$2,122> – $0 (dividends) = $2,371.
– Net income dividend by shares outstanding equals basic earnings per share. $4,493/700 = $6.42.

Balance Sheet as of the Year-End	**12/31/2011**	**12/31/2012**
Assets		
Current Assets		
Cash and Equivalents	$ 372	$ 9,053
Accounts Receivable, Net	$ 4,575	$ 6,800
Inventory, LCM	$ 880	$ 2,640
Prepaid Expenses	$ 75	$ 100
Total Current Assets	$ 5,902	$ 18,593
Fixed Assets		
Property, Plant, and Equipment	$ 1,000	$ 1,250
Accumulated Depreciation	$ (350)	$ (600)
Net Fixed Assets	$ 650	$ 650
Other Assets		
Intangible Assets and Goodwill, Net	$ 1,500	$ 1,000
Other Assets	$ 75	$ 75
Total Other Assets	$ 1,575	$ 1,075
Total Assets	$ 8,127	$ 20,318
Liabilities and Stockholders' Equity		
Current Liabilities		
Accounts Payable, Inventory	$ 403	$ 728
Accounts Payable, Operating Expenses	$ 329	$ 595
Accrued Expenses	$ 604	$ 945
Current Portion of Debt	$ 400	$ 0
Income Taxes Payable	$ 0	$ 429
Other Current Liabilities	$ 4,313	$ 8,250
Total Current Liabilities	$ 6,049	$ 10,947
Long-Term Liabilities		
Notes Payable, Less Current Portion	$ 1,200	$ 0
Other Long-Term Liabilities	$ 0	$ 0
Total Long-Term Liabilities	$ 1,200	$ 0
Total Liabilities	$ 7,249	$ 10,947
Stockholders' Equity		
Capital Stock—800,000 Authorized, 550,000 Outstanding → 2011 & 700,000 Outstanding → 2012	$ 3,000	$ 7,000
Retained Earnings	$(2,122)	$ 2,371
Total Owners' Equity	$ 878	$ 9,371
Total Liabilities and Stockholders' Equity	$ 8,127	$ 20,318

which is the cumulative result from all years the company has been in existence. You will notice that the ending retained earnings figure of $2,371,000 is lower than the net income earned in 2012 of $4,493,000 as at the end of 2011, the company had a negative retained earnings balance or what is commonly referred to as an *accumulated deficit* (as a result of incurring losses from previous years). This is not an uncommon occurrence with younger, start-up companies that must invest heavily in product development and market launch expenses that drive losses in early years and profits (hopefully) in later years.

Tips, Tidbits, and Traps

Dividends are generally issued by larger, more mature, financially stronger, and slower-growing companies than compared to their counterparts (smaller, earlier stage, financially weaker, and faster growing). The reason for this is that smaller, faster-growing companies need to conserve as much cash as possible to finance their rapid growth. There would be no point for a small, fast-growing company to issue dividends to only turn around and have to borrow excessively or sell more company equity to finance its growth. Rather cash is conserved and in some cases, hoarded (Apple, Inc. provides a perfect case study in hoarding cash) to finance future growth. And one additional word of caution with the dividends is the potential "image" or story it tells. While companies such as Apple may have more than enough cash to distribute as dividends (well over $100 billion of cash and equivalents at the end of 2012), actually making a distribution in the form of a dividend may send a signal to the market that growth rates are decelerating and cash would be better used by distributing it rather than investing it in new, internal products/opportunities. So while investors are happy to receive a cash dividend, they will become concerned that growth rates and EPS are slowing, meaning that the future value of the company may not be as robust as once thought. There is no doubt that this issue contributed to Apple's share price dropping from a high of more than $700 per share in late 2012 to roughly $450 per share by mid-2013.

Notice in this example that the company has a relatively small retained earnings balance compared with its total assets and other balance sheet accounts (total retained earnings of $2,371,000 compared to total assets of $20,318,000 at the end of 2012). This signals that the business has not had strong profits in the past. However, we can't tell from the balance sheet whether the company suffered a loss in one or more years in the past (as this would need to be deciphered by reviewing the historical income statements for the company).

Many people, even some experienced business managers, are confused about what retained earnings refers to. They mistakenly imagine that retained earnings refers to a cache of cash that has been set aside. No, a thousand times no! The balance of the retained earnings account does not refer to any particular asset and certainly not to cash. Yet, we can see that the title of this balance sheet owners' equity account could mislead people into thinking that it refers to money that the business has squirreled away.

Perhaps the best way to reinforce the correct meaning of retained earnings is to rearrange the accounting equation to put emphasis on retained earnings:

Assets – Liabilities – Capital Invested by Owners
= Retained Earnings

In words, if you subtract the amount of liabilities and capital invested by owners the remainder of assets must be attributable to earnings that have been retained in the business. In our business example the numbers (in thousands) are as follows at the end of 2012:

$20,318	–	10,947	–	$7,000	=	2,371
Assets		Liabilities		Capital Stock		Retained Earnings

In short, the balance in retained earnings explains one source of the total assets of a business. Making profit and keeping it in the business has added $2,371,000 to the total assets of the business in our example. You must look in the asset section of the balance sheet to see which particular assets the business owns. You can't tell a thing about which assets the business has by looking at the balance of its retained earnings. You're on the wrong side of the balance sheet.

When a business retains some (or all) of its annual net income, the retained profit should be considered as an addition to the ongoing capital base of the business. Businesses do not generally go back and pay a dividend from prior years' profits—although when a business piles up a huge cash hoard and has no other investment uses for the money it may make a large distribution out of retained earnings. Apple comes to mind here although a good part of what Apple did in 2013 involved buying back a large number of its capital stock shares, as well as paying a hefty dividend.

Looking down the road to the end of a business—after closing its doors, liquidating all of its assets, and paying off all of its liabilities, the business would distribute its remaining cash balance to its shareowners. The first layer of this final cash distribution to its shareowners is return of the capital they invested in the business. The remaining amount would be the final dividend (which is taxable).

Earnings per Share (EPS)

Net income, the bottom line in the income statement, is the profit measure for the business as a whole. Earnings per share (EPS) is the profit measure for each ownership unit, or for each share of capital stock of a business corporation.

Suppose in our example that you own 14,000 shares, or exactly 2 percent of the 700,000 shares of capital stock issued by the business as of 12/31/12. Several years ago you purchased these shares by investing $56,000 in the business, when it was just starting up. You're one of the original stockholders. Your $56,000 capital investment divided by your 14,000 shares means that your cost is $4 per share. Later investors paid more per share as a result of the company's value increasing (based on its operating performance).

We can tell this from the company's balance sheet (see Exhibit 16.1). The $7,000,000 balance in the company's capital stock account divided by the 700,000 capital stock shares outstanding works out to an average of $10 per share. The later investors paid more per share than you did with the most recent tranche of investors purchasing new shares in 2012. (How do we know this? Refer to the increase in capital stock account between 2011 and 2012.)

Owning only 2 percent of the total capital stock shares outstanding, you are a passive, outside investor in the business. Generally speaking, you would not participate actively in managing the company or be a member of the board of directors. You're entitled to 2 percent of any cash dividends paid from profit, and you control 2 percent of the votes on matters that have to be put to a vote of stockholders. However, your entitlement to the dividend is dependent on the board of directors actually authorizing a dividend, which for 2012, did not occur.

As a stockholder you should be provided a copy of the company's annual (and quarterly) financial reports. Needless to say, you're very interested in the company's profit performance. You could take the view that 2 percent of annual net income "belongs" to you, which is an $89,860 slice of the company's total $4,493,000 net income. This is your cut of the net income pie. Or you could look at earnings per share (EPS), which is net income divided by the average number of capital stock shares outstanding during the year. In this example, EPS for the year just ended works out to $6.42 per share (net income of $4,493,000 divided by 700,000 shares equals $6.42 EPS). Relative to your $4 cost per share you're earning a handsome return on your original investment in the business.

Earnings per share (EPS) is an especially important number for *public* companies whose capital stock shares are traded on securities exchanges. In fact, public companies must report EPS at the bottom of their income statements. Nonpublic companies do not have to report EPS although they may elect to do so (but the general rule is that unless the ownership structure of a private company is relatively complex, EPS data is generally not provided).

To close this section of the chapter, three key concepts should be understood related to EPS:

Critical Terminology Alert

Preferred versus common equity: Quite often you will see different categories of capital stock in the equity section of a company's balance sheet. The two most common types of equity are preferred and common stock. Preferred equity sounds like its name. That is, it has preferences over common stock. These may include dividend, liquidation, voting, and/or other preferences. Listing all of the potential features in preferred stock is beyond the scope of this book but the basic concept is simple. Preferred stock is higher in the food chain than common stock when it comes to liquidation rights and security in company assets.

Basic versus fully diluted EPS: Another distinction you will see in financial statements is the calculation between basic and fully diluted EPS. Basic EPS simply takes the GAAP net income (less certain adjustments) and divides it by the average number of common stock shares outstanding (in the hands of the shareholders) for the period. Fully diluted EPS takes the GAAP net income (less certain adjustments) and divides it by the number of average common stock shares outstanding that includes additional shares that would be issued under options, warrants, convertible securities, and/or other equities (all of which fall into the category of additional shares that a business is potentially committed to issue in the future). Just remember the fully diluted EPS is almost always lower than the basic EPS as it accounts for all forms of common stock that have been committed, outstanding or not.

EPS as a valuation basis: Last, it should be noted that EPS plays a key role in putting a market value on a share of stock in a business. For example, suppose we offer to buy 1,000 of your shares. You might offer to sell them at 10 times the stock's $6.42 EPS, or $64.20 per share (which we may view as fair or not, thus not purchasing the shares). The concept that is in play here and so often referenced for publicly traded companies (when determining a value) is the price earnings ratio.

Critical Ratio Alert

The price earnings (PE) multiple or ratio is calculated by simply taking the current price quote for a stock and dividing it by the company's EPS. Exhibit 16.2 calculates the price earnings ratio for HSI (assuming the current price quote is $102).

EXHIBIT 16.2—PRICE EARNINGS RATIO

Dollar Amounts in Thousands

	12/31/2012
Current Stock Price	$102.00
Basic Earnings per Share (EPS)	$ 6.42
Price Earnings Multiple	15.89

Per the calculation in Exhibit 16.2, HSI's price earnings multiple is 15.89. Is this too high or too low? Well, it's hard to say but the basic premise behind higher price-earning multiples is that the "market" is assuming or anticipating higher growth rates (in sales revenue, operating profits, and net income) for companies that have high price earnings multiples (and vice versa for companies with low-growth rates). This is why a company like Exxon will trade at a PE of less than 10 and Facebook at a PE of more than 100.

Accounting Issues and Our Case Study

Accounting problems don't concern retained earnings as such, but rather sales revenue and expenses that determine profit for the period, which we've explained over the last several chapters. If net income is incorrect, then the retained earnings amount is incorrect. But there are some important accounting issues to note as it relates to net income, equity, retained earnings, and EPS:

- Distribution of earnings versus dividend: Dividends are issued by regular C corporations and represent an allocation and payment of corporate earnings to the shareholders of the company. Dividends are issued after the corporation has paid taxes and can trigger a double taxation depending on the recipient's status (as the recipients may have to record the receipt of the dividend as additional income on their tax return). A distribution of earnings generally occurs from a pass-through entity (discussed in Chapter 12) such as a subchapter S corporation or limited liability company (LLC). The distribution and payment of earnings by itself does not trigger a taxable event to the recipient. Rather, the allocation of taxable income in a pass-through entity does result in taxable income being realized. For example, if a subchapter S corporation generated $300,000 of taxable income during a year and had three equal owners, each owner would receive an allocation of $100,000, which they must report on their personal income tax return. If this same company distributed only $50,000 to each owner for the same year, each owner would still be required to report $100,000 of taxable income (as the $50,000 distribution is not the taxable event but rather represents that 50 percent of the taxable income is being distributed to the owners). This is one of the most commonly misunderstood elements of how distributions work in pass-through entities.

- Foreign currency adjustments: Before we close the book on retained earnings we should briefly mention another component of owners' equity called *Other Comprehensive Income*. You see this in the financial reports of many public companies. This element of owners' equity is reported separately from retained earnings. It accumulates certain types of gains and losses recorded on the assets of a business. One example is gains and losses from changes in foreign exchange ratios that haven't yet been executed by the business but affect the value of certain of its assets.

  Also, you would think that all asset gains and losses should pass through the income statement. However, these special income-and-loss items bypass the income statement and are recorded directly in the owners' equity account, Other Comprehensive Income. The thinking behind this treatment is that these peculiar gains and losses should not be included in the calculation of net income.

So when you see "other adjustments" to the equity section for these types of items and/or transactions, you may want to spend a little more time evaluating and understanding the events.

- Different types of EPS: There are some technical aspects of retained earnings, which are beyond the scope of this book. By and large, the financial reporting of retained earnings is straightforward and noncontroversial. But reporting EPS is another matter altogether. There are several problems in calculating EPS. To start with, many companies have to report not just one, but two figures for EPS—basic and fully diluted EPS as discussed previously.

Taking a look at our case study companies, we can see the significant difference between TTI and HSI's EPS for the two-year period of 12/31/11 and 12/31/12 in Exhibit 16.3.

Chapter 24 provides an updated assessment of both companies, which specifically addresses this calculation.

EXHIBIT 16.3—CASE STUDY COMPARISON—EPS

Dollar Amounts in Thousands

	12/31/2011	12/31/2012
EPS—HareSquared, Inc.	$ 0.14	$ 6.42
EPS—TortTech, Inc.	12/31/2011	12/31/2012
Net Income (Loss)	$(2,173)	$2,351
Average Number of Common Shares Outstanding	550	550
Basic Earnings per Share (EPS)	$ (3.95)	$ 4.27

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CASH FLOW FROM OPERATING (PROFIT-MAKING) ACTIVITIES

A Different Type of Connection

Personal Note from Tage

In my travels over the past 20 years, without question the most difficult financial statement for businesses to prepare (let alone understand) is the statement of cash flows. While most businesses tend to focus on and have a good handle on the income statement as well as the balance sheet (although more challenging to understand), the statement of cash flows might as well be prepared in a foreign language. Small businesses particularly struggle with the cash flow statement as they generally lack the internal accounting sophistication and resources to understand how important this financial statement is. I must admit that my experience has been skewed toward small businesses (i.e., companies with annual revenues less than $100 million) but without fail and with more than 80 percent of the companies I provided professional counsel to, the cash statement was almost always missing or, when presented, nobody could explain it.

The reason the cash flow statement has taken on a new level of importance can be traced back to the Great Recession, which started in 2008. On top of the severity of this economic downturn (which numerous experts noted as being the second worst economic downturn over the past 100 years only trailing the Great Depression), one of the critical events and outcomes of the Great Recession was that available sources of capital (including access to equity discussed in Chapter 16, loans discussed in Chapter 15, and short-term accounts payable and accrued liabilities covered in Chapters 9 through 11) were severely and abruptly reduced or eliminated. So what businesses quickly discovered was that if capital or cash was not available for external sources, you better start looking internally in your business operations to determine where cash could be generated, and in a hurry. As pointed out by the noted economist Richard Koo, what we had was a "Balance Sheet Recession."

So now that we have your attention as to the importance of the cash flow statement, we shift gears and focus on the connections between the cash flow statement and primarily, the balance sheet. If you recall, Chapters 7 through 16 (except for Chapter 9) walk down the income statement and the related connections to the balance sheet. Each chapter explains how sales revenue or an expense is connected with its corresponding asset or liability. You can't understand the balance sheet too well without understanding how sales revenue and expenses drive many of the assets and liabilities in the balance sheet. (In Chapter 4 we explain the increases and decreases of assets and liabilities in the recording of revenue and expenses.)

This chapter is the first of two that explain the *statement of cash flows*, which is the third primary financial statement reported by businesses in addition to the income statement and balance sheet. Exhibit 17.1 presents the statement of cash flows for our case study business, HSI, which we have discussed and analyzed starting in Chapter 7. Please take a moment to read down this statement. We make you a wager here. We bet you understand the second and third sections of the statement (*investing* activities and *financing* activities) much better than the first section (*operating* activities).

Profit and Cash Flow from Profit: Not Identical Twins!

Exhibit 17.1 shows the balance sheets of the company at the start and end of the year and includes a column for changes in assets, liabilities, and stockholders' equity. This chapter focuses on the first section of the cash flows statement, which presents cash flow from the company's operating activities (i.e., its *profit-making* activities) during the year. As you know, a company's profit-making activities are reported in its income statement. The income statement is not needed here to explain the first section of the statement of cash flows. Cash flow from operating activities is driven by changes during the period in the balance sheet.

The main question on everyone's mind seems to be why profit doesn't equal cash flow. In this example, the company earned $4,493,000 net income over the year just ended. Why didn't earning this amount of profit generate the same amount of cash flow? The first section in the cash flows statement provides part of the answer to this question.

The last line in the first section is labeled "Cash Flow from Operating Activities" (see Exhibit 17.1). Frankly, this is not the best name in the world. We prefer to call it *cash flow from profit*. The term *operating activities* is accounting jargon for sales revenue and expenses, which are the profit-making activities or operations of a business. Much of the time we refer to this line as *cash flow from profit*, which is shorter and more descriptive, we think. In any case, from the cash flows statement we see that the company generated $6,531,000 cash flow from profit compared with its $4,493,000 net income for the year.

Business managers have a double duty—first to earn profit, and second to convert the profit into cash as soon as possible. Waiting too long to turn profit into cash reduces its value because of the time value of money. Business managers should be clear on the difference between profit reported in the income statement and the amount of cash flow from profit during the year. Creditors and investors also should keep an eye on cash flow from profit (operating activities) and management's ability to control this very important number.

To get from net income to the cash flow result from net income, we have to make adjustments along the way. Each is caused by a change during the year in one of the company's operating assets and liabilities (i.e., the assets and liabilities directly involved in recording sales revenue and expenses). We look at these adjustments in the company's statement of cash flows. (Data is from Exhibit 17.1.)

EXHIBIT 17.1—CASH FLOW FROM PROFIT-MAKING ACTIVITIES

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2012

Balance Sheet as of the Year-End	**12/31/2011**	**12/31/2012**	**Change**
Assets			
Current Assets			
Cash and Equivalents	$ 372	$ 9,053	$ (8,681)
Accounts Receivable, Net	$4,575	$ 6,800	$ (2,225)
Inventory, LCM	$ 880	$ 2,640	$ (1,760)
Prepaid Expenses	$ 75	$ 100	$ (25)
Total Current Assets	$5,902	$18,593	$(12,691)
Fixed Assets			
Property, Plant, and Equipment	$1,000	$ 1,250	$ (250)
Accumulated Depreciation	$ (350)	$ (600)	$ 250
Net Fixed Assets	$ 650	$ 650	$ 0
Other Assets			
Intangible Assets and Goodwill, Net	$1,500	$ 1,000	$ 500
Other Assets	$ 75	$ 75	$ 0
Total Other Assets	$1,575	$ 1,075	$ 500
Total Assets	$8,127	$20,318	$(12,191)
Liabilities and Stockholders' Equity			
Current Liabilities			
Accounts Payable	$ 732	$ 1,323	$ 591
Accrued Expenses	$ 604	$ 945	$ 341
Current Portion of Debt	$ 400	$ 0	$ (400)
Other Current Liabilities	$4,313	$ 8,679	$ 4,366
Total Current Liabilities	$6,049	$10,947	$ 4,898
Long-Term Liabilities			
Notes Payable, Less Current Portion	$1,200	$ 0	$ (1,200)
Other Long-Term Liabilities	$ 0	$ 0	$ 0
Total Long-Term Liabilities	$1,200	$ 0	$ (1,200)
Total Liabilities	$7,249	$10,947	$ 3,698
Stockholders Equity			
Capital Stock—800,000 Authorized, 550,000 Outstanding → 2010	$3,000	$ 7,000	$ 4,000
Retained Earnings	$(2,122)	$ 2,371	$ 4,493
Total Owners' Equity	$ 878	$ 9,371	$ 8,493
Total Liabilities and Stockholders' Equity	$8,127	$20,318	$ 12,191

Statement of Cash Flows for the Fiscal Year Ending	**12/31/2012**
Net Income (loss)	$ 4,493
Operating Activities, Cash Provided or Used:	
Depreciation and Amortization	$ 750
Decrease (Increase) in Accounts Receivable	$(2,225)
Decrease (Increase) in Inventory	$(1,760)
Decrease (Increase) in Other Current Assets	$ (25)
Increase (Decrease) in Trade Payables	$ 591
Increase (Decrease) in Accrued Liabilities	$ 341
Increase (Decrease) in Other Liabilities	$ 4,366
Net Cash Flow from Operating Activities	$ 6,531
Investing Activities, Cash Provided or Used:	
Capital Expenditures	$ (250)
Investments in Other Assets	$ 0
Net Cash Flow from Investing Activities	$ (250)
Financing Activities, Cash Provided or Used:	
Dividends or Distributions Paid	$ 0
Sale (Repurchase) of Equity	$ 4,000
Proceeds from Issuance of Debt	$ 0
Repayments of Long-Term Debt	$(1,600)
Other Financing Activities—Asset Impairment	$ 0
Net Cash Flow from Financing Activities	$ 2,400
Other Cash Flow Adjustments	$ 0
Net Increase (Decrease) in Cash and Equivalents	$ 8,681
Beginning Cash and Equivalents Balance	$ 372
Ending Cash and Equivalents Balance	$ 9,053

Changes in Assets and Liabilities that Impact Cash Flow from Operating Activities

Changes in assets and liabilities that impact cash flow from operating activities (as opposed to financing activities which are discussed in Chapter 18) are generally considered short-term or current in nature (i.e., the asset will be turned into cash within 12 months and the liability will require cash payment within 12 months). Chapter 3 discussed the balance sheet and the importance of understanding current versus long-term assets and liabilities. But as a refresher, the primary current assets that will impact cash flow from operating activities are accounts receivable, inventory, and prepaid expenses. The primary current liabilities that will impact cash flow from operating activities are accounts payable, accrued expenses payable/liabilities, and other current liabilities. One exception to this rule relates to depreciation and amortization expense which is discussed in point 4 below in greater detail.

1. ***Accounts receivable:*** At year-end the company had $6,800,000 uncollected sales revenue, which is the ending balance of its accounts receivable. The $6,800,000 is included in sales revenue for determining profit. But the company did not receive this amount of cash from customers. The $6,800,000 is still in accounts receivable instead of cash at year-end. However, the company collected its $4,575,000 beginning balance of accounts receivable. The $4,575,000 collected minus $6,800,000 not collected results in a $2,225,000 negative impact on cash flow. See the first adjustment in the cash flow statement (Exhibit 17.1). If short, an increase in accounts receivable hurts cash flow from profit.
2. ***Inventory:*** Notice the rather large increase in the company's inventory during the year. This may or may not have been a smart business decision. Perhaps the business needed a larger inventory to meet higher sales demand, or maybe not. In any case, the $1,760,000 inventory increase has a negative impact on cash flow. The quickest way to explain this is as follows. Inventory is an investment in products in the process of being manufactured and finished products being held for sale. Increasing an investment means putting more money in the investment. See the second adjustment in the cash flow statement. In short, an increase in inventory hurts cash flow from operating activities (the profit-making activities of the business).
3. ***Prepaid expenses:*** During the year, the company paid $100,000 for certain operating costs that will benefit it next year, and therefore were not charged to expenses in the year. See the ending balance in the company's prepaid expenses account. The company paid $100,000 on top of its operating expenses for the year. But the company had $75,000 of prepaid expenses at the start of the year; these costs were paid last year and then charged to operating expenses in the year just ended. Taking into account both the beginning and ending balances in prepaid expenses, the company experiences only a $25,000 drain on cash during the year. The $75,000 not paid minus $100,000 paid has a $25,000 negative impact on cash flow. See the third adjustment in the cash flow statement (Exhibit 17.1).
4. ***Depreciation and Amortization:*** During the year the company recorded $750,000 of depreciation and amortization expense, not by writing a check for this amount but by

writing down the cost of its property, plant, and equipment and intangible assets. This write-down is recorded as an increase in the accumulated depreciation account (or accumulated amortization for intangible assets), which is the contra or offset account deducted from the property, plant, and equipment asset account and a reduction to the net value of the company's intangible assets. These long-term operating assets are partially written down each year to record the decrease in value associated with these assets (from wear and tear, reduced market value, etc.). The company paid cash for the assets when it bought these long-term resources. The company does not have to pay for them a second time when it uses them. In short, depreciation and amortization expense is not a cash outlay in the year recorded and therefore is a positive adjustment, or so-called add-back for determining cash flow from profit. See the fourth adjustment in the cash flow statement.

The depreciation and amortization add-back to net income can be explained another way. For the sake of argument here, assume all sales revenue had been collected in cash during the year. Part of this cash inflow from customers pays the company for the use of its long-term operating assets during the year. In a sense, the business "sells" a fraction of its fixed and intangible assets to its customers each year. In setting its sales prices, a business includes depreciation and amortization as a cost of doing business. So, each year a business recovers part of the capital invested in its fixed assets in cash flow from sales revenue. In short, the company in this example recaptured $750,000 of the investment in its property, plant, and equipment assets and intangible assets which is a significant source of cash flow.

5. ***Accounts payable:*** The ending balance in the company's accounts payable liability reveals that manufacturing costs, product purchases, and operating expenses were not fully paid during the year. The ending balance in this liability relieved the company of making cash payments in the amount of $1,323,000 (again see Exhibit 17.1). Not paying these costs avoids cash outflow. Consider the other side of the coin, as well. The company started the year with $732,000 accounts payable. These liabilities were paid during the year. The $1,323,000 not paid minus $732,000 paid has a net $591,000 positive impact on cash flow. See the fifth adjustment in the cash flow statement.

6. ***Accrued expenses payable:*** This liability works the same way as accounts payable. The company did not pay $945,000 of its expenses during the year, which is the balance in this liability at the end of the year. But the company did pay the $604,000 beginning amount of this liability. The $945,000 not paid minus $604,000 paid has a net $341,000 positive impact on cash flow. See the sixth adjustment in the cash flow statement.

7. ***Other current liabilities:*** This one is particularly large so pay close attention. At the start of the year, the business had other current liabilities of $4,313,000. This balance is comprised of various items including taxes, customer deposits, but most importantly, deferred customer revenue (billed to the customer and either collected or still in accounts receivable). Deferred revenue represents sales revenue that has been billed but not yet earned per generally accepted accounting principles (GAAP; e.g., an annual software license billed in advance for the entire year). At the end of the year, the business had other current liabilities of $8,679,000 as our case study company was actively and aggressively booking new sales (for software licenses) at the end of the year. This liability acts in a similar fashion to accounts payable and accrued

liabilities as the net increase of $4,366,000 was a source of cash (or produced an increase in cash).

Summing up the seven cash flow adjustments to net income:

- Increases in operating assets cause decreases in cash flow from profit; and decreases in operating assets result in increases in cash flow from profit.
- Increases in operating liabilities help cash flow from profit; and decreases in operating liabilities result in decreases in cash flow from profit.

See in Exhibit 17.1 that the combined net effect of the seven adjustments is that cash flow from profit is $6,531,000, which is $2,038,000 more than profit for the year. This difference between cash flow and bottom-line profit is due to the changes in the company's operating assets and liabilities. In summary, the business realized $6,531,000 cash flow from its operating activities during the year. This source of cash flow is vital to every business.

Tips, Tidbits, and Traps

One point that should stick out in the above analysis and with Exhibit 17.1 is the significant increase in other current liabilities, related to deferred revenue. During the past five years, businesses have pursued numerous strategies to increase cash flows, one of which is to bill or invoice customers for increased amounts, in advance of services/products being shipped. This is commonly referred to as *advanced billings, prebills, project/partial bills*, and so on and is designed to accelerate cash flows. Our case study company, HSI, has utilized just this strategy over the past two years but needs to be evaluated closely to ensure the advance billings are appropriate and that sales revenue is recorded in the correct period.

A Quick Word about the Direct Method for Reporting Cash Flow from Operating Activities

The accounting profession's rule-making body in the United States, the Financial Accounting Standards Board (FASB), has expressed a preference regarding the reporting of cash flow from operating activities. You might be surprised that the format you see in Exhibit 17.1 is *not* the preferred method. What you see in Exhibit 17.1 is called the *indirect method* that uses changes in operating assets and liabilities to adjust net income, which leads down to cash flow from operating activities. Instead, the FASB prefers the *direct method* for this section of the statement of cash flows.

Exhibit 17.2 shows the *direct method* format for reporting cash flow from operating activities. The cash flow amounts from sales revenue and for expenses are presented "directly" in this format. The direct method format is supplemented with a schedule that summarizes the changes in operating assets and liabilities, pretty much the same way as the changes are presented by the indirect method shown in Exhibit 17.1.

Both formats report the same cash flow from operating activities. Although the FASB expresses a clear preference for the direct method, the large majority of businesses use the indirect method in their external financial reports (which the FASB permits). Because of its popularity, we use the indirect method for the statement of cash flows in our business example.

EXHIBIT 17.2—DIRECT METHOD FOR REPORTING CASH FLOW FROM OPERATING ACTIVITIES

Dollar Amounts in Thousands

	12/31/2012
Sales Revenue	$ 38,281
Costs of Goods Sold Expense	$(17,950)
Operating Expenses	$(13,800)
Interest Expense	$ 0
Income Tax Expense	$ (1,288)
Cash Flow from Operating Activities	$ 5,243

Accounting Issues and Our Case Study

Most financial statement readers have a good intuitive understanding of a balance sheet (assets, liabilities, and shareholders' equity), and they have a good intuitive understanding that profit equals sales revenue minus expenses. In contrast, most financial statement readers seem confused about cash flow from profit. They think that making profit means making money, and that cash increases the same amount as bottom-line profit. This is not true, however. Profit and cash flow are two different numbers, both of which are important in their own right. So the following accounting issues have been identified that are based more on the complexity of the statement of cash flows as opposed to actual GAAP accounting issues (which are most closely associated with the balance sheet accounts and the respective income statement accounts they're connected to):

- The missing cash flow statement: As noted previously, this is a common occurrence with small businesses and does not mean the company is being dishonest and/or incompetent as their balance sheet and income statement are both available and accurate. Just be prepared to create or prepare cash flow statements for these businesses as once you've completed a couple, it becomes second nature.
- Don't rely on your CPA: We remind you that most honest and qualified accountants are accrual basis people, not cash basis people. To most accountants accrual basis is second nature. Indeed, we've met accountants who have trouble understanding cash flow because they are so submerged in the accrual basis. As a matter of fact, we've seen CPAs who have trouble preparing a statement of cash flows. So the party needs to invest the time and effort to really understanding what the statement of cash flows is saying about a business.
- Cash flow statement complexity: In preparing financial reports, accountants should keep in mind that the readers generally have a more difficult time understanding the statement of cash as compared with the balance sheet and income statement. But we see little evidence of this in the actual reporting of cash flow statements. We have read countless statements of cash flows. Many are exceedingly complicated. It's not unusual to find a statement of cash flows of a public company that reports 30, 40, or more lines of information. Furthermore, it is impossible to reconcile all the items reported in the statement of cash flows with their corresponding assets and liabilities in the balance sheet. So with this said, the following quote really applies to the statement of cash flows—***Don't lose sight of the forest for the trees!***

We believe that businesses should provide a more readable statement of cash flows. It would be quite helpful if management

provided a brief summary and discussion of the company's cash flows for the year. Instead, the large majority of businesses offer little or no comment regarding their cash flows. You can make some headway in reading the statement of cash flows, but that's about it. Even CPAs would have trouble doing a complete and thorough analysis of the cash flows statements of many companies.

Now let's compare our two case study companies, which highlights a significant difference in how cash flow from operating activities is reported using the direct method (to be evaluated more closely in Chapter 24). See Exhibit 17.3.

EXHIBIT 17.3—CASE STUDY COMPARISON—DIRECT METHOD FOR REPORTING CASH FLOW FROM OPERATING ACTIVITIES

Dollar Amounts in Thousands

	HareSquare, Inc. 12/31/2012	TortTech, Inc. 12/31/2012
Sales Revenue	$ 38,281	$ 31,977
Costs of Goods Sold Expense	$(17,950)	$(16,966)
Operating Expenses	$(13,800)	$(12,300)
Interest Expense	$ 0	$ (110)
Income Tax Expense	$ (1,288)	$ 0
Cash Flow from Operating Activities	$ 5,243	$ 2,601

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CASH FLOWS FROM INVESTING AND FINANCING ACTIVITIES

Understanding the Real Capital Structure and Needs of a Business

Every business needs to invest in long-term assets to support its business operations and future growth. Manufacturing companies need to constantly reinvest in machinery and equipment to stay competitive and replace worn-out assets. Technology companies wouldn't be around very long if they didn't continually invest in new innovations, product development, intellectual property, and so on. Utility companies, new energy generation facilities, airlines—well that's easy—new airplanes, and the list goes on and on. This concept of investment and where does the cash come from to support these investments is the basis of Chapter 18 on understanding cash flows from investing and financing activities.

These two simple concepts represent the basis for understanding cash flows from investing and financing activities as businesses must constantly invest in assets, hard or soft, internally produced or externally acquired, to drive earnings growth. Further, by focusing on these two segments of the cash flow statement, a better understanding of financial structure of a company can be obtained as it relates to using debt and equity to finance its operations.

Tips, Tidbits, and Traps

Two key concepts need to be understood relating to understanding cash flows from investing and financing activities: What return will my investment generate and where will the cash come from to support the investment? As for a return, all businesses must focus on its ROI or return on investment (covered in Chapter 22). Let's look no further than Netflix and their reported $100 million-plus investment in its internally produced miniseries, *House of Cards,* for a real world example. Will it play out and generate the type of return Netflix is hoping for? Well, only time will tell.

Assuming the potential return meets or exceeds its target level, then the next question will become: Where will the capital, or cash, come from to support the expansion? It could come from internal earnings or retained cash, lenders extending loans against the airplanes, by raising cash from selling equity in the company, or a combination of these items. But remember this critical financial concept—the greater the use of debt may produce higher investment net returns (compared to equity) but carries with it higher risks. The lower amount of debt used tends to produce lower net investment returns but carries with it lower risks. This is the basis of "financial leverage," which can have disasterous results.

Rounding Out the Statement of Cash Flows

Please refer to Exhibit 18.1.Chapter 17 explains the first of the three sections in the statement of cash flows, cash flow from operating activities, which without doubt is the hardest to understand. This chapter explains the other two sections of the cash flows statement, which are a piece of cake to understand compared with the first section that reports cash flow from operating activities.

The second section of the statement of cash flows (see Exhibit 18.1) summarizes the *investment activities* of the business during the year in long-term operating assets. In the example, the business spent $250,000 for new fixed assets (tangible long-term operating assets). See the line extending from this expenditure in the statement of cash flows to the property, plant, and equipment asset account in the balance sheet. In addition, the business did not make any investment in intangible assets during the year (supported by the line connecting $0 investments to investments in other assets).

The investing activities section also includes proceeds from disposals of investments (net of tax), if there are any such disposals during the period. In our example, the business did not dispose of any of its long-term operating assets during the year—tangible or intangible. We should mention in passing that an ongoing business normally makes some disposals of fixed assets during the year.

The third section of the statement of cash flows (see Exhibit 18.1 again) reports the cash flows of *financing activities*. The term *financing* refers to dealings between the business and its sources of capital (i.e., its lenders and its stockholders). The business in our example decreased its short-term and long-term debt during the year by a total of $1,600,000 ($1,200,000 of long-term and $400,000 of short-term debt). It also raised a relatively large amount of $4,000,000 from issuing new capital stock shares (to a new investor). See the lines of connection from the statement of cash flows to the corresponding balance sheet accounts in Exhibit 18.1.

The business distributed no cash dividends from profit to its shareowners during the year. Cash dividends, if present, are included in the financing activities section of the cash flows statement. You may logically ask: Why not put cash dividends from profit next to cash flow from profit (i.e., from operating activities)? We say more about the placement of cash dividends later in the chapter. Its $4,493,000 net income for the year increases the company's retained earnings account the same amount (see Chapter 16) with no cash dividends. Therefore, the net increase in retained earnings during the year is $4,493,000 (see Exhibit 18.1).

The bottom line of the statement of cash flows is the $8,681,000 increase in cash during the year (see Exhibit 18.1), which is very large and telling in this situation as why would a company that produces positive cash flow from operating activities, also look to generate cash from its financing activities (when actual investments

EXHIBIT 18.1—CASH FLOW FROM INVESTING AND FINANCING ACTIVITIES

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2012

Balance Sheet as of the Year-End	12/31/2011	12/31/2012	Change
Assets			
Current Assets			
Cash and Equivalents	$ 372	$ 9,053	$ (8,681)
Accounts Receivable, Net	$4,575	$ 6,800	$ (2,225)
Inventory, LCM	$ 880	$ 2,640	$ (1,760)
Prepaid Expenses	$ 75	$ 100	$ (25)
Total Current Assets	$5,902	$18,593	$ (12,691)
Fixed Assets			
Property, Plant, and Equipment	$1,000	$ 1,250	$ (250)
Accumulated Depreciation	$ (350)	$ (600)	$ 250
Net Fixed Assets	$ 650	$ 650	$ 0
Other Assets			
Intangible Assets and Goodwill, Net	$1,500	$ 1,000	$ 500
Other Assets	$ 75	$ 75	$ 0
Total Other Assets	$1,575	$ 1,075	$ 500
Total Assets	$8,127	$20,318	$(12,191)
Liabilities and Stockholders' Equity			
Current Liabilities			
Accounts Payable	$ 732	$ 1,323	$ 591
Accrued Expenses	$ 604	$ 945	$ 341
Current Portion of Debt	$ 400	$ 0	$ (400)
Other Current Liabilities	$4,313	$ 8,679	$ 4,366
Total Current Liabilities	$6,049	$10,947	$ 4,898
Long-Term Liabilities			
Notes Payable, Less Current Portion	$1,200	$ 0	$ (1,200)
Other Long-Term Liabilities	$ 0	$ 0	$ 0
Total Long-Term Liabilities	$1,200	$ 0	$ (1,200)
Total Liabilities	$7,249	$10,947	$ 3,698
Stockholders' Equity			
Capital Stock—800,000 Authorized, 700,000 Outstanding → 2012	$3,000	$ 7,000	$ 4,000
Retained Earnings	$(2,122)	$ 2,731	$ 4,493
Total Owners' Equity	$ 878	$ 9,371	$ 8,493
Total Liabilities and Stockholders' Equity	$8,127	$20,318	$12,191

Statement of Cash Flows for the Fiscal Year Ending	12/31/2012
Net Income (Loss)	$ 4,493
Operating Activities, Cash Provided or Used:	
Depreciation and Amortization	$ 750
Decrease (Increase) in Accounts Receivable	$(2,225)
Decrease (Increase) in Inventory	$(1,760)
Decrease (Increase) in Other Current Assets	$ (25)
Increase (Decrease) in Trade Payables	$ 591
Increase (Decrease) in Accrued Liabilities	$ 341
Increase (Decrease) in Other Liabilities	$ 4,366
Net Cash Flow from Operating Activities	$ 6,531
Investing Activities, Cash Provided or Used:	
Capital Expenditures	$ (250)
Investments in Other Assets	$ 0
Net Cash Flow from Investing Activities	$ (250)
Financing Activities, Cash Provided or Used:	
Dividends or Distributions Paid	$ 0
Sale (Repurchase) of Equity	$ 4,000
Proceeds from Issuance of Debt	$ 0
Repayments of Long-Term Debt	$(1,600)
Other Financing Activities—Asset Impairment	$ 0
Net Cash Flow from Financing Activities	$ 2,400
Other Cash Flow Adjustments	$ 0
Net Increase (Decrease) in Cash and Equivalents	$ 8,681
Beginning Cash and Equivalents Balance	$ 372
Ending Cash and Equivalents Balance	$ 9,053

in assets during the year was only $250,000). We explore this in more detail later in this chapter when we present our case study companies.

As a side note, perhaps we shouldn't call the change in cash the bottom line. The accounting authorities would not be amused. The term *bottom line* is more or less reserved for the last line of the income statement. But we see nothing wrong with referring to the bottom line of the cash flows statement. That line is the final, net result of all three types of activities that determine the increase or decrease in cash during the year.

Seeing the Big Picture of Cash Flows

Earning profit is a vital source of cash inflow to every business. Profit is the *internal* source of cash flow—money generated by the business itself without going outside the company to external sources of capital. Chapter 17 explains that the company generated $6,531,000 cash flow during the year just ended from its profit-making (operating) activities. Profit provided more than $5,000,000 of money for the business, and this isn't chicken feed. The obvious question is: What did the business do with its cash flow from profit? The remainder of the cash flows statement answers this important question. The rest of the cash flows statement reports other sources of cash that were tapped by the business during the year that provided additional capital to the business. And, most important, the statement of cash flows reveals what the business did with all this money.

From its profit-making activities the company generated $6,531,000 cash during the year. What *could* it do with this money? (We look at what it actually did in just a moment.) One option is simply to increase its cash balance, which is exactly what HSI did—just let the money pile up in the company's checking account. This is not a productive use of the cash, unless the business is on the ragged edge and desperately needs to increase its day-to-day working cash balance, is planning for a significant investment in the near term (e.g., a company acquisition), or is anticipating some type of other event that could require significant cash, or liquidity, to work through. The business could also pay down some of its liabilities, which again, HSI did by paying off $1,600,000 of debt. Or the company could use some of the money to pay cash dividends to its stockholders.

Finally, the company could make an investment in its long-term assets which it did, but for only $250,000 (refer to Exhibit 18.1), not very significant in the grand scheme of things.These cash outlays are called *capital expenditures*, to emphasize the long-term nature of investing capital in these assets. You may have noticed that the total amount of capital expenditures was considerably less than cash flow from financing activities so this begs the question:What did HSI do with the balance of its cash? Chapter 24, which summarizes our two case study companies, will provide the answer and summarize the moral to our story.

It's worthwhile at this stage to take a step back and evaluate the three primary sources of cash for a business:

1. Internal: Businesses should always look to optimize internal cash flows and/or utilize excess cash balances, as this source is the most directly controllable, accessible, and cheapest. Chapter 17 summarizes the topic of generating cash flows from operating activities but the real meat of our discussion is based on Chapters 7 through 12 (covering the connections between the income statement and the balance sheet's working capital, and hints provided on where cash can be generated).

2. Debt: Most businesses will utilize some type of formal lending agreements, shortterm or longterm, to support continued operations and growth (refer to Chapter 15). Although debt creates interest expense and is not as readily available as tapping internal sources of cash, it can be a valuable source of cash when used appropriately. That is, debt is designed to be used to fund real assets that can act as collateral for items such as machinery and equipment, accounts receivables, and inventory. Where companies get into trouble is when they use debt inappropriately such as to support expenses (rather than assets) and/or in an overly leveraged or risky manner.
3. Equity: Businesses can secure cash by increasing the equity in their company by issuing stock in exchange for a cash investment (refer to Chapter 16). The good news with raising cash from issuing equity is that it does not bring with it a direct interest expense or require a set repayment plan. The bad news with raising cash from issuing equity is that it is often expensive (as a portion of future earnings now technically belong to the new equity owner), time consuming, and brings in outside parties that may influence management moving forward. The key with equity, just like with debt, is to raise cash using a company's equity at the most appropriate time, which include at the initial start-up (as all new businesses will require some type of equity to launch), in rapid growth environments, and ideally when the perceived value of the company is at its highest (as the selling price per share of stock will be higher so the ownership percentage sold will be lower assuming a constant total level of cash is raised).

When a business is growing year over year, its cash flow from profit net of cash dividends (which almost are never issued in a rapidly expanding business as the cash is needed to fund growth) usually does not provide all the cash it needs for its capital expenditures. Therefore, the business has to expand its debt and equity capital, which the business did in our example. Chapter 19 examines the impact of business growth and decline on cash flow from operating activities.

Business managers, lenders, and investors keep a close watch on capital expenditures. These cash outlays are a bet on the future by the company. The business is saying, in effect, that it needs the new long-term assets to maintain or improve its competitive position, or to expand its facilities for future growth. These are some of the most critical decisions business managers make.

Making capital investments is always risky. On the one hand, who knows what will happen in the future? On the other hand, not making such investments may sign the death warrant of a business. By not making such investments, the company may fall behind its competition and lose market share that would be impossible to regain. Then again, being overinvested and having excess capacity can be an albatross around the neck of a business.

Critical Terminology Alert

Quite often in the financial world you will hear the term *sustainable growth rate* or *SGR*. What this is basically referring to is determining at what rate a business can support its growth from relying on internal cash flows only (i.e., no external debt or equity is required to support growth). Numerous resources are available online to calculate a company's SGR but it should be noted that SGRs will vary by company and industry depending on the specific targets established (such as return on equity, dividend policies). An SGR for a software technology company is going to be very different than the SGR for a heavy equipment manufacturer.

We should point out that there are no general standards or guidelines regarding how large a company's working cash balance should be. Most business managers would view the company's cash balance in this example as adequate, we think. Just how much cash cushion does a business need as a safety reserve to protect against unfavorable developments?

What if the economy takes a nosedive, or what if the company has a serious falloff in sales? What if some of its accounts receivable are not collected on time? What if the company is not able to sell its inventory soon enough to keep the cash flow cycle in motion? What if it doesn't have enough money to pay its employees on time? There are no easy answers to these cash dilemmas.

In summary, the cash flows statement deserves as much attention and scrutiny as the income statement and balance sheet. Though not too likely, a company making a profit could be headed for liquidity problems (having too little ready cash) or solvency problems (not being able to pay liabilities on time). Profit does not guarantee liquidity and solvency. The cash flows statement should be read carefully to see if there are any danger signs or red flags.

At the end of Chapter 17 we mention that statements of cash flows reported by most public corporations are cluttered with a lot of detail—often far too much detail, in our opinion. One could get the impression that companies are deliberately making their cash flow statements hard to read, though this view may be too cynical.

Our advice is to focus mainly on the big-ticket items and skip the smaller details in reading a statement of cash flows. Stand back and try to see the big picture. The income statements reported by most public corporations have far fewer lines of information compared with cash flows statements and are generally much easier to understand. This is an odd state of affairs indeed.

Accounting Issues and Our Case Study

As noted in Chapter 17, accounting issues related to cash flow statement reporting tend to be centered in disclosure, format, and presentation rather than generally accepted accounting principles (GAAP)–based accounting issues. A couple of items to pay attention to have been summarized in these bullet points:

- Technical disclosures and classifications: There are several technical accounting problems in reporting cash flows. For example, should the cash flows connected with the discontinued operations of a business be reported separately from its ongoing, recurring cash flows? Should cash flows of certain short-term activities be reported gross or net? If a company utilizes a short-term line of credit lending facility that is tied to current assets, should activity appear under the statement of cash flows from operating activities or financing activities? These cash flow issues are beyond the scope of this book so you can breathe easier now as these subjects represent a book unto themselves.
- Dividend placement: One of our criticisms of the statement of cash flows—aside from the huge number of lines reported by most companies in this financial statement—is the placement of cash dividends in the financing activities section of the statement. Instead, we favor placing cash dividends immediately under cash flow from operating activities. Deducting the amount of cash dividends from cash flow from operating activities would highlight the amount of cash flow the company had available for general business purposes.

  The purpose is to show more clearly how much of the cash flow from profit was available to the business after cash dividends. The financial statement reader could easily size up dividends against the amount of cash flow from profit, and see the amount of cash remaining for other needs of the business. But the current standard is to put dividends in the financing activities section of the cash flows statement. Our view is that businesses should have more options regarding where to place cash dividends in their statements of cash flows.

One thing comes across loud and clear in the authoritative pronouncement on reporting cash flows. A business should not include cash flow per share in its financial reports (yet numerous companies still report this as a non-GAAP disclosure, in one form or another as noted in Chapter 16). In particular, accounting authorities do not want a business to report cash flow from operating activities per share as this might confuse readers between what is cash flow and EPS. But as external parties continue to

demand more and more business information and look to expand their analyses to almost ridiculous levels, and even though public companies are only required to provide EPS, the pressure continues to build to report in some fashion cash flow per share (so be aware when reading financial information especially as it relates to references to non-GAAP).

At this stage, the comparison between our two case study companies is for the most part complete. The final comparison of each companies' financial statements, including their statement of cash flows, are addressed in Chapter 24, which brings a conclusion to the story of TTI and HSI.

Part Four

FINANCIAL REPORT ANALYSIS

19

EXPANSION AND CONTRACTION IMPACTS ON CASH FLOW

Setting the Stage

The single best statement we've heard over the years related to really understanding the impact of expanding and contracting business cycles on cash flows goes like this (pardon our language but this is coming straight from the horse's mouth, a client of ours for more than 20 years):

> We don't need a bank going into a recession but we sure as hell need one coming out!

This client operates a personnel staffing or "Temp" business—an industry that is highly sensitive to changing economic conditions and often a leading indicator of future economic activity (as businesses tend to secure temporary or part-time employees first to ensure that a real recovery is taking place and then they hire the employees full time when their confidence is higher). At first this statement may appear contradictory as if a company is anticipating a downturn, resulting in incurring net losses for 12 to 24 months, it would seem that additional cash or financing from a bank would be required to support ongoing operations. But as you learn in this chapter, the exact opposite is generally the rule of thumb as it's during high growth and expansion periods when cash resources become the most constrained.

Our goal in this chapter is not to pick on banks and evaluate their lending practices and standards (as covering this material would represent an entirely new book), rather this chapter is designed to help the reader better understand the ebb and flow

Tips, Tidbits, and Traps

There is no doubting the severe impact the Great Recession (from 2008 through 2010) had on economic activity in the United States, as well as the world. Forget for a moment that some of the biggest and best known investment banking firms including Lehman Brothers and Bear Sterns were eliminated virtually overnight or that GM's bailout was in the billions of dollars, the real impact for most businesses (which is still being felt today) was on the dramatic changes the credit markets underwent in terms of how credit (or loans) were underwritten, evaluated, and eventually extended (to companies) by the banking industry. In the span of less than two years, banks went from being aggressive lenders with relatively loose underwriting standards to, for lack of a better term, *ultraconservative* lenders with extremely tight underwriting standards. This wasn't entirely the bank's fault or decision as the federal government and its regulatory arm had a significant influence with this change in the market environment. But the outcome of this change in demeanor by the banks is the real point that needs to be driven home for businesses.

That is, lenders and particularly banks, have become far more conservative with their lending standards and often have covenants that require a company to generate a profit every year. If a loss is incurred, the company may be declared in default of the loan forcing the bank to pursue a number of potential strategies including

"requesting" the company leave the bank and find a new lending source. Needless to say, this can wreak havoc on a company that is starting to grow again, needs bank financing to support the growth, and is being told by the bank that it no longer wants its business. And to quote our client again, keep this thought in mind:

> The bank is only going to be there for you and offer loans when you need them the least!

of cash flow in economic cycles and how businesses manage their operations to improve internal liquidity and availability to cash (both important analysis benchmarks).

So to start, let's have a quick refresher course (covered in Chapter 17) on how a business gets from net income (the bottom line of the income statement) to the cash flow yield from net income (which is found in the first section of the statement of cash flows).

Cash flow is almost always higher or lower than net income for the period. There are three main reasons: (1) depreciation (and any other noncash expenses and losses recorded in the period); (2) changes in operating assets; and, (3) changes in operating liabilities.

1. ***Depreciation, amortization, and noncash expenses and losses:*** Sales revenue reimburses a business for the expenses it incurs in making sales. Profit is the margin of sales revenue in excess of expenses. One expense is *depreciation*. A business records depreciation expense each period by writing down the cost balance of its property, plant, and equipment (except land). There is no cash outlay in recording this expense. Because depreciation is not a cash outlay the amount of the expense is an "add-back" to net income for determining cash flow.

   In addition to depreciation, a business may record other *noncash* expenses and losses. For example, a company may record *amortization* expense to recognize the loss of value of its intangible assets. Or, a business may record an uninsured loss that occurred during the year. Such asset write-downs do not involve a decrease in cash. Therefore, amortization expense and asset write-down losses are added back to net income (just like depreciation).
2. ***Operating assets:*** Changes in operating assets (accounts receivable, inventory, and prepaid expenses) affect cash flow from profit. An increase in accounts receivable means that less cash was actually collected than sales revenue for the period. Increases in operating assets require cash outflow to build up the assets. In contrast, a decrease in accounts receivable means that more cash was actually collected than sales revenue for the period. Decreases in other operating assets improve cash flow because the business, in effect, liquidates part of its investments in these operating assets.
3. ***Operating liabilities:*** Increases in operating liabilities (accounts payable, accrued expenses payable, and income tax payable) boost cash flow during the year. The business avoids cash outlay to the extent of the increases. In other words, part of total expenses for the year are not paid but are attributable to increases in these liabilities. Decreases in operating liabilities have the opposite effect: More cash is paid out than the amount of expenses for the year because the liabilities are paid down.

Caution: Simply adding back depreciation (plus any other noncash expenses and losses) to net income does not give you a true measure of cash flow from operating activities (profit). Changes in operating assets and liabilities during the year cause impacts on cash flow, which can be very sizable in some cases.

Cash Flows in the Steady-State Case

Let's look ahead to the fiscal year ending 12/31/13 for HSI we use throughout the book. In broad terms, the company's sales revenue next year will hold steady, grow, or decline. These are the three basic scenarios for next year. The scenarios have remarkably different impacts on cash flow from operating activities (cash flow from profit).

We start with the steady-state, or low-growth/no-decline scenario for HSI of just 3 percent for 2013. Sales revenue and expenses in this scenario duplicate the year just ended. There are no changes. Exhibit 19.1 presents the first section of the company's cash flows statement for next year for the steady-state situation. We don't bother to present its income statement for the coming year (it's a carbon copy as the one you've seen many times already).

Critical Terminology Alert

Notice on the top of Exhibit 19.1 that the reference to "audited" financial statements has been replaced with "Unaudited" financial statement forecasts. This is an important distinction as it is important to always clearly note when financial statements and information has been "audited" or is really nothing more than a SWAG, or scientific wild ass guess (refer to Chapter 1).

Realistically, a company's sales revenue and expenses during the coming year will almost certainly change, at least a little bit. Our purpose here, however, is simply to provide a useful point of reference before moving on to the growth and decline scenarios.

In this example the company's accounts receivable equals roughly nine weeks of annual sales revenue, its inventory equals eight weeks of annual cost of goods sold expense, and so on. These ratios can change over time. But in the steady-state scenario shown in Exhibit 19.1 all the operating ratios of sales revenue and expenses with their corresponding assets and liabilities basically hold constant for the coming year. The result is that you see limited changes for the company's operating assets and liabilities. The primary adjustments to net income to determine cash flow is the depreciation add back (plus a small net change associated with current assets and current liabilities).

We must admit that even in a steady-state situation the business may allow its average accounts receivable collection period to drift up, in which case its accounts receivable would increase. This increase would cause a negative cash flow adjustment to net income. Even when sales revenue and expenses remain constant the following year, a company's operating assets and liabilities may change because the average credit period extended to its customers may change, or its average inventory holding period may change, or its average credit period of accounts payable may change, and so on.

EXHIBIT 19.1—STEADY-STATE BUSINESS GROWTH IMPACT ON CASH FLOWS

Dollar Amounts in Thousands

HareSquared, Inc.
Unaudited Financial Statement Forecasts
for the Fiscal Year Ending
12/31/2013

Balance Sheet as of the Year-End	Actual 12/31/2012	Forecast 12/31/2013
Assets		
Current Assets		
Cash and Equivalents	$ 9,053	$12,770
Accounts Receivable, Net	$ 6,800	$ 7,229
Inventory, LCM	$ 2,640	$ 2,719
Prepaid Expenses	$ 100	$ 125
Total Current Assets	$18,593	$22,843
Fixed Assets		
Property, Plant, and Equipment	$ 1,250	$ 1,500
Accumulated Depreciation	$ (600)	$ (850)
Net Fixed Assets	$ 650	$ 650
Other Assets		
Intangible Assets and Goodwill, Net	$ 1,000	$ 500
Other Assets	$ 75	$ 75
Total Other Assets	$ 1,075	$ 575
Total Assets	$20,318	$24,068
Liabilities and Stockholders' Equity		
Current Liabilities		
Accounts Payable	$ 1,323	$ 1,588
Accrued Expenses	$ 945	$ 1,167
Current Portion of Debt	$ 0	$ 0
Other Current Liabilities	$ 8,679	$ 8,939
Total Current Liabilities	$10,947	$11,694
Long-term Liabilities		
Notes Payable, Less Current Portion	$ 0	$ 0
Other Long-Term Liabilities	$ 0	$ 0
Total Long-Term Liabilities	$ 0	$ 0
Total Liabilities	$10,947	$11,694
Stockholders Equity		
Capital Stock—800,000 Authorized, 550,000 Outstanding → 2013	$ 7,000	$ 7,000
Retained Earnings	$ 2,371	$ 5,374
Total Owner's Equity	$ 9,371	$12,374
Total Liabilities and Stockholders' Equity	$20,318	$24,068

Changes in account balances between the years are anticipated to be relatively small.

Net income, depreciation and amortization expense, and dividends account for the majority of changes to cash of the $3.717 million net increase for the year.

Income Statement for the Fiscal Year Ending	Actual 12/31/2012	Forecast 12/31/2013
Sales Revenue, Net	$38,281	$39,429
Costs of Goods Sold	$17,950	$17,743
Gross Profit	$20,331	$21,686
Selling, General, and Administrative Expenses	$13,800	$14,007
Depreciation and Amortization Expense	$ 750	$ 750
Operating Earnings	$ 5,781	$ 6,929
Other Expenses (Income)	$ 0	$ 0
Interest Expense	$ 0	$ 0
Net Income (Loss) before Income Taxes	$ 5,781	$ 6,929
Income Tax Expense (Benefit)	$ 1,288	$ 2,425
Net Income (Loss)	$ 4,493	$ 4,504
Shares Outstanding	700	700
Earnings (Loss) Per Share	$ 6.42	$ 6.43

Statement of Cash Flows for the Fiscal Year Ending	Actual 12/31/2012	Forecast 12/31/2013
Net Income (Loss)	$4,493	$ 4,504
Operating Activities, Cash Provided or Used:		
Depreciation & Amortization	$ 750	$ 750
Decrease (Increase) in Accounts Receivable	$(2,225)	$ (429)
Decrease (Increase) in Inventory	$(1,760)	$ (79)
Decrease (Increase) in Other Current Assets	$ (25)	$ (25)
Increase (Decrease) in Trade Payables	$ 591	$ 265
Increase (Decrease) in Accrued Liabilities	$ 4,707	$ 482
Net Cash Flow from Operating Activities	$ 6,531	$ 5,468
Investing Activities, Cash Provided or Used:		
Capital Expenditures	$ 0	$ 0
Investments in Other Assets	$ (250)	$ (250)
Net Cash Flow from Investing Activities	$ (250)	$ (250)
Financing Activities, Cash Provided or Used:		
Dividends or Distributions Paid	$ 0	$ (1,501)
Sale (Repurchase) of Equity	$ 4,000	$ 0
Proceeds from Issuance of Debt	$ 0	$ 0
Repayments of Long-Term Debt	$(1,600)	$ 0
Other Financing Activities	$ 0	$ 0
Net Cash Flow from Financing Activities	$ 2,400	$ (1,501)
Other Cash Flow Adjustments	$ 0	$ 0
Net Increase (Decrease) in Cash and Equivalents	$8,681	$ 3,717
Beginning Cash and Equivalents Balance	$ 372	$ 9,053
Ending Cash and Equivalents Balance	$9,053	$12,770

In our steady-state scenario cash flow from operating activities equals net income plus depreciation plus the net change in working capital, which is $5,468,000 for the coming year. Cash flow from profit in a steady-state scenario is like milking a cow that gives a dependable, steady supply of cash flow every period, equal to depreciation (and other noncash items) plus net income. Indeed, the term *cash cow* is used to describe a business in a steady-state situation.

The $750,000 addition to cash flow from recapturing some of the capital invested in a company's fixed assets (the depreciation and amortization add backs) provides a source of money for replacing fixed assets. Due to general inflation over the years, new fixed assets will probably cost more than the original cost of the fixed assets being replaced. To keep on a steady path, the business may have to use some of its cash flow from net income to replace fixed assets as they are retired. Further, HSI is forecasting a dividend to be issued for the year of $1,501,000 as a result its continued strong operating performance.

In summary, Exhibit 19.1 calls out two key elements of a steady growth business environment. First, changes in working capital accounts (i.e., current assets and current liabilities) between the years are relatively small and have a limited impact on cash flows. Second, the change in cash between the years is primarily impacted by HSI's net income, depreciation and amortization expense, and dividends.

Cash Flow Growth Penalty

Growth is the central strategy of many businesses. The purpose of growth is to increase profit and shareholders' wealth. Without good management, however, expenses can grow faster than sales revenue, and profit may actually decrease. In tough times, just holding its own may be the best a business can do.

Exhibit 19.2 presents a 30 percent growth scenario for HSI in the coming year. The exhibit begins on the left with the income statement for the year just ended and shows the budgeted changes in sales revenue and expenses for the coming year. The company is planning for significant growth in sales revenue and profit next year. The CEO wants to know how this growth will impact the company's cash flow from profit next year. (We do not go into how the company arrived at its budgeted changes; we trust that the company's managers have done realistic forecasting and have set achievable goals for next year, which might not be entirely true.)

In Exhibit 19.2 the budgeted changes in sales revenue and expenses for the coming year are connected with their net balance sheet and cash flow changes for 2013. See the several lines of connection leading from the changes in the income statement into the balance sheet and cash flow from operating activities section of the cash flows statement.

The amounts of the changes in operating assets and liabilities assume that the company's operating ratios change during the year. For instance, notice that sales revenue is forecast to increase by $11,484,000 during the year bringing the total ending balance in accounts receivable to $11,404,000 as of 12/31/13. If we apply our days sales outstanding ratio (covered in Chapter 7) to these figures, we now see that HSI is forecasting a DSO in accounts receivable of approximately 82 days at the end of 2013 compared to 64 days outstanding as of the end of 2012 (refer to Exhibit 19.3).

Tips, Tidbits, and Traps

The reason for the increase in HS's DSO calculation between the years is the result of two primary factors. First, to increase sales, the company elected to provide extended payment terms to various customers. Second, when companies are growing fast and sales are "back loaded" to the end of the year, this has the effect of increasing the accounts receivable balance at the end of the year as a higher percentage of sales occur in the fourth quarter compared to the first quarter of the year. So in effect what happens is the DSO calculation gets skewed higher when average monthly sales for the year is used based on assuming each month has equal sales of $4,147,000. A better measurement of DSO would be based on determining average monthly sales for the fourth quarter and then completing the calculation (but because this information is not available in our example, the DSO calculation is based on annual revenue, which skews the result). If in our example, average monthly sales during the fourth quarter were $5,150,000, the DSO calculation would have been 66 days, which is much more reasonable than 82.5 days. The key point to remember is that drilling down into the detail is essential to really understand the operating results of a company.

EXHIBIT 19.2—EXPANDING BUSINESS GROWTH IMPACT ON CASH FLOWS

Dollar Amounts in Thousands

HareSquared, Inc.
Unaudited Financial Statement Forecasts
for the Fiscal Year Ending
12/31/2013

Balance Sheet as of the Year-End	Actual 12/31/2012	Forecast 12/31/2013	Forecast Change
Assets			
Current Assets			
Cash and Equivalents	$ 9,053	$10,157	$(1,104)
Accounts Receivable, Net	$ 6,800	$11,404	$(4,604)
Inventory, LCM	$ 2,640	$ 3,432	$ (792)
Prepaid Expenses	$ 100	$ 125	$ (25)
Total Current Assets	$18,593	$25,118	$(6,525)
Fixed Assets			
Property, Plant, and Equipment	$ 1,250	$ 1,750	$ (500)
Accumulated Depreciation	$ (600)	$ (900)	$ 300
Net Fixed Assets	$ 650	$ 850	$ (200)
Other Assets			
Intangible Assets and Goodwill, Net	$ 1,000	$ 2,000	$(1,000)
Other Assets	$ 75	$ 75	$ 0
Total Other Assets	$ 1,075	$ 2,075	$(1,000)
Total Assets	$20,318	$28,043	$(7,725)
Liabilities and Stockholders' Equity			
Current Liabilities			
Accounts Payable	$ 1,323	$ 1,913	$ 590
Accrued Expenses	$ 945	$ 1,323	$ 378
Current Portion of Debt	$ 0	$ 0	$ 0
Other Current Liabilities	$ 8,679	$ 9,981	$ 1,302
Total Current Liabilities	$10,947	$13,217	$ 2,270
Long-Term Liabilities			
Notes Payable, Less Current Portion	$ 0	$ 0	$ 0
Other Long-Term Liabilities	$ 0	$ 0	$ 0
Total Long-Term Liabilities	$ 0	$ 0	$ 0
Total Liabilities	$10,947	$13,217	$ 2,270
Stockholders Equity			
Capital Stock—800,000 Authorized,550,000 Outstanding → 2013	$ 7,000	$ 7,000	$ 0
Retained Earnings	$ 2,371	$ 7,826	$ 5,455
Total Owners' Equity	$ 9,371	$14,826	$ 5,455
Total Liabilities and Stockholders' Equity	$20,318	$28,043	$ 7,725

Notice the relatively large increases in current asset accounts that consume or "use" cash as the company grows rapidly.

Income Statement for the Fiscal Year Ending	Actual 12/31/2012	Forecast 12/31/2013	Forecast Change
Sales Revenue, Net	$38,281	$49,765	$11,484
Costs of Goods Sold	$17,950	$22,394	$ 4,444
Gross Profit	$20,331	$27,371	$ 7,040
Selling, General, and Administrative Expenses	$13,800	$15,870	$ 2,070
Depreciation and Amortization Expense	$ 750	$ 800	$50
Operating Earnings	$ 5,781	$10,701	$ 4,920
Other Expenses (Income)	$ 0	$ 0	$ 0
Interest Expense	$ 0	$ 0	$ 0
Net Income (Loss) before Income Taxes	$ 5,781	$10,701	$ 4,920
Income Tax Expense (Benefit)	$ 1,288	$ 3,745	$ 2,457
Net Income (Loss)	$ 4,493	$ 6,956	$ 2,463
Shares Outstanding	700	700	700
Earnings (Loss) Per Share	$ 6.42	$9.94	$ 3.52

Statement of Cash Flows for the Fiscal Year Ending	Actual 12/31/2012	Forecast 12/31/2013
Net Income (Loss)	$ 4,493	$ 6,956
Operating Activities, Cash Provided or Used:		
Depreciation and Amortization	$ 750	$ 800
Decrease (Increase) in Accounts Receivable	$ (2,225)	$ (4,604)
Decrease (Increase) in Inventory	$ (1,760)	$ 792)
Decrease (Increase) in Other Current Assets	$ (25)	$ (25)
Increase (Decrease) in Trade Payables	$ 591	$ 590
Increase (Decrease) in Accrued Liabilities	$ 341	$ 378
Increase (Decrease) in Other Liabilities	$ 4,366	$ 1,302
Net Cash Flow from Operating Activities	$ 6,531	$ 4,605
Investing Activities, Cash Provided or Used:		
Capital Expenditures	$ (250)	$ (500)
Investments in Other Assets	$ 0	$ (1,500)
Net Cash Flow from Investing Activities	$ (250)	$ (2,000)
Financing Activities, Cash provided or used:		
Dividends or Distributions Paid	$ 0	$ (1,501)
Sale (Repurchase) of Equity	$ 4,000	$ 0
Proceeds from Issuance of Debt	$ 0	$ 0
Repayments of Long-Term Debt	$ (1,600)	$ 0
Other Financing Activities	$ 0	$ 0
Net Cash Flow from Financing Activities	$ 2,400	$ (1,501)
Other Cash Flow Adjustments	$ 0	$ 0
Net Increase (Decrease) in Cash and Equivalents	$ 8,681	$ 1,104
Beginning Cash and Equivalents Balance	$ 372	$ 9,053
Ending Cash and Equivalents Balance	$ 9,053	$10,157

EXHIBIT 19.3 —YEAR-END DSO OR DAYS SALES OUTSTANDING CALCULATION COMPARISON

Dollar Amounts in Thousands

Days Sales O/S in Trade Receivables:	Actual 12/31/2012	Actual 12/31/2013
Total Trade Receivables	$ 6,800	$11,404
Total Annual Sales Revenue	$38,281	$49,765
Average Monthly Sales	$ 3,190	$ 4,147
Average Days in a Month	30	30
Days Sales O/S in Trade Receivables	63.95	82.50

In like manner, all other operating ratios in the business example are allowed to vary as well in the growth scenario shown in Exhibit 19.2. Depreciation expense is not based on an operating ratio; rather, depreciation for the coming year is calculated from detailed schedules of the company's fixed assets (including new assets to be acquired in the coming year). This expense is budgeted to increase $50,000 next year because the company is planning to buy new fixed assets. Therefore, the depreciation and amortization add back to net income is $800,000 next year ($250,000 depreciation in year just ended + $50,000 increase in depreciation in coming year + $500,000 of amortization expense = $800,000 depreciation and amortization expense in the coming year).

Profit is budgeted to increase $2,463,000 next year (see Exhibit 19.2), which equals a 55 percent increase over last year. The stockholders should be pleased. But if they anticipate that the business will also increase cash dividends 55 percent, they may be disappointed. Last year the business generated $6,531,000 cash flow from profit (from Exhibit 19.2). In the growth scenario, however, notice that cash flow does *not* increase with the budgeted profit increase. Cash flow from profit is only $4,605,000 (see Exhibit 19.2). How do you like that?

The lower amount of cash flow from profit (compared with the year just ended) is caused by the rather large hits on cash flow resulting from the increases in accounts receivable and inventory next year that are needed to support the higher level of sales and expenses. These sizable negative cash flow adjustments to net income are offset to some extent by increases in operating liabilities. In short, profit goes up but cash flow from profit goes down!

There's no such thing as a free lunch for growth when it comes to cash flow. Growth should be good for profit next year, but growth almost always puts a dent in cash flow for the year. In other words, growth does not produce an instant cash flow increase equal to the increase in profit. Cash flow in all likelihood will decrease compared with the previous year—as it does in our business example.

Compare Exhibit 19.2, which shows $4,605,000 cash flow from profit for the growth scenario, with Exhibit 19.1, which shows cash flow from profit in the steady-state scenario. Cash flow is $5,468,000 in the steady-state case, or $863,000 higher. Profit is lower in the steady-state case, but cash flow is higher.

We don't mean to suggest that a business should sacrifice growth to keep its cash flow higher. We do want to make clear, however, that a business pays a cash flow penalty in the short run for growth. During a rapid growth phase, many companies suspend cash dividends to shareowners. All profit is "plowed back," or reinvested in the business.

A business could speed up cash flow from profit if it were able to improve its operating ratios, such as holding a smaller stock of products in inventory. However, improving operating ratios is generally difficult in a period of growth. If anything, a business may be under pressure and allow its operating ratios to slip a

little. For example, the company may offer customers more liberal credit terms to stimulate sales, which would extend the average accounts receivable credit period. Or the business may increase the size and mix of its inventory to improve delivery times to customers and to provide better selection.

Finally, we would like to draw your attention to the investing and financing activities of the statement of cash flows. Here you see three items (shaded in grey) that consumed roughly $3,500,000 of cash during the year. First, HSI is forecasting to purchase $500,000 of property, plant, and equipment during the year to support anticipated growth. Second, HSI invested $1,500,000 in other assets as the company is planning on pursuing an aggressive software development project to expand its range of product offerings starting in 2014. Third, HSI is anticipating that a dividend will be paid to the shareholders of $1,501,000.

So after all items impacting cash flows are accounted for, HSI's $6,956,000 of forecast net income is anticipated to translate into only $1,104,000 of increased cash balances as the company's rapid growth expectations will require the lion's share of net income to be "reinvested" to support its business plan.

Cash Flow "Reward" from Decline

The old saying "what goes up must come down" certainly applies to most businesses. Few can keep growing forever; most high-growth businesses eventually slow down or reverse direction. There are cases of remarkable long-run sustained growth; Walmart comes to mind, for instance. But even stalwarts such as McDonald's have slowed down, leveled off, or declined. Some industries are cyclical by nature; their sales revenue goes up and down like a roller coaster over the business cycle.

Exhibit 19.4 presents the decline scenario. In our decline scenario, cost of goods sold expense drops in a different percent (i.e., lower) compared to sales revenue as HSI is anticipating the need to reduce prices to generate sales but with no change in product costs.Depreciation and amortization expense remains the same for the coming year on the grounds that the company would not immediately dispose of any fixed assets and is reluctant to invest in any new assets during a down period. As you should expect, profit performance suffers in a decline. It's difficult for a business to respond to a falloff in sales by cutting all its expenses immediately. For one thing, businesses are saddled with *fixed costs* that cannot be reduced in the short run when sales volume declines. A business has to carry out major surgery to reduce these fixed costs. What happens to cash flow from profit (operating activities) when a business suffers a decline in sales?

The company's net income is budgeted to fall $4,435,000 in the decline scenario (see Exhibit 19.4 again). This is bad news.

Tips, Tidbits, and Traps

In our example, HSI is forecasting only a 9 percent decrease in selling, general, and administrative expenses compared to a 30 percent decrease in sales revenue. Why the divergence?Two reasons come to mind. First, a business may not be able to reduce its fixed costs right away when sales start to drop. The company needs more time to ratchet down its fixed costs, which may take from six months to three years. Second, businesses that have ample resources have no problem cutting the excess "fat" but will avoid cutting into the "bone" in order to avoid eliminating resources that will benefit the organization over the long term. Highly skilled employees fall into this category as nobody wants to lose quality labor that will be extremely difficult and expensive to replace when growth begins again.

In short, a company's expenses may not go down as quickly as sales, which is the case in our example as sales revenue decreases 30 percent and selling, general, and administrative expenses decrease only 9 percent (as HSI will not be able to).

Net income would drop to just $58,000, which means HSI is basically operating at a breakeven level. But cash flow from profit would be roughly $2 million! You may find this rather surprising. In fact, you may even find this hard to believe. So, let us explain why.

EXHIBIT 19.4—Contracting Business Growth Impact on Cash Flows

Dollar Amounts in Thousands

HareSquared, Inc.
Unaudited Financial Statement Forecasts
for the Fiscal Year Ending
12/31/2013

Balance Sheet as of the Year-End	Actual 12/31/2012	Forecast 12/31/2013	Forecast Change
Assets			
Current Assets			
Cash and Equivalents	$ 9,053	$11,059	$(2,006)
Accounts Receivable, Net	$ 6,800	$ 5,583	$ 1,217
Inventory, LCM	$ 2,640	$ 1,848	$ 792
Prepaid Expenses	$ 100	$ 75	$ 25
Total Current Assets	$18,593	$18,565	$ 28
Fixed Assets			
Property, Plant, and Equipment	$ 1,250	$ 1,250	$ 0
Accumulated Depreciation	$ (600)	$ (850)	$ 250
Net Fixed Assets	$ 650	$ 400	$ 250
Other Assets			
Intangible Assets and Goodwill, Net	$ 1,000	$ 500	$ 500
Other Assets	$ 75	$ 75	$ 0
Total Other Assets	$ 1,075	$ 575	$ 500
Total Assets	$20,318	$19,540	$ 778
Liabilities and Stockholders' Equity			
Current Liabilities			
Accounts Payable	$ 1,323	$ 1,298	$ (25)
Accrued Expenses	$ 945	$ 785	$ (160)
Current Portion of Debt	$ 0	$ 0	$ 0
Other Current Liabilities	$ 8,679	$ 8,028	$ (651)
Total Current Liabilities	$10,947	$10,111	$ (836)
Long-Term Liabilities			
Notes Payable, Less Current Portion	$ 0	$ 0	$ 0
Other Long-Term Liabilities	$ 0	$ 0	$ 0
Total Long-Term Liabilities	$ 0	$ 0	$ 0
Total Liabilities	$10,947	$10,111	$ (836)
Stockholders Equity			
Capital Stock—800,000 Authorized, 550,000 Outstanding → 2013	$ 7,000	$ 7,000	$ 0
Retained Earnings	$ 2,371	$ 2,429	$ 58
Total Owner's Equity	$ 9,371	$ 9,429	$ 58
Total Liabilities and Stockholders' Equity	$20,318	$19,540	$ (778)

Notice the relatively large decreases in current asset accounts that now are a source of cash as the company's sales contract.

Income Statement for the Fiscal Year Ending	Actual 12/31/2012	Forecast 12/31/2013	Forecast Change
Sales Revenue, Net	$38,281	$26,797	$(11,484)
Costs of Goods Sold	$17,950	$13,399	$ (4,551)
Gross Profit	$20,331	$13,398	$ (6,933)
Selling, General, and Administrative Expenses	$13,800	$12,558	$ (1,242)
Depreciation and Amortization Expense	$ 750	$ 750	$ 0
Operating Earnings	$ 5,781	$ 90	$ (5,691)
Other Expenses (Income)	$ 0	$ 0	$ 0
Interest Expense	$ 0	$ 0	$ 0
Net Income (Loss) before Income Taxes	$ 5,781	$ 90	$ (5,691)
Income Tax Expense (Benefit)	$ 1,288	$ 32	$ (1,256)
Net Income (Loss)	$ 4,493	$ 58	$ (4,435)
Shares Outstanding	700	700	700
Earnings (Loss) Per Share	$ 6.42	$ 0.08	$ (6.34)

Statement of Cash Flows for the Fiscal Year Ending	Actual 12/31/2012	Forecast 12/31/2013
Net Income (Loss)	$ 4,493	$ 58
Operating Activities, Cash Provided or Used:		
Depreciation and Amortization	$ 750	$ 750
Decrease (Increase) in Accounts Receivable	$ (2,225)	$ 1,217
Decrease (Increase) in Inventory	$ (1,760)	$ 792
Decrease (Increase) in Other Current Assets	$ (25)	$ 25
Increase (Decrease) in Trade Payables	$ 591	$ (25)
Increase (Decrease) in Accrued Liabilities	$ 341	$ (160)
Increase (Decrease) in Other Liabilities	$ 4,366	$ (651)
Net Cash Flow from Operating Activities	$ 6,531	$ 2,006
Investing Activities, Cash Provided or Used:		
Capital Expenditures	$ (250)	$ 0
Investments in Other Assets	$ 0	$ 0
Net Cash Flow from Investing Activities	$ (250)	$ 0
Financing Activities, Cash Provided or Used:		
Dividends or Distributions Paid	$ 0	$ 0
Sale (Repurchase) of Equity	$ 4,000	$ 0
Proceeds from Issuance of Debt	$ 0	$ 0
Repayments of Long-Term Debt	$ (1,600)	$ 0
Other Financing Activities	$ 0	$ 0
Net Cash Flow from Financing Activities	$ 2,400	$ 0
Other Cash Flow Adjustments	$ 0	$ 0
Net Increase (Decrease) in Cash and Equivalents	$ 8,681	$ 2,006
Beginning Cash and Equivalents Balance	$ 372	$ 9,053
Ending Cash and Equivalents Balance	$ 9,053	$11,059

What is happening with HSI's balance sheet is that it is contracting or compressing with the decrease in net sales revenue. In Exhibit 19.4 every operating asset and liability falls—including income tax payable because the business is budgeting a decrease in taxable income next year. In most respects, the decline scenario (Exhibit 19.4) is just the flip side of the growth scenario (Exhibit 19.2). For example, in the growth scenario the $792,000 inventory increase is a negative adjustment to cash flow provided from operating activities, but in the decline scenario the $792,000 inventory decrease is a positive adjustment to cash flow provided from operating activities.

In the decline scenario, the business would realize a substantial cash flow from profit or operating activities and would have to decide what to do with the cash. The company could pay down its debt (interest-bearing liabilities), or possibly retire some of its capital stock shares. If the business predicts that the decline will be permanent, it should not need as much capital from debt and equity sources. At the lower level of sales, the company can get by on a lower level of assets, which means it needs less capital but a word of caution with this situation.

Tips, Tidbits, and Traps

What this means is that all businesses should have well-developed business plans to adapt to rapidly changing economic conditions in order to manage profit and cash or capital levels proactively. As noted at the start of this chapter the following quote was provided:

> We don't need a bank going into a recession but we sure as hell need one coming out!

Although a bank may not be needed in our example, the same concept was confirmed by Exhibit 19.2 as it displayed just how much cash is needed to support a rapidly growing company that may be coming out of a severe downturn and rebounding quickly. Businesses need to plan well ahead to ensure that even when the balance sheet contracts due to a downturn and cash resources appear ample, if a quick rebound occurs and a business is not prepared, they can grow themselves right out of business. The strength of the balance sheet really comes into play here as this is where companies really have the opportunity to add significant value to their enterprise—preying on the vulnerable and weak as economic expansion begins again (and the weaker competitors are not able to participate due to cash or capital limitations).

Red Ink and Cash Flow

Following our discussion of business decline in the preceding section, this is a good place to bring up an unpleasant subject. What happens to cash flow when the bottom line of the income statement is in red ink? In other words, what happens to cash flow when a business records a *net loss* for the year?

A net loss means that the total of expenses and losses is more than sales revenue (and income if any) for the year. Suppose a business records a $10 million net loss for the year: Did its cash decrease $10 million during the year? No, the cash impact from the net loss is bound to be different. To determine cash flow, you apply the same cash flow adjustments that are explained in Chapter 17. And, there is another factor to consider in many red ink cases.

A net loss for the year may be due to large write-downs of assets (or by recording a large liability). For example, the balance in a company's goodwill asset account may be written down because the asset suffered what is called *impairment*. This means that management has come to the conclusion that the asset has a lower future value to the business, or perhaps no value at all. The asset write-down does not involve a cash outlay. So, cash flow from operating activities is not hurt by such an asset write-down.

Suppose that a business records no asset write-downs (or liability write-ups) during the year, but reports a sizable net loss for the year. Its cash flow from operating activities could very well be negative. In other words, the total cash outlays for expenses could be more than total cash inflow from sales revenue, even after the depreciation add back. This condition is called *negative cash flow*.

Critical Terminology Alert

In a negative cash flow situation, a business is using up its available cash. The rate at which the business is using up its cash is called the *burn rate* and is usually calculated on a monthly basis. The burn rate can be used to estimate how long the business can live without a major cash infusion. This length of time given to a business is often referred to as its *runway* (thus, you often hear the comment about how to lengthen the runway to buy a start-up more time). Start-up business ventures typically experience negative operating cash flow during their first few years as they develop their business plan, test products/services (often referred to as the *beta* or *pilot* period), and launch into market. Often their burn rate remains too high and they don't make it, which is one of the leading causes of failures for start-up businesses.

Final Comment

Financial reporting standards do not require a business to explain or comment on its cash flow strategies and problems. The life or death of the business may be at stake, but top management may not say anything about how they expect to deal with their serious cash flow problems. Chapter 22 explains financial statement ratios that help lenders and investors identify liquidity and solvency problems of a business.

20

WHAT IS EBITDA AND WHY IS IT IMPORTANT?

EBITDA—An Alternative View of Cash Flow or Operating Income?

One of the most commonly referenced terms and relied on financial reference points used by financial and accounting types is the ever popular *EBITDA* or earnings before interest, taxes, depreciation, and amortization. EBITDA has been around for decades but gained a significant amount of interest and use back in the 1980s during a period when leveraged buyout strategies were utilized to purchase companies.

What the buyers and their financing sources really needed to understand was how much EBITDA (or in their mind organic or internal cash flow) a company could generate to support future debt service payments. For example, if a company generated $10 million a year in EBITDA and the debt service requirements associated with the leveraged buyout was $6 million per year, then more comfort was gained that the company could adequately make the annual payment of $6 million (with some room to spare).

But let's look a little closer at this all important metric and its relation to "cash flow." You frequently see cash flow mentioned in the business and financial press. In reading news items and articles, often it's not clear what the reporter means by the term *cash flow*. Reporters usually don't offer definitions of the term as they are using it. When they do define cash flow, they don't necessarily mean the amount in the statement of cash flows called *cash flow from operating activities*. They often use some other measure of cash flow. So, be careful when reading an article that refers to cash flow.

The balance of this chapter discusses EBITDA in more detail and evaluates the pros and cons of relying on this financial metric.

Critical Terminology Alert

EBITDA has become popular to reference as an alternative measurement of cash flow. Stop right here and listen carefully. EBITDA should not be considered a measurement of cash flow similar to understanding how cash flow from operations is generated (refer to Chapter 17). EBITDA as a financial metric is not an accurate measure of operating cash flow, because interest and income tax are certainly cash flow expenses and are removed from calculating EBITDA in addition to accounting for changes in current assets and liabilities that impact operating cash flow. Rather, EBITDA represents more of an alternative measure for operating profit, one that strips away how the company is financed and taxed and removes depreciation and amortization (if the business records any amortization expense).

Relying on EBITDA—The Pros and Cons

EBITDA's evolution in the business world has expanded over the years and without question if used in the proper context (the "pros" of EBITDA), can be a useful financial measurement tool when evaluating a company's operating results. Some of the more popular uses of EBITDA have been summarized in the following three points:

1. Use as valuation basis: Large publicly traded companies are often valued using a price earnings multiple (refer to Chapter 16 for further reference). For smaller businesses, price earnings multiples are not as popular as using an EBITDA or cash flow multiple to value a business. For example, a publicly traded company may be valued at 20 times its trailing 12-month earnings per share (EPS) so if its EPS for the past year was $5 per share and 1 million shares were outstanding, the company's value or market capitalization would be $100,000,000 ($5 EPS multiplied by 1 million shares times 20). For a smaller company, a multiple of 6 might be applied on its EBITDA to determine its value so if its EBITDA is $10,000,000, the company's value would be $60,000,000 (before other adjustments). This is a simple valuation method and does not take into consideration important elements of business acquisitions (such as accounting for proper levels of working capital and adjusting the purchase price for assumed long-term debt among others) but does provide a sound starting point to place a value on a business.
2. Use to normalize earnings: A number of parties will refer to EBITDA to calculate normalized earnings to help remove the noise and clutter associated with expenses that may vary significantly between businesses. These expenses include income taxes, depreciation and amortization expense, interest expense, discontinued operations, asset impairments, and/or other one-time-type write-offs. EBITDA is designed to strip out these items and provide for a more "apples to apples" comparison of core or base company earnings.
3. Use to understand cash flows: As previously noted and warned, EBITDA is often mistaken as cash flow. From an accounting perspective, this is incorrect. EBITDA, however, can measure a company's operating income fairly well, which gives readers a leg up on understanding a company's ability to generate internal or organic cash flow and how much might be available to cover such items as debt service payments (principle and interest), investments in capital assets, income taxes, and other financing and investing activities. EBITDA is a valuable tool to help understand cash flow better but should not be relied on by itself to calculate a company's cash flow.

Other uses could be listed but these are three of the most common reasons why EBITDA represents a financial analysis focal point. EBITDA can be modified to offer two additional financial analysis tools:

1. Adjusted EBITDA: Adjusted EBITDA expands on the primary concept of EBITDA (which is to evaluate normalized operating results) by pulling out certain one-time expenses, charge offs, gains, and so on that may excessively impact a company's operating results during a reporting period. For example, a company may suffer a one-time loss and added professional fees due to litigation over a patent, which it records as selling, general, and administrative fees under legal professional expenses. If material, the company may want to pull this expense out of its income statement and report it below the operating income line as an "other expense" (so that normal operating income is not distorted by the event).

   But a word of caution here as companies are notorious for constantly making "adjustments" to EBITDA to inflate this figure (and the performance of the company) by pushing various expenses into another expense group that falls into the "one-time" status (which are generally viewed in a less negative fashion by external parties).
2. Free cash flow: In its simplest form, free cash flow starts with EBITDA and then reduces it by required investments in capital assets (capital expenditures or cap. ex.) to support ongoing operations over a period of time. Capital expenditures represent a necessary and ongoing investment that all companies need to make to support continued business operations and growth. Free cash flow represents an important measurement of a company's health and financial viability as if a company constantly produces $10,000,000 a year in EBITDA, but requires capital investments of $9,000,000 to support ongoing operations, its true cash flow is far less than what EBITDA would lead you believe.

So, in short, there are a number of "pros" associated with using EBITDA (both the base formula and expanded formats with adjusted EBITDA and free cash flow) as a financial performance measurement tool. But in the same breath, EBITDA "cons" also need to be understood as described here:

- Capital investment requirements ignored: One of the biggest weaknesses of relying on EBITDA is that it ignores normal and necessary investments in capital assets to support continued operations. For capital-intensive businesses (think manufacturers, oil producers, etc.), EBITDA fails to capture a critical operating component related to continued investments in capital assets. EBITDA is really much better suited for evaluating service companies, "soft" technology businesses, and noncapital-intensive operations whereas free cash flow measurements are better suited for capital-intensive businesses.
- Working capital changes: Changes in accounts receivable, inventory, prepaid expenses, accounts payable, accrued expenses payable, and income tax payable are ignored by the EBITDA definition of cash flow and profit. If all these changes in operating assets and liabilities are relatively minor, then simply adding back depreciation (and amortization, if any) to net income might be acceptable as a cash flow measure. But typically these changes are significant and cannot be ignored.
- Garbage in, garbage out: Calculating EBITDA is dependent on whether the financial statements are accurate to begin with, especially the balance sheet. If errors are present in the

financial statements, EBITDA will be unreliable so it suffers from the same risks as financial statements in general related to "massaging the numbers" (covered in Chapter 25). Basically, EBITDA is as easily manipulated as net income if management elects to pursue this path.

- Not governed by generally accepted accounting principles (GAAP): EBITDA is a financial term that is subject to different definitions, formats, and structuring (when reported). Or in other words, when EBITDA is reported it is generally directed by the company's management or board of directors and not by an independent CPA conducting an audit. This leads to a potential problem as EBITDA may be pushed to the forefront and net profit is pushed to the background. When a business's profit performance is lackluster or when a business reports a loss, the CEO may prefer to shift attention to EBITDA or cash flow (assuming cash flow is healthy). However, EBITDA and cash flow are not a substitute for profit. The oldest trick in the book is to divert attention from bad news to whatever good news you can find. Simply put, profit generates cash flow; cash flow does not generate profit.

Tips, Tidbits, and Traps

This is the most direct tip we provide in the book. EBITDA represents just one financial analysis tool and should be used in conjunction with all of the other financial analysis tools, reports, and statements to properly assess the financial performance of a business.

21

FINANCIAL STATEMENT FOOTNOTES—THE DEVIL'S IN THE DETAILS

The Meat of the Financial Report

We're going to start this chapter by directing you to probably the most important concept when it comes to really understanding the financial condition of a company by referencing this simple but highly relevant quote:

The Devil's in the Details

If you think about it, why do public companies produce annual financial reports that have roughly three to six pages dedicated to the actual financial statements, but are 40 or more pages in total? Well, after stripping out the front end "storyboard" (that portion of the annual report that the company uses for branding and marketing purposes and to highlight certain operating results), the balance of the annual report is dedicated to the financial statements and the footnotes to the financial statements.

Based on a quick review and estimate of Ford Motor Company's 2012 annual report totaling 164 pages, here's the breakdown:

- Pages 1–62, or 38 percent of the total annual report dedicated toward Ford's storyboard.
- Page 63, or less than 1 percent, dedicated to the auditor's report (or opinion).
- Pages 64 through 70, or just 4 percent, dedicated to the actual financial statements.
- Pages 71 through 164, or 57 percent dedicated to the footnotes and final miscellaneous disclosures.

Needless to say, there's an enormous amount of information disclosed by companies in the footnotes and their storyboard (which includes a management discussion of operating results) that savvy external parties will dissect to gain further insight into not just how the company's performing, but more importantly, its accounting policies and procedures and any "smoking guns."

Tips, Tidbits, and Traps

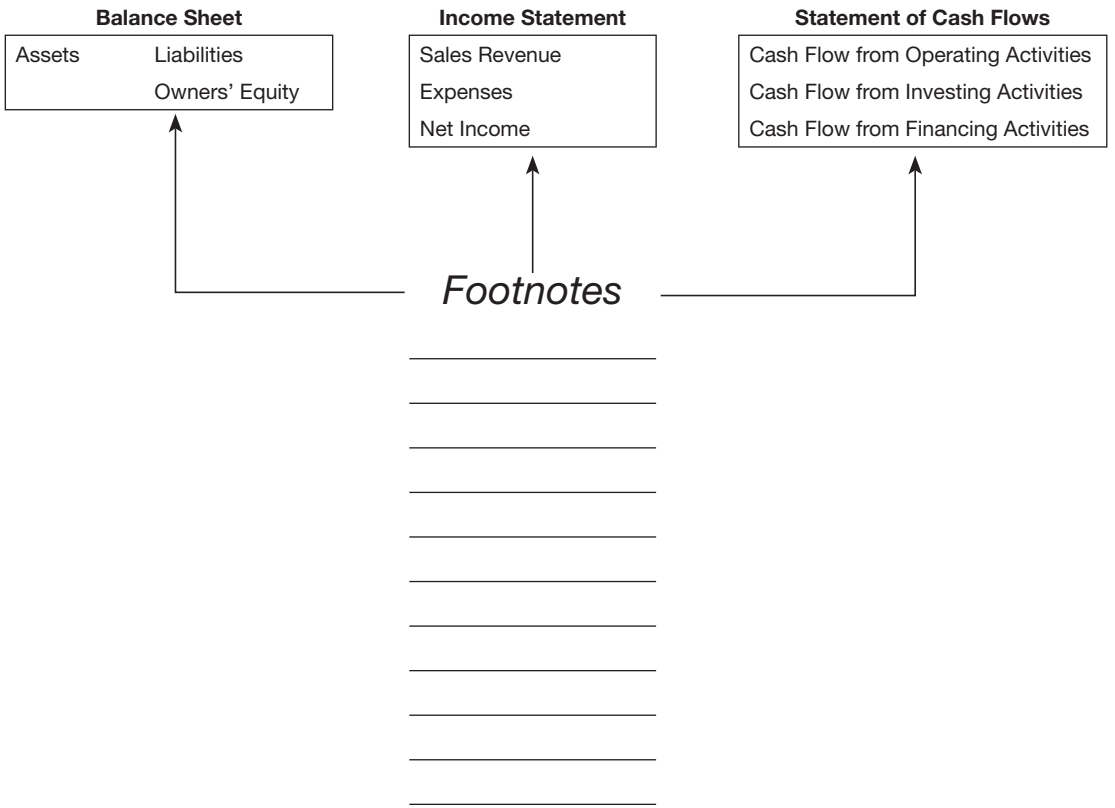
It should be noted that both the footnotes and the company's storyboard offer insightful and detailed information for evaluation purposes. But remember that the company's storyboard is generally directed and prepared by the company's executive management team (not an independent party) whereas the financial statement footnotes are evaluated and confirmed to a certain degree by the company's external auditors (an independent party). We're not saying the storyboard is inaccurate or misleading because public companies cannot afford this misstep. Rather, a typical storyboard tends to be focused (especially at the start) on the company's highlights and successes and then dive into the hard detail of a company where a more objective overview is provided.

So, to extend the discussion on analyzing business financial reports we turn our attention to financial statement footnotes to gain more insight into the qualitative elements of financial statements. This and the next chapter consider the information

in *external* financial reports—those that circulate outside the business. These financial communications are designed mainly for the outside shareowners and lenders of the business, who are the two primary *stakeholders* in the business. The managers of a business have access to more information than released in the company's external financial reports. Chapter 23 discusses how managers can use the inside information for analyzing profit performance.

Exhibit 21.1 summarizes the principal elements of the three financial statements of a business and shows that *footnotes* are included with the three statements. Footnotes are the fourth essential part of every financial report. Financial statements would be "naked" without their footnotes. This chapter explains the importance of reading the footnotes and problems with footnotes. Studying a financial report should definitely include reading the footnotes to the financial statements.

EXHIBIT 21.1—THREE FINANCIAL STATEMENTS AND FOOTNOTES



Financial Statements—Brief Review

Before discussing footnotes, let's quickly review the three financial statements of a business that we explained in previous chapters.

1. ***Balance sheet:*** Also called the *statement of financial condition*, the balance sheet is a relatively brief and condensed summary of a company's assets, liabilities, and owners' (stockholders') equity at the close of business on the last day of the income statement period. In reading a balance sheet, you need to understand the differences between basic types of assets (inventory versus property, plant, and equipment, for instance), and differences between operating liabilities (mainly accounts payable and accrued expenses payable) versus debt on which the business pays interest. Also, you should know the difference between the two different sources of owners' equity—capital invested by the owners in the business versus profit earned and not distributed to owners, which is called *retained earnings*.
2. ***Income statement:*** This financial statement summarizes a company's sales revenue and expenses for the period (the profit-making activities of the business) and it reports the company's bottom-line *net income* for the period, also called earnings and more popularly simply profit. A publicly owned business corporation must report its earnings per share (EPS) with its income statement. A nonpublic company doesn't have to report earnings per share.
3. ***Statement of cash flows:*** Making a profit has cash flow effects. But, as we explained in Chapter 17, the amount of cash flow from making profit during the year does not equal bottom-line profit (net income) for the year. This financial statement divides cash flows into three groups. The first section provides a trail from net income to cash flow from *operating (profit-making) activities*. The second section summarizes the cash flow of the company's *investing activities* during the year. The third section summarizes the cash flow from the company's *financing activities* during the year. The statement of cash flows exposes the financial strategy of the business. For example, you can compare dividends paid during the year against its cash flow from operating activities (profit), which is a major financial decision of the business.

In short, the three financial statements report on the three financial imperatives facing every business—making a profit, remaining in healthy financial condition, and making good use of cash flow.

Most businesses—large and small, public and private—present comparative financial statements for their most recent two years or three years. This multiyear presentation allows financial statement readers to make comparisons between the year just ended and the preceding year, and the year before that. The federal agency that regulates financial reporting by public corporations,

the Securities and Exchange Commission (SEC), requires three-year comparative financial statements.

According to various estimates, there are about 5,000 *public* companies in the United States. The financial reports of public companies are required to be audited annually by an independent certified public accountant (CPA) firm. The largest four international CPA firms (called the *Big Four*) audit the large majority of public companies. There are millions of *private* businesses in the United States. Private companies may or may not have their financial reports audited by an independent CPA firm. Generally, they are not legally required to have audits. We discuss financial report audits in Chapter 26.

Why Footnotes?

Without footnotes, financial statements would be incomplete, and possibly misleading. Footnotes are an essential *extension* to the three primary financial statements. Each financial statement is presented on one page, or at most two pages, in a financial report. Keep in mind that each financial statement is very condensed and presents highly compacted information.

It comes down to this: The lenders and investors in a business need more information than can be put into the financial statements. We suppose you could integrate this additional information into each financial statement. But can you imagine reading a balance sheet or an income statement that runs 5, 10, or 20 pages long? We don't think so. Therefore, the practical solution is to present the additional information in the form of supplementary footnotes to the financial statements. If you have a financial stake in the business you definitely should read the footnotes to its financial statements.

One overarching premise of financial reporting is *adequate disclosure*, so that all those who have a legitimate interest in the financial affairs of the business are provided the relevant information they need to make informed decisions and to protect their interests in the business. Footnotes are needed because the additional information provided in the footnotes is important to financial statement readers.

Top-level managers should not forget that they are responsible for the company's financial statements *and the accompanying footnotes*. The footnotes are an integral, inseparable part of a financial report. Financial statements state this fact on the bottom of each page, usually worded as follows:

> *The accompanying footnotes to the financial statements are an integral part of these statements.*

The CPA auditor's report covers footnotes as well as the financial statements.

Ideally, footnotes should be written in an understandable manner, and every effort should be made to use language and visual layouts, schedules, and exhibits that are clear and reasonably easy to follow. In other words, financial reports should be *transparent*. The lack of transparency in financial reports has come in for much criticism, especially regarding footnotes that are so dense and obtuse that even a lawyer would have trouble reading them. More on this point later in the chapter.

Two Types of Footnotes

The first type of footnote identifies and discusses the key accounting methods used by the business. As we discuss in Chapter 25, for several expenses and even for revenue a business can choose between two (or more) acceptable accounting methods. The company's selections of accounting methods should be made clear in its footnotes.

Here's an example of the types of accounting methods footnotes you find in financial reports (at least in the reports of public companies). In its 2012 financial report filed with the SEC Caterpillar included footnotes explaining their accounting methods for the following items (pages A11–A18):

- Nature of operations (machinery and power systems versus financial products).
- Basis of presentation (consolidation methods).
- Sales and revenue recognition (a detailed list).
- Inventories (use of the LIFO method and effects if the alternative FIFO method had been used).
- Depreciation and amortization.
- Foreign currency translations.
- Derivative financial instruments.
- Income taxes.
- Estimates in financial statements.
- New accounting guidelines (standards) that took effect in year.
- Goodwill.
- Accumulated other comprehensive income.
- Assets held for sale.

Caterpillar's footnotes occupy many more pages than its financial statements themselves, which is not that unusual.

Tips, Tidbits, and Traps

Footnotes assume that you are familiar with general accounting terminology. A business may be in an industry that is relatively unique and very different from other businesses, in which case it might explain its unusual terminology in its footnotes. But, by and large, companies do not include a glossary of accounting terms to help readers of their financial reports.

One of Caterpillar's footnotes explains how it goes about consolidating the various legal entities that make up the conglomerate entity called *Caterpillar*. Most large businesses consist of a family of corporations under the control of one parent company,

which is the case for Caterpillar. The financial statements of each corporation are grouped together into one integrated set of financial statements. Intercorporate dealings are eliminated as if there were only one entity. Affiliated companies in which the business has made investments are not consolidated if the company does not have a controlling interest in the other business.

In addition to footnotes that identify accounting methods (footnote type one), footnotes are needed to provide important information that cannot be placed in the financial statements themselves (footnote type two). For example, the maturity dates, interest rates, collateral or other security provisions, and other details of the long-term debt of a business are presented in footnotes. Annual rentals required under long-term operating leases are given. Details regarding stock options and stock-based compensation plans are spelled out, and the dilution effects on earnings per share are illustrated in footnotes.

Major lawsuits and other legal actions against the company are discussed in footnotes. Details about the company's employees' retirement and pension plans are disclosed in footnotes. Obligations of the business to pay for postretirement health and medical costs of retired employees are presented in footnotes.

The list of possible footnotes is a long one. In preparing its annual report, a business needs to go down an exhaustive checklist of items that may have to be disclosed, and then actually write the footnotes. This is no easy task. The business has to explain in a relatively small space what can be rather complex.

Management Discretion in Writing Footnotes

Business executives have to rely on the experts—the chief financial officer of the organization, legal counsel, and the outside CPA auditor—to go through the checklist of footnotes that may be required. Once every required footnote has been identified, key decisions still have to be made regarding each footnote. A business has a good deal of discretion and latitude regarding just how candid to be and how much detail to reveal in each footnote.

Clearly, business managers should not give away the farm—they should not divulge information that would damage a competitive advantage that the business enjoys. Managers don't have to help their competitors. The idea is to help the company's creditors and stockholders—to report to them information they're entitled to.

But just how much information do the creditors and stockholders really need? How much are they legally entitled to? These are very difficult questions to answer in straightforward and clear-cut terms. Beyond certain basic facts, exactly what should be put in a footnote to comply with the standard of adequate disclosure is not always clear and definite.

Too little disclosure, such as withholding information about a major lawsuit against the business, would be misleading, and the top executives of the business would be liable for such lack of disclosure. Beyond the legal minimum, which should be insisted on by the company's CPA auditors, footnote disclosure rules and guidelines are somewhat vague and murky.

Business executives, in fact, have rather broad freedom of choice regarding how frank to be and how to express what they put in footnotes. Quite clearly, footnotes are not written like newspaper articles. If the company's advertising copy were written like its footnotes, the business wouldn't make many sales.

Critical Terminology Alert

Footnotes should not be confused with the MDOR or MD&A (management discussion of operating results or management discussion and analysis) that usually accompanies most financial reports as part of the storyboard. As noted with Ford Motor Company's annual report previously referenced, a lengthy MDOR was provided that was prepared by Ford's management team. By the way, you will notice that the MDOR comes before the auditor's report, financial statements, and footnotes, which is by design to not confuse the reader that the MDOR was audited by the CPA firm.

Analysis Issues

Admittedly, we may be somewhat biased regarding financial statement footnotes. Excuse us if we jump on the soapbox here. We see a very serious financial reporting problem regarding the readability of footnotes. As authors we may be overly sensitive to this, but we think not. Investors and securities analysts complain about the dense fog in footnotes. Footnote writing can be so obtuse that you have to suspect that the writing is deliberately obscure. The rules require footnotes, but the rules fail to demand that the footnotes be clear and concise so that an average financial report reader can understand them.

All too often the sentence structure of footnotes seems intentionally legalistic and awkward. Technical terminology abounds in footnotes. Poor writing seems more prevalent in footnotes on sensitive matters, such as lawsuits or ventures that the business abandoned with heavy losses. A lack of candor is obvious in many footnotes.

Creditors and stockholders cannot expect managers to expose all the dirty linen of the business in footnotes, or to confess all their bad decisions. But, better clarity and more frankness certainly would help and should not damage the business.

In short, creditors and investors often are stymied by poorly written footnotes. You have only one option, and that is to plow through the underbrush of troublesome footnotes, more than once if necessary. Usually you can tell if particular footnotes are important enough to deserve this extra effort. Beyond this advice, all we can say to you regarding reading footnotes is: "Good luck."

22

FINANCIAL STATEMENT RATIOS—CALCULATING AND UNDERSTANDING

Financial Reporting Ground Rules

The main purpose of external financial reporting is to provide up-to-date financial information from a business to its investors and lenders. The investors and lenders are its sources of capital and they have a right to and need for the information. Other parties are also interested in the financial affairs of a business—for example, its employees and its other creditors. When they read financial reports, they should keep in mind that these communications are directed to the owner-investors of the business and its lenders. External financial reporting standards have been developed with this primary audience in mind.

According to estimates, there are about 5,000 publicly owned businesses in the United States. Their capital stock shares and other securities are traded in public markets. The dissemination of financial information by these companies is governed by federal law, which is enforced mainly by the Securities and Exchange Commission (SEC). The New York Stock Exchange, Nasdaq, and Internet securities markets also enforce rules and regulations over the communication of financial information by companies whose securities are traded on their markets.

Securities of some 12,000 foreign businesses are traded in stock markets around the world. Many countries, including the United States, have been attempting to develop a set of *international financial reporting and accounting standards*. This process has not gone as smoothly as many had hoped for. Indeed, at this time (2013) the SEC has not yet given its formal endorsement of international standards. American businesses are not yet required to adopt the global standards.

In the United States and other countries, a business cannot legally release information to some stockholders or lenders but not to others, nor can a business tip off some of them before informing the others. The purpose is to prevent *insider trading* by those who have information in advance of the information being reported to other stockholders and lenders. The laws and established standards of financial reporting are designed to ensure that all stockholders and lenders have equal access to a company's financial information and financial reports.

A company's financial report may not be the first source of information about its profit performance. In the United States, most public corporations issue press releases of their most recent earnings results. These press releases precede the mailing of hard copies of the company's financial report to its stockholders and lenders. Most public companies put their financial reports on their websites at the time of or soon after the press releases. Private businesses do not usually send out letters to their owners and lenders in advance of their financial reports, although they could. Private companies do not put their financial reports on publicly accessible websites.

This chapter examines what stockholders and lenders do with financial reports once they have access to them. The chapter centers on the *annual* financial report. (Quarterly financial reports are abbreviated versions of the annual reports.) In particular, this chapter focuses on certain *financial statement ratios* that are widely used by investors and lenders.

Financial Statement Preliminaries

Exhibit 22.1 presents a company's annual financial statements. This is the same company example used throughout earlier chapters. The footnotes for these statements are not included. (Chapter 21 discusses footnotes to financial statements.)

As a reminder, our company example from our case study, HSI, is privately owned, which means that its capital stock shares are not traded in a public market. The business has about 50 shareholders; some are managers of the business, including the CEO, the president, and several vice presidents. A business this size could go into the public marketplace for equity capital through an initial public offering (IPO) of capital stock shares and become publicly owned. However, the company has decided to remain private.

This chapter does not pretend to cover the field of *securities analysis* (i.e., the analysis of stocks and debt instruments issued by corporations). This broad field includes the analysis of competitive advantages and disadvantages of business, domestic, and international economic developments, business combination possibilities, general economic conditions, and much more. The key ratios explained in this chapter are basic building blocks in securities analysis.

Also, this chapter does not discuss *trend analysis*, which involves comparing a company's latest financial statements with its previous years' statements to identify important year-to-year changes. For example, investors and lenders are very interested in the sales growth or decline of a business, and the resulting impact on profit performance, cash flow, and financial condition. (Chapter 19 examines the impact of growth and decline on cash flow.)

This chapter has a more modest objective—to explain basic ratios used in financial statement analysis. Only a handful of ratios are discussed in the chapter, but they are fundamentally important.

On opening a company's financial report, probably one of the first things most investors do is to give the financial statements a once-over; they do a fairly quick scan of the financial statements. What do most financial report readers first look for? In our experience, they look first at the bottom line of the income statement, to see if the business made a profit or suffered a loss for the year.

As one sports celebrity put it when explaining how he keeps tabs on his various business investments, he looks first to see if the bottom line has "parentheses around it." The business in our example does not; it made a profit. Its income statement reports that the business earned $4,493,000 net income, or bottom-line profit for the year. Is this profit performance good, mediocre, or poor? Ratios help answer this question.

After reading the income statement, most financial statement readers probably take a quick look at the company's assets and compare them with the liabilities of the business. Are the assets adequate to the demands of the company's liabilities? Ratios help answer this question.

Extraordinary Gains and Losses

The business in our example does not report any *extraordinary gains or losses* for the year, which are one-time, nonrecurring events.

EXHIBIT 22.1—EXTERNAL FINANCIAL STATEMENTS OF BUSINESS

Dollar Amounts in Thousands Except Earnings Per Share

INCOME STATEMENT FOR YEAR	
Sales Revenue	$38,281
Cost of Goods Sold Expense	$17,950
Gross Profit	$20,331
Selling, General, and Administrative Expenses	$13,800
Depreciation Expense	$ 750
Earnings before Interest and Tax	$ 5,781
Earnings before Tax	$ 5,781
Income Tax Expense	$ 1,288
Net Income	$ 4,493
Basic Earnings per Share	$ 6.42

STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY FOR YEAR

	Capital Stock	Retained Earnings
Beginning Balances	$ 3,000	$(2,122)
Net Income for Year		$ 4,493
Shares Issued during Year	$ 4,000	
Dividends Paid during Year		$ 0
Ending Balances	$ 7,000	$ 2,371

BALANCE SHEET AT END OF YEAR		
Assets		
Cash		$ 9,053
Accounts Receivable		$ 6,800
Inventory		$ 2,640
Prepaid Expenses		$ 100
Current Assets		$18,593
Property, Plant, and Equipment		$ 1,250
Accumulated Depreciation		$ (600)
Intangible Assets		$ 1,075
Total Assets		$20,318
Liabilities and Owners' Equity		
Accounts Payable		$ 1,323
Accrued Expenses Payable		$ 945
Income Tax Payable		$ 429
Other Current Liabilities		$ 8,250
Current Liabilities		$10,947
Long-Term Notes Payable		$ 0
Total Liabilities		$10,947
Capital Stock (700,000 Shares)	$7,000	
Retained Earnings	$2,371	
Stockholders' Equity		$ 9,371
Total Liabilities and Stockholders' Equity		$20,318

STATEMENT OF CASH FLOWS FOR YEAR	
Net Income	$ 4,493
Depreciation and Amortization Expense	$ 750
Accounts Receivable Increase	$(2,225)
Inventory Increase	$(1,760)
Prepaid Expenses Increase	$ (25)
Accounts Payable Increase	$ 591
Accrued Expenses Payable Increase	$ 341
Increase (Decrease) in Other liabilities	$ 4,366
Cash Flow from Operating Activities	$ 6,531
Expenditures for Property, Plant, and Equipment	$ (250)
Expenditures for Intangible Assets	$ 0
Cash Flow from Investing Activities	$ (250)
Dividends or Distributions Paid	$ 0
Sale (Repurchase) of Equity	$ 4,000
Proceeds from Issuance of Debt	$ 0
Repayments of Long-Term Debt	$(1,600)
Other Financing Activities—Asset Impairment	$ 0
Cash Flow from Financing Activities	$ 2,400
Change in Cash during the Year	$ 8,681
Cash Balance at Start of Year	$ 372
Cash Balance at End of Year	$ 9,053

For example, a business may sell a major fixed asset and record a gain. Or a business may record a restructuring charge for the cost of laying off employees who will receive severance packages. These out-of-the-ordinary, unusual gains and losses are reported separately from the ongoing, continuing operations of a company. This topic would lead us into a labyrinth of technical details.

Tips, Tidbits, and Traps

But be warned: These irregular gains and losses complicate the evaluation and forecasting of profit performance! Extraordinary gains and losses, especially losses, raise troublesome questions, such as:

- Is an extraordinary loss really a correction of past years' accounting mistakes?
- What if a company reports such irregular gains and losses on a recurring basis, instead of infrequently?
- Will such extraordinary gains and losses be reported again in the future, and if so when and how much?
- Is the company just trying to package or get rid of all of its bad news at once by "cleaning house" with all financial and accounting related matters in one year-end restructuring charge?

Deciding how to interpret and assess extraordinary gains and losses is a vexing challenge, to say the least.

No Cash Flow Ratios, But …

As you see, the company's statement of cash flows is included in Exhibit 22.1. This is one of the three primary financial statements of a business entity that is included in its external financial reports. Nevertheless, we almost didn't include it in the exhibit, which might surprise you.

None of the benchmark ratios discussed in this chapter involve the statement of cash flows—because no cash flow ratios have emerged or are in widespread use. Still, cash flow gets a lot of ink in the financial press and in reports on corporations published by stockbrokers and investment advisors. Cash flow from profit (operating activities) is considered a key factor for all businesses.

The business in our example realized $6,531,000 net cash flow from profit (operating activities) for the year just ended. You could compare this important cash flow number with the company's $250,000 capital expenditures for the year (see Exhibit 22.1). As you see in its statement of cash flows the company's financing activities provided $2,400,000 net cash inflow for the year. Thus, the company's cash balance increased $8,681,000 during the year. None of these comparisons use ratios as such. But financial report readers should find such comparisons helpful for understanding the cash flow strategy of the business. Reading the cash flow statement in this manner provides a useful synopsis of where the business got its money during the year and what it did with the money.

We could divide cash flow from profit ($6,531,000) by net income ($4,493,000) to determine cash flow as a percentage of net income (145 percent). We think this is an interesting ratio. But it is not one of the benchmark ratios used in financial statement analysis (at least not yet) and can be misleading if significant one-time shifts occur in the company's working capital structure.

We could divide cash flow from profit (operating activities) by the number of capital stock shares to get cash flow per share. The authoritative financial reporting standard setter in the United States, the Financial Accounting Standards Board (FASB), specifically discouraged this ratio, which is most unusual. It is quite rare for the FASB to go out of its way to put the kibosh on a particular ratio.

A New Financial Statement

Exhibit 22.1 introduces a new financial statement—the *statement of changes in stockholders' equity for year*—that we have not presented before in the book. In some respects this is not really a financial statement; it's more of a supporting schedule that summarizes changes in the stockholders' equity accounts. The business issued 150,000 additional shares of capital stock during the year. The $4,000,000 cash from issuing the shares are reported in the statement of changes in stockholders' equity as well as the statement of cash flows (see Exhibit 22.1). Net income for the year is reported as an increase in retained earnings, and cash dividends paid to stockholders as a decrease.

The statement of changes in stockholders' equity is definitely needed when a business has a capitalization (ownership) structure that includes two or more classes of stock, and when a business owns some of its own capital stock shares (called *treasury stock*). This financial statement is also needed when a business has recorded certain types of losses and gains that bypass the income statement. These special gains and losses are put in a special stockholders' equity account called *Accumulated Other Comprehensive Income*.

Critical Terminology Alert

The term *comprehensive income* connotes that, in addition to net income that flows through the income statement into the retained earnings account, additional gains and losses have been recorded that have not been reported in the income statement. The accumulated other comprehensive income account serves like a second retained earnings type account, which holds the cumulative result of recording certain types of gains and losses. Exploring these special gains and losses would take us into a technical territory beyond the scope of this book.

Be warned: The statement of changes in stockholders' equity can be complex and highly technical. In the following discussion we focus on the most widely used ratios that are calculated from data in the big three financial statements (balance sheet, income statement, and statement of cash flows).

Benchmark Financial Ratios

Stock analysts, investment managers, individual investors, investment bankers, economists, and many others are interested in the fundamental financial aspects of a business. Ratios are a big help in analyzing the financial situation and performance of a business so throughout the chapters focused on connections (Chapters 7 through 18), critical financial ratios were presented that closely related to the subject matter being discussed (e.g., in Chapter 7 on sales revenue and accounts receivable, the days sales outstanding in accounts receivable ratio was discussed).

So to start, we begin with analyzing a company's solvency and liquidity as opposed to profit analysis.

Solvency and more so liquidity, *basically* refer to the ability of a business to pay its liabilities when they come due. If a business is insolvent and cannot pay its liabilities on time its very continuance is at stake. In many respects solvency comes first and profit second. The ability to earn profit rests on the ability of the business to continue on course and avoid being shut down or interfered with by its lenders. In short, earning profit demands that a business remains solvent. Maintaining solvency and liquidity (its debt-paying ability) is essential for every business. If a business defaults on its debt obligations, it becomes vulnerable to legal proceedings that could stop the company in its tracks, or at least could interfere with its normal operations.

Bankers and other lenders, when deciding whether to make and renew loans to a business, direct their attention to certain key financial statement ratios to help them evaluate the solvency situation and prospects of the business. These ratios provide a useful financial profile of the business in assessing its creditworthiness and for judging the ability of the business to pay interest and to repay the principal of its loans on time and in full.

Note: From here forward in the chapter all amounts from the financial statements are in thousands of dollars, except earnings per share (EPS). Instead of reminding you every time we assume that you remember that the relevant data is taken from Exhibit 22.1.

Current Ratio

The *current ratio* tests the short-term liability-paying ability of a business. It is calculated by dividing total current assets by total current liabilities in a company's most recent balance sheet. The current ratio for the company is computed as follows:

Current Assets	$18,593	=
Current Liabilities	$10,947	1.70

The current ratio is hardly ever expressed as a percent (which would be 170 percent for this company example). The current ratio for the business is stated as 1.70 to 1.00, or more simply just as 1.70.

The common opinion is that the current ratio for a business should be 2 to 1 or higher and at least 1.50 to 1.00. Most businesses find that their creditors expect this minimum current ratio. In other words, short-term creditors generally like to see a

business limit its current liabilities to one-half or less of its current assets.

Why do short-term creditors put this limit on a business? The main reason is to provide a safety cushion of protection for the payment of the company's short-term liabilities. A current ratio of 2 to 1 means there is $2 of cash and assets that should be converted into cash during the near future that will be available to pay each $1 of current liabilities that come due in roughly the same time period. Each dollar of short-term liabilities is backed up with $2 of cash on hand or near-term cash inflows. The extra dollar of current assets provides a margin of safety for the creditors.

A company may be able to pay its liabilities on time with a current ratio of less than 2 to 1, or perhaps even if its current ratio were as low as 1 to 1. In our business example, the company has not had to borrow any short-term debt to support its operating cash flow needs, but very well could given that HSI has $6,800,000 of accounts receivables and $2,640,000 of inventory.

Tips, Tidbits, and Traps

The company in our example could approach a lender to secure a short-term line of credit against its current assets to support operating cash needs if needed. In the example provided, this is not necessary as the company has $9,053,000 of cash available in addition to its balances in accounts receivables and inventory (all which can be used or turned into cash quickly to pay creditor obligations). The tip to remember here is that banks and other asset-based lenders (ABL) like to first lend against the most reliable and stable assets first and then work down the food chain. So the most desirable asset to lend against (and use as collateral) would be accounts receivable as these are highly liquid, usually turn into cash quickly, and should represent a valid claim against a third party. Next would be inventory (not considered as liquid but still offering some value) and then finally would be company property, plant, and equipment and possibly intangible assets. A typical short-term line of credit lending facility might allow for our example company to borrow 80 percent of eligible accounts receivable, 50 percent of the eligible inventory value, and 75 percent of the forced liquidation value (i.e., the value that can be expected if a forced liquidation of company assets are necessary) of HSI's property, plant, and equipment.

In summary, short-term sources of credit generally demand that a company's current assets be double its current liabilities. After all, creditors are not owners—they don't share in the profit earned by the business. The income on their loans is limited to the interest they charge (and collect). As creditors, they quite properly minimize their loan risks; as limited-income (fixed-income) investors, they are not compensated to take on much risk.

Acid Test Ratio (aka Quick Ratio)

Inventory is many weeks away from conversion into cash. Products are typically held two, three, or four months before being sold. If sales are made on credit, which is normal when one business sells to another business, there is a second waiting period before the receivables are collected. In short, inventory is not nearly as liquid as accounts receivable; it takes a lot longer to convert inventory into cash. Furthermore, there's no guarantee that all the products in inventory will be sold.

A more severe measure of the short-term liability-paying ability of a business is the *acid test ratio*, which excludes inventory (and prepaid expenses also). Only cash, short-term marketable securities investments (if any), and accounts receivable are counted as sources to pay the current liabilities of the business.

This ratio is also called the *quick ratio* because only cash and assets quickly convertible into cash are included in the amount available for paying current liabilities. It's more in the nature of a liquidity ratio that focuses on how much cash and near-cash assets a business possesses to pay all of its short-term liabilities.

In this example, the company's acid test ratio is calculated as follows (the business has no investments in marketable securities):

Cash	$ 9,053	
Accounts Receivable	$ 6,800	
Subtotal	$15,853	=
Current Liabilities	$10,947	1.45

The general rule is that a company's acid test ratio should be 1 to 1 or better, although you find many exceptions. In our case study example company, HSI is well above this level at 1.45 to 1.00.

Debt to Equity Ratio

Some debt is generally good, but too much debt is dangerous. The *debt to equity ratio* is an indicator of whether a company is using debt prudently, or perhaps has gone too far and is overburdened with debt that may likely cause problems. For this example, the company's debt to equity ratio calculation is:

Total Liabilities	$10,947	=
Total Stockholders' Equity	$ 9,371	1.17

This ratio tells us that the company is using $1.17 of liabilities in addition to each $1 of stockholders' equity in the business. Notice that all liabilities (noninterest-bearing as well as interest-bearing, and both shortterm and longterm) are included in this ratio, and that all owners' equity (invested capital stock and retained earnings) is included.This business—with its 1.17 debt to equity ratio—would be viewed as moderately leveraged by today's standards.

It used to be that most businesses attempted to stay below a 1 to 1 debt to equity ratio in order to maintain a picture of health. The businesses didn't want to take on too much debt, or they couldn't convince lenders to put up more than one-half of their assets. But times change and the use of debt has become so widespread that higher leveraged companies are much more frequent than 20 years ago (think leveraged buyouts, investment banks, etc.). When one looks back at the Great Recession and the role excessive leverage played, it's no wonder the U.S. economy tanked like it did. (as highlighted by this insightful analysis completed in 2008 by Reuters).

Debt Service Coverage Ratio

To pay interest on its debt, and repay principal, a business needs to have sufficient EBITDA (covered in Chapter 20). To test the ability to pay interest and principal from earnings, the *debt service coverage ratio* is calculated. Annual EBITDA is divided by interest expense plus principal payments: For our sample company, we refer back to Exhibit 15.2(repeated here as Exhibit 22.2) for 2011.

There is no standard or general rule for this particular ratio—although obviously the ratio should be higher than 1 to 1. Most lenders like to see a floor or minimum of 1.25 to 1.00 and generally higher (especially if annual capital expenditures are fairly high). In this example, the company's ratio for 2011 is 1.78 which

EXHIBIT 22.2 DEBT SERVICE COVERAGE RATIO

Dollar Amounts in Thousands

	12/31/2011
Net Income after Tax	$76
Plus:	
Amortization Expense	$500
Depreciation Expense	$200
Interest Expense	$ 80
Income Tax Expense	$ 0
EBITDA—(Z)	$856
Total Debt Service:	
Principal Payments Due in next 12 Months	$400
Interest Expense	$ 80
Total Debt Service Payments (X)	$480
Debt Service Coverage Ratio (Z Divided by X)	1.78

is reasonable to its lenders. Lenders would be very alarmed if a business barely covers its annual debt service requirements (debt principal and interest payments). The company's management and stockholders should be equally alarmed.

Return on Sales Ratio

Making sales while controlling expenses is how a business makes profit. The profit residual slice from a company's total sales revenue pie is expressed by the *return on sales ratio*, which is profit divided by sales revenue for the period. The company's return on sales ratio for its latest year is:

Net Income	$4,493	=
Total Sales Revenue	$38,281	11.74%

There is another way of explaining the return on sales ratio. For each $100 of sales revenue, the business earned $11.74 net income—and had expenses of $88.26. Return on sales varies quite markedly from one industry to another. Some businesses do well with only a 2 percent return on sales; others need more than 20 percent to justify the large amount of capital invested in their assets and/or risks undertaken. Some of the largest technology companies in the world have very high return on sales ratios.

Return on Equity (ROE)

Owners take the risk of whether their business can earn a profit and sustain its profit performance over the years. How much would you pay for a business that consistently suffers a loss? The value of the owners' investment depends first and foremost on the past and potential future profit performance of the business—or not just profit, we should say, but profit relative to the capital invested to earn that profit.

For instance, suppose a business earns $100,000 annual net income for its stockholders. If its stockholders' equity is $250,000, then its profit performance relative to the stockholders' capital used to make that profit is 40 percent, which is very good indeed. If, however, stockholders' equity is $2,500,000, then the company's profit performance equals only 4 percent of owners' equity, which is weak relative to the owners' capital used to earn that profit.

In short, profit should be compared with the amount of capital invested to earn that profit. Profit for a period divided by the

amount of capital invested to earn that profit is generally called *return on investment* (ROI). ROI is a broad concept that applies to almost any sort of investment of capital.

The owners' historical investment in a business is the total of the owners' equity accounts in the company's balance sheet. Their profit is bottom-line net income for the period—well, maybe not all of net income. A business corporation may issue *preferred stock* on which a fixed amount of dividends have to be paid each year. The preferred stock shares have the first claim on dividends from net income. Therefore, preferred stock dividends are subtracted from net income to determine the *net income available for the common stockholders*. In this example the business has issued only one class of stock shares. The company has no preferred stock, so all of net income "belongs" to its common stockholders.

Dividing annual net income by stockholders' equity gives the *return on equity* (ROE) ratio. The calculation for the company's ROE in this example is:

Return on Equity		
Net Income	$4,493	=
Total Stockholders' Equity	$9,371	47.95%

Note: We use the ending balance of stockholders' equity to simplify the calculation. Alternatively, the weighted average during the year could be used, and should be if there has been significant changes during the year.

By most standards, HSI's 47.95 percent annual ROE would be very impressive. However, everything is relative. ROE should be compared with industrywide averages and with investment alternatives. Also, the risk factor is important: Just how risky is the stockholders' capital investment in the business?

Critical Terminology Alert

Benchmarking is a term used when like companies' operating performances are compared against one another within a specific industry. This provides a better measurement tool to evaluate a company's financial performance than simply looking at the "market" as a whole. There's no point in trying to compare Google's results against Ford Motor Company as the industry each company operates within is completely different.

We need to know much more about the history and prospects of the business to reach a final conclusion regarding whether its 47.95 percent ROE is good, mediocre, or poor. Also, we should consider the *opportunity cost of capital*—that is, the ROI the stockholders could have earned on the next best use of their capital. Furthermore, we have not considered the personal income tax on dividends paid to its individual stockholders. In summary, judging ROE is not a simple matter!

Other "return" ratios can be calculated (e.g., return on total assets, return on long-term capital assets) with a number of them being very specific to an industry. For example, a return on investment calculation is often completed by a social media company looking to evaluate how many users were acquired (and how much revenue the users produced for the company) compared to the investment made in a specific advertising or promotional campaign. If $1,500,000 was spent to acquire 50,000 active users that generate gross profits of $3 per user per year (from advertising revenue earned by the company), then the earnings for this endeavor would be $150,000 per year compared to an investment of $1,500,000 producing a return on investment (ROI) of just 10 percent and resulting in an average user acquisition cost of $30 (both, very poor results by social media standards).

Earnings per Share (EPS)

In contrast to the ratios discussed earlier in the chapter, the earnings per share (EPS) ratio is reported at the bottom of their income statements by public companies. You don't have to calculate it. Given its importance you should surely understand how it is calculated. Private companies do not report EPS. However, as a stockholder of a private company you may find it helpful to calculate its EPS.

The capital stock shares of 5,000 domestic business corporations are traded in public markets—the New York Stock Exchange, Nasdaq, and electronic stock exchanges. The day-to-day, even minute-by-minute market price changes of these shares receive a great deal of attention. More than any other single factor, the market value of capital stock shares depends on the past and forecast net income (earnings) of a business.

Suppose we tell you that the market price of a stock is $60, and ask you whether this value is too high or too low, or just about right. You could compare the market price with the stockholders' equity per share reported in the balance sheet—called the *book value per share*, which is about $13.39 in our example. (Recall that a company's total assets minus its total liabilities equal its stockholders' equity.)

Total Stockholders' Equity	$9,371,000	=
# of Shares Outstanding	700,000	$13.99

The book value method has a respectable history in securities analysis. Today, however, the book value approach plays second fiddle to the earnings-based approach. The starting point is to calculate *earnings (net income) per share*.

One of the most widely used ratios in investment analysis is *earnings per share* (EPS). The essential calculation of earnings per share is as follows for our company example:

Net Income (Available to Common)	$4,493,000	=	Basic
# of Shares Outstanding	700,000	$6.42	EPS

Note: To be technically accurate, the weighted average number of shares outstanding during the year should be used—based on the actual number of shares outstanding each month (or day) during the period.

First off, notice that the numerator (top number) in the EPS ratio is *net income available for common stockholders*, which equals bottom-line net income less any dividends paid to the preferred stockholders of the business. Many business corporations issue preferred stock that requires a fixed amount of dividends to be paid each year. The mandatory annual dividends to the preferred stockholders are deducted from net income to determine net income available for the common stockholders.

Second, please notice the word *basic* in front of *earnings per share*, which means that the actual number of common stock shares in the hands of stockholders is the denominator (bottom number) in the EPS calculation. Many business corporations have entered into contracts of one sort or another that require the company at some time in the future to issue additional stock shares at prices below the market value of the stock shares at that time. The shares under these contracts have not been actually issued yet but probably will be in the future.

For example, business corporations award managers *stock options* to buy common stock shares of the company at fixed prices (generally equal to the present market price or current value of the shares). If in the future the market value of the shares rises over the fixed option prices, the managers will exercise their rights and buy capital stock shares at a bargain price. With stock options, therefore, the number of stock shares is subject to inflation. When

(and if) the additional shares are issued, EPS will suffer because net income will have to be spread over a larger number of stock shares. EPS will be diluted, or thinned down, because of the larger denominator in the EPS ratio.

Basic EPS does not recognize the additional shares that will be issued when stock options are exercised. Also, basic EPS does not take into account potential dilution effects of any convertible bonds and convertible preferred stock that have been issued by a business. These securities can be converted at the option of the security holders into common stock shares at predetermined prices.

To warn investors of the potential effects of stock options and convertible securities, a second EPS is reported by public corporations, called *diluted* EPS. This lower EPS takes into account the potential dilution effects caused by issuing additional common stock shares under stock option plans, convertible securities, and any other commitments a business has entered into that could require it to issue additional stock shares at predetermined prices in the future.

Basic EPS and diluted EPS (if applicable) must be reported in the income statements of publicly owned business corporations. This indicates the importance of EPS. In contrast, none of the other ratios discussed in this chapter have to be reported, although many public companies report selected ratios.

Price/Earnings (P/E) Ratio

The market price of stock shares of a public business corporation is compared with its EPS and expressed in the *price/earnings (P/E) ratio* as follows:

$$\frac{\text{Current Market Price of Stock Shares}}{\text{Earnings per Share}} = \text{Price Earnings Ratio}$$

Suppose a public company's stock shares are trading at $40 per share and its basic EPS for the most recent year (called the *trailing 12 months*) is $2. The company does not report a diluted EPS. Thus, its P/E ratio is 20. Like other ratios discussed in this chapter, the P/E ratio should be compared with industrywide and marketwide averages to judge whether it is acceptable, too high, or too low. At one time a P/E ratio of 8 was considered right. As we write this sentence P/E ratios in the range of 15 to 18 are considered acceptable and nothing to be alarmed about, until the market decides these are too high and experiences a downside correction (which it has done on numerous occasions).

Now, here's a problem in calculating the P/E ratio for a public company: Should you use its *basic* EPS or its *diluted* EPS? If the business reports only basic EPS there is no problem. But when a public company reports both, which EPS should you use? Well, it is done both ways. Our advice is to check the legend in the stock market tables in the *Wall Street Journal* and the *New York Times* to find out which EPS the newspaper uses in reporting the P/E ratios for companies. Using diluted EPS is more conservative; that is, it gives a higher P/E ratio.

The market prices for stock shares of a private business are not available to the public at large. Private company shares are not usually actively traded and when they are traded the price per share is not made public. Nevertheless, stockholders in these businesses are interested in what their shares are worth. To estimate the value of stock shares a P/E multiple can be used. In the company example, its EPS is $6.42 for the most recent year (see Exhibit 22.1).

Suppose you own some of the capital stock shares, and someone offers to buy your shares. You could establish an offer price at, say, 12 times basic EPS. This would be roughly $77 per share. The potential buyer may not be willing to pay this price, or he or she might be willing to pay 15 or 18 times basic EPS.

Market Cap

Suppose the stock shares of a public company are currently trading at $65 per share, and the business has 10 million shares outstanding. The *market cap*, or total market value capitalization of the company, is $650 million ($65 market value per share ×10 million capital stock shares = $650 million). We'd bet you dollars to doughnuts that if you compared the market cap of most businesses with the shareholders' equity amounts reported in their latest balance sheets, the market caps would be considerably higher and perhaps much higher.

The book value (balance sheet value) of shareholders' equity is the historical record of the amounts invested in the business by the owners' past plus its retained earnings accumulated over the years. Over time these amounts become more and more out of date. In contrast, the market cap is based on the current market value of the company's stock shares. If a business gets into financial straits, its market cap may drop below the book value of its owners' equity—at least for the time being. In rare cases a company's cash balance may be more than its market cap.

Final Comments

Many other ratios can be calculated from the data in financial statements. For example, the *asset turnover ratio* (annual sales revenue divided by total assets) and the *dividend yield* (annual cash dividends per share divided by market value per share) are two ratios you often see used in securities analysis. There's no end to the ratios that can be calculated.

The trick is to focus on those ratios that have the most interpretive value. It's not easy to figure out which ratios are the most important. Professional investors seem to use too many ratios rather than too few, in our opinion. On the other hand, you never know which ratio might provide a valuable clue to the future market value direction of a stock.

23

PROFIT ANALYSIS FOR BUSINESS MANAGERS

Why All Businesses Should Produce and Use Two Types of Financial Statements

Unless you started reading this book right at this point, you're aware that the previous chapters focused on the *external financial statements* prepared and reported by businesses. External financial statements are designed for external distribution to the general public (e.g., a publicly traded company such as Amazon) or to a select group of external parties, such as a bank or taxing authority, from a privately owned business. Under either scenario, the same basic concept holds when financial statements are distributed to external parties. The financial statements and associated information is designed for review and evaluation from the "outside looking in."

So if logic holds and external financial statements are prepared and reported to external parties, then internal financial statements should be prepared and reported to a company's internal management team and employees to support critical business decision making functions. By the way, we are not suggesting that a company should keep two sets of accounting books and records as this would be both very inefficient and potentially, illegal. No, the idea is that the same accounting system used to produce financial information for external distribution and reporting should be designed to report the critical internal information on which business decisions are based. The key differences between internal and external financial statements and associated information is based on the following three elements:

1. Level of detail: External financial statements are generally prepared in a more summarized format with limited amounts of detail provided. Quite often, a public company's externally prepared income statement is compressed or summarized into a single page, its annual financial report. Internal financial statements are far more detailed and provide additional depth and insight into a company's operations at a granular level. For example, a company like Ford Motor Company may produce a detailed internal financial statement for one manufacturing facility (e.g., the Ford Mustang) to evaluate its financial performance. When you see Ford's external financial statements, these rollup all of its operations but the managers of the Mustang facility may only see the individual income statement for this profit center, listing every revenue and expense item on a line-by-line basis. Great information for the company insiders but not appropriate for company outsiders.

2. Confidential information: Directly associated with the level of detail difference is the amount of confidential information disclosed. Detailed internal financial statements will often include confidential financial information and data the company does not want to make public (e.g., trends with product pricing, allocation of expenses between different types of accounts). While there are a number of rules that require public companies to disclose large amounts of information in the financial statements and more importantly, the financial footnotes, the highly sensitive and confidential

financial information located in internally prepared financial statements is almost always excluded.

3. Audits, generally accepted accounting principles (GAAP), and presentation consistency: External financial statements prepared by publicly traded companies must be audited on an annual basis and issued in accordance with GAAP. Internal financial statements are prepared by the company's management team and are almost never audited by an independent third party. In addition, the format of external financial statements is designed to offer a more consistent format for parties to evaluate results from different companies (apples to apples). Internal financial statements and reports take on all kinds of different formats and structures to provide the most meaningful information to the users.

To provide an example of the difference between internal and external financial statements, refer to Exhibit 23.1 for our sample company, HSI.

A number of items should jump out at you right away including the breakout of sales revenue by type, costs of goods sold in more detail, the different types of selling, general, and administrative expenses by function, along with an analytical ratio analysis that provides results in "percentages" rather than just dollars. Further, you can see that the totals reported in the external financial statement agree to the totals in the internal financial statement but now, it easier to understand sales by type and the gross margins generated from each type of sales source (services versus products). We should note that the internal financial statement format presented in Exhibit 23.1 is designed for the company's senior management analysis and assessment as frontline managers would normally be provided a much more detailed financial statement for their respective area of responsibility (and would not receive this format as it provides too much information for the company in its entirety). This is an important concept to understand.

Tips, Tidbits, and Traps

Large companies need to be very sensitive about distributing confidential information to its internal staff. For example, a manager with P&L responsibility for a company's western sales region does not need to see the detailed financial results for a manager with responsibility for the eastern region. The executive in charge of both regions would see all of the information but each individual manager is only provided information for their relevant area of responsibility. This keeps managers focused on their respective responsibilities and avoids leaking confidential internal information to the wrong parties.

As you can probably guess, accounting involves more than preparing a company's external financial statements, although this is certainly one of its most important functions. Designing and operating accounting systems, complying with a myriad of tax laws, and preparing external financial reports are three bedrock accounting functions of every business. Also, the accounting staff in a business has another very important function—providing information to its managers for their decisionmaking, planning, and control. This fourth function of accounting is referred to as *management accounting* or *managerial accounting* (which we prefer).

EXHIBIT 23.1—INTERNAL VERSUS EXTERNAL INCOME STATEMENT FORMAT COMPARISONS

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2012

External Format

Income Statement for the Fiscal Year Ending	**12/31/2012**
Sales Revenue, Net	$38,281
Costs of Goods Sold	$17,950
Gross Profit	$20,331
Selling, General, and Administrative Expenses	$13,800
Depreciation and Amortization Expense	$ 750
Operating Earnings	$ 5,781
Other Expenses (Income)	$ 0
Interest Expense	$ 0
Net Income (Loss) before Income Taxes	$ 5,781
Income Tax Expense (Benefit)	$ 1,288
Net Income (Loss)	$ 4,493

HareSquared, Inc.
Unaudited Financial Statements
For the Fiscal Year Ending
12/31/2012

Internal Format

Income Statement for the Fiscal Year Ending	**12/31/2012**	**% of Net Rev.**
Revenue:		
Software System Sales	$ 20,063	52.41%
Product System Sales	$ 19,200	50.16%
Other Sales, Discounts, and Allowances	$ (982)	–2.57%
Net Revenue	$ 38,281	100.00%
Costs of Goods Sold:		
Direct Product Costs	$ 10,560	27.59%
Wages and Burden, Software System Sales	$ 6,520	17.03%
Direct Overhead	$ 800	2.09%
Other Costs of Goods Sold	$ 70	0.18%
Total Costs of Goods Sold	$ 17,950	46.89%
Gross Profit	$ 20,331	53.11%
Gross Margin	53.11%	
Operating, Selling, General, and Admin. Expenses:		
Selling, Marketing, and Promotional Expenses	$ 4,000	10.45%
Direct Operating Expenses	$ 1,200	3.13%
Research, Development, and Design	$ 1,000	2.61%
Corporate Overhead & Support	$ 7,500	19.59%
Other Operating, Selling, and G&A expenses	$ 100	0.26%
Total Operating Expenses	$ 13,800	36.05%
Operating Income (EBITDA)	$ 6,531	17.06%
Operating Margin (EBITDA Margin)	17.06%	

Managerial Accounting

Managerial accounting is an *internal* function, which is carried out inside a business to help its managers make sound decisions, develop plans and budgets, and exercise control. In short, the purpose of managerial accounting is to help managers be good managers. Managerial accounting, more than anything else, should provide useful information needed by managers and help them make use of this information in the most effective manner.

The design of internal accounting reports to managers is dependent on the nature of the business and the organizational structure of the business. Suppose a business is divided into sales territories, for example. Accounting reports are needed for each sales territory. Each sales territory may be divided into major product lines. So, the accounting reports separate each product line in each territory. In short, management accounting should follow the organizational structure of a business and provide each manager with the information the manager needs.

External financial statements are designed for the outside, nonmanagement investors and lenders of the business. The external accounting reports of a business do not contain all the financial information its managers need. Managers should understand their company's external financial statements like the backs of their hands, even though they are not accountants. And, they need additional accounting reports that provide more detailed information, much of which is confidential and is not released outside the confines of the business.

We could write a book on management control and the detailed information managers need for effective control including a discussion on how sales revenue and expenses are generally accounted for by most larger and more sophisticated businesses.

Before moving on, we should point out that this chapter is not a comprehensive survey of the field of managerial accounting—far from it! For instance, in this chapter we do not discuss projections/forecasting, standard costs, management control reports, cost allocation methods, and other topics. Our more modest goal is to demonstrate how expenses should be classified, in order to make accounting information more useful for management decision-making analysis. We believe business managers will find this chapter very instructive.

Critical Terminology Alert

Sales revenue and expenses are often accounted for separately in individual profit centers and cost centers of a business. A profit center is a separate, identifiable source of sales revenue with its matching expenses. For an auto dealer, for instance, one profit center is its new car and truck sales; another is its used car and truck sales; and, a third is its service and parts department. A cost center is an organizational unit that does not generate sales revenue, such as the accounting and building maintenance departments.

Beyond the Income Statement

To begin, please refer back to Exhibit 23.1, which provides a comparison of an external income statement versus an internal income statement. Exhibit 23.1 shows a typical format for an *external* income statement. As you notice, this income statement reports highly condensed, summary-level information. As we have said several times before, this income statement is designed for reporting to the outside investors and lenders of a business entity. Is it adequate for the managers of the business? No, not by a long shot.

The first thought that probably comes to mind is that managers need a lot of detailed information for controlling the business than the condensed information in the external income statement. That's for sure! From the top line to the bottom line managers need more detailed and specific information. Take sales revenue, for instance. Managers, at least the ones responsible for sales, need information about how many units of each product were sold, which products didn't meet sales volume expectations, and which exceeded forecasts. Also, managers should keep a close eye on product returns and postsale repairs and replacements of products.

For control purposes business managers need to keep track of a thousand and one details. Managers need to develop relevant performance benchmarks, and they should focus their time and energy on *control points*. For example, managers should keep a close watch on the total number of employees and sales revenue per employee. Productivity measures are very important for manufacturers. Retailers should measure inventory shrinkage in order to determine losses from customer shoplifting and employee theft.

In summary, accountants include a great deal more detailed information about sales revenue and expenses in internal income statements (profit reports) to managers. Managers need itemized information for controlling expenses. Therefore, the accountant provides supporting schedules listing hundreds or more specific expenses to managers. More than just detail, managers need to know how expenses behave relative to the two big profit drivers of every business—*sales prices* and *sales volume*.

To illustrate the importance of knowing how expenses behave, we put a question to you here. Which would be better for profit: a 5 percent sales price increase across the board, or a 5 percent sales volume increase on all products and services sold by the business? If you, the business manager, could have one but not the other, which would you choose—the sales price option or the sales volume option? One is clearly better, as we explain.

Classifying Operating Expenses

Refer to Exhibit 23.1 again. Notice that cost of goods sold expense is deducted immediately after sales revenue, in order to determine the *gross margin* from sales (also called *gross profit*). Every business must earn an adequate gross margin to cover its other expenses. Earning a satisfactory bottom-line profit begins with earning an adequate gross margin on sales. Reporting cost of goods sold as a separate expense provides important information for managers. No doubt about this. Managers, first and foremost, have to control their gross margins.

But of further interest is understanding that gross margins are different for each type of product or service sold. Exhibit 23.2 compares the gross margin our sample company HSI generates from each of its two primary product lines—software system sales and product system sales (i.e., technology hardware).

You can see that the gross margin generated from software system sales of 67.50 percent is much greater than from product system sales, which makes sense given that HSI develops its own software and sells it via licenses (proprietary technology) whereas the products HSI sells are purchased from a third party and resold (nonproprietary technology). The point of providing Exhibit 23.2 is to highlight the fact that if HSI increases sales revenue from software systems, this should have a greater impact on increasing net income due to the higher gross margin earned. This is why it is important to understand where sales growth comes from (by product or service line offering), which is commonly referred to as a company's *sales revenue mix*.

EXHIBIT 23.2—GROSS MARGIN COMPARISON, SERVICE VERSUS PRODUCTS

Dollar Amounts in Thousands

Gross Margin Analysis—Software System Sales	Amount
Software System Sales	$ 20,063
Wages and Burden, Software System Sales	$ (6,520)
Gross Profit Software System Sales	$ 13,543
Gross Margin Software System Sales	67.50%
Gross Margin Analysis—Product System Sales	
Product System Sales	$ 19,200
Direct Product Costs	$(10,560)
Gross Profit Product System Sales	$ 8,640
Gross Margin Product System Sales	45.00%

The next question concerns *operating expenses*, which in the external income statement in Exhibit 23.1 are lumped into one conglomerate account labeled *Selling, General, and Administrative Expenses*. Depreciation expense is reported separately in Exhibit 23.1, which is a special type of operating expense. (Operating expenses do not include interest and income tax expenses, which are reported separately in the income statement.)

The point we want to emphasize here is that business managers should understand how their expenses behave *relative to changes in sales revenue and sales volume*. Sales prices and sales volume are in a state of constant change for most businesses. Managers need to know how operating expenses change with changes in sales prices and sales volume. Unfortunately, this important point often gets overlooked in the hustle and bustle of the daily problems of running a business.

In our view, internal profit accounting reports to managers should classify operating expenses according to how they behave relative to changes in sales prices and sales volume. Sales prices and sales volume are the big two factors driving profit performance. In actual practice accountants generally do *not* classify expenses this way in their internal profit reports to managers. There are many reasons why they don't. For one thing, it would pile more work on top of all the other things accountants do in a business. Also, most managers probably don't ask for expense information to be classified this way. But we think managers are missing the boat on this. After reading this chapter, you be the judge on this issue.

Controlling specific operating expenses is one thing; analyzing operating expenses in decision making is quite another. To emphasize this point, we recast the external income statement of our business example. See Exhibit 23.3, which we call the *Management Profit Report*. The company's operating expenses are classified according to how they behave relative to changes in sales prices and sales volume. It's an alternative to the standard external income statement.

In the management profit report (Exhibit 23.3), the company's operating expenses are classified into three types:

1. ***Sales revenue expenses***—operating costs that depend on and vary with total sales revenue (the total dollar amount of sales). Sales commissions equal to a certain percent of sales and credit card discounts paid by a retailer to a credit card company are two examples.
2. ***Sales volume expenses***—operating costs that depend on and vary with the total sales volume, or quantities of products and services sold to customers. Packaging and transportation costs are two main examples.
3. ***Fixed operating expenses***—costs that are relatively fixed in amount and cannot be changed over the short run. Employees on fixed salaries, building rent, equipment lease payments, and property taxes are examples of fixed operating costs.

For ease of presentation, we have eliminated references to depreciation and amortization, interest, and income tax expenses to focus on two key performance measurements—EBITDA (refer to Chapter 20) and a new term commonly referred to as the *contribution margin*.

EXHIBIT 23.3—MANAGEMENT PROFIT REPORT FOR YEAR

Dollar Amounts in Thousands

Sales Revenue	$ 38,281
Cost of Goods Sold Expense	$(17,950)
Gross Profit	$ 20,331
Sales Revenue Expenses	$ (4,000)
Sales Volume Expenses	$ (1,200)
Profit Margin before Fixed Expenses—Contribution Margin	$ 15,131
Fixed General and Administrative Expenses	$ (8,600)
Operating Income (EBITDA)	$ 6,531

Critical Terminology Alert

The contribution margin represents a measurement of earnings that falls between gross profits or gross margin and EBITDA. What it is designed to capture is how much additional income will be contributed to the overall performance of a business from a profit-and-loss center. For example, when a large restaurant chain opens up new facilities, they need to understand how much each facility will contribute to the company's net income. That facility will generate sales revenue and costs of goods expense, which produces gross profits. Further, that facility will have direct operating expenses associated with just that facility, which tend to be fixed in nature at the individual facility level (think of rent, utilities, direct advertising, a manager, etc.). So when analyzing the facility, the first order of business is: Can a reasonable gross profit be generated? Then the next step is to focus on whether the facility can produce enough gross profit to cover its direct operating expenses to produce a positive contribution margin. If the facility passes this test, then it is safe to say it is producing a positive contribution margin to help cover general corporate expenses (for the entire organization) and/or contribute to the company's overall net income.

The classification of operating expenses requires careful study to sort out which costs belong in each of the expense categories. Once its operating costs have been classified this way, the costs are tagged in the bookkeeping process so that the total for each type of operating expense is determined and included in internal profit reports to managers.

Comparing Changes in Sales Prices and Sales Volume

In the limited space of this chapter we can offer only a brief overview of how business managers can use a profit report like the one presented in Exhibit 23.3. Speaking broadly, business managers focus on *changes*. Every factor and variable that determines profit is subject to change; change is constant, as experienced business managers will verify. Managers have to deal with changes that affect the profit performance of their business.

For example, higher transportation costs next year may increase the company's sales volume driven expenses. Property taxes may go up, which will increase its fixed operating expenses. The sales manager may make a persuasive case that the advertising budget should be increased next year. Managers have to respond to all such changes; they don't get paid to sit on their hands and idly watch the changes happen.

Top-level managers have the responsibility of developing realistic plans to improve profit performance, which means making changes in the profit equation of the business. Which specific changes? This is the key question. Suppose the president of the company wants to develop a plan to improve bottom-line net income 10 percent next year. Exactly how would the manager accomplish this goal? The logical places to start are sales *prices* and sales *volume*.

Business managers need a crystal-clear understanding regarding what happens when sales prices increase (or decrease) and when sales volume increases (or decreases). In Exhibit 23.4 we compare the impacts of a 5 percent sales price increase scenario with a 5 percent sales volume increase scenario to help you appreciate the differences between changes in these two fundamental profit factors.

Before looking at Exhibit 23.4 you might first ask yourself which alternative you think is better. If you're a sales manager, you might favor the sales volume increase because the business would increase its market share at the higher sales volume. Market share is always an important factor to consider—you should never ignore this point. But, if you compare the two alternatives, you see that bumping the sales price 5 percent would be much better for profit.

In this comparison we stop at the EBITDA profit line for ease of presentation. Selling at 5 percent higher sales prices increases profit margin before fixed expenses 11.33 percent (see Exhibit 23.4), whereas selling 5 percent higher volume increases the profit margin before fixed expenses only 5 percent. Every variable expense goes up 5 percent with the 5 percent increase in sales volume. But only one expense goes up with the 5 percent sales price increase.

Then there are fixed selling and operating expenses and the fixed depreciation expense to consider. The higher sales prices shouldn't affect fixed costs. However, a higher sales volume would push up some fixed costs if the business is already running at full capacity and would have to add more space, equipment, and personnel to handle the higher sales volume. In Exhibit 23.4 we assume that the business could take on 5 percent more sales volume without having to increase any of its fixed costs.

EXHIBIT 23.4—5% SALES PRICE VERSUS 5% SALES VOLUME INCREASE

Dollar Amounts in Thousands

		5% Higher Sales Prices			5% Higher Sales Volume		
	Original Example	New Scenario	Change Amount	Percent	New Scenario	Change Amount	Percent
Sales Revenue	$ 38,281	$ 40,195	$1,914	5.00%	$ 40,195	$1,914	5.00%
Cost of Goods Sold Expense	$(17,950)	$(17,950)			$(18,848)	$ (898)	5.00%
Gross Profit	$ 20,331	$ 22,245	$1,914	9.41%	$ 21,348	$1,017	5.00%
Sales Revenue Sensitive Expenses	$ (4,000)	$ (4,200)	$ (200)	5.00%	$ (4,200)	$ (200)	5.00%
Sales Volume Sensitive Expenses	$ (1,200)	$ (1,200)			$ (1,260)	$ (60)	5.00%
Profit Margin before Fixed Expenses	$ 15,131	$ 16,845	$1,714	11.33%	$ 15,888	$ 757	5.00%
Fixed Selling and Operating Expenses	$ (8,600)	$ (8,600)			$ (8,600)		
EBITDA	$ 6,531	$ 8,245	$1,714	26.24%	$ 7,288	$ 757	11.58%

It may be more realistic, though, to gain 5 percent more sales volume compared with pushing through a 5 percent sales price increase. Customers may balk at the higher sales prices. Setting sales prices certainly is one of the most perplexing decisions facing business managers. The price sensitivity of customers is seldom clear-cut. In any case, business managers should understand that a relatively small change in sales price could have a major impact on profit margin.

Breakeven Point

By definition the *breakeven point* is that mix of sales revenue and expenses that yields exactly a zero outcome—no profit and no loss. You can use the management profit report information (Exhibit 23.4) to determine the *breakeven point* at various performance levels (which for simplicity purposes, we will focus on the EBITDA breakeven point).

Exhibit 23.5 reveals that a 19.05 percent drop in sales prices would wipe out all the company's EBITDA. In contrast, sales volume would have to plunge 43.16 percent to take the business down to zero EBITDA. (Using the Excel spreadsheet tool, we decreased sales price and sales volume to find the two breakeven points.)

Exhibit 23.5 makes clear that the business should be very careful regarding lowering its sales prices. In particular, a 19.05 percent drop in sales prices would take the business very close to its breakeven point if volume stays the same. Its sales manager might suggest a cut in sales prices to boost sales volume. First, we recommend that you use the profit report (Exhibit 23.3) to crunch the numbers, and see whether profit would increase.

EXHIBIT 23.5—BREAKEVEN ANALYSIS—SALES PRICE VERSUS VOLUME DECREASES

Dollar Amounts in Thousands

		5% Higher Sales Prices			5% Higher Sales Volume		
	Original Example	New Scenario	Change Amount	Percent	New Scenario	Change Amount	Percent
Sales Revenue	$ 38,281	$ 30,988	$(7,293)	–19.05%	$ 21,759	$(16,522)	–43.16%
Cost of Goods Sold Expense	$(17,950)	$(17,950)			$(10,203)	$ 7,747	–43.16%
Gross Profit	$ 20,331	$ 3,038	$(7,293)	–35.87%	$ 11,556	$ (8,775)	–43.16%
Sales Revenue Sensitive Expenses	$ (4,000)	$ (3,238)	$ 762	–19.05%	$ (2,274)	$ 1,726	–43.16%
Sales Volume Sensitive Expenses	$ (1,200)	$ (1,200)			$ (682)	$ 518	–43.16%
Profit Margin before Fixed Expenses	$ 15,131	$ 8,600	$(6,531)	–43.16%	$ 8,600	$ 6,531)	–43.16%
Fixed Selling and Operating Expenses	$ (8,600)	$ (8,600)			$ (8,600)		
EBITDA	$ 6,531	$ 0	$(6,531)	–99.99%	$ 0	$ (6,531)	–99.99%

Final Point

The format of the management profit report presented in Exhibit 23.4 can be used as a *template or model* for analyzing, budgeting, and planning profit. For instance, the business may plan for a 10 percent sales volume increase combined with 5 percent sales price increases across the board next year. You can fairly easily make these changes and see what the profit (before interest and income tax expenses) would be if these changes hold true next year.

Also, we would like to direct your attention to a couple of other terms widely used in the financial world when analyzing financial statements and information.

Critical Terminology Alert

You probably see references to "What if" and "sensitivity" analysis. A *what if* analysis is just like it sounds: What happens if we change these key assumptions. The idea is to run through different scenarios of changing key assumptions to a business to see how the output changes. A *sensitivity analysis* is similar to a what if analysis but it looks to focus on how sensitive (highs and lows) financial information is in relation to changing key assumptions. For example, if a small change in price has a large impact on earnings, a high degree of sensitivity is present.

24

OUR CASE STUDY AND THE MORAL OF THE STORY—THE GOOD, THE BAD, AND THE UGLY

The Changing Economic Environment

As we left our two case study companies back in Chapter 13, HSI's financial performance and balance strength was noticeably better than TTI's. Further, it appeared the outlook for HSI was stronger than TTI given their respective recent performance. But this analysis was completed before, and I quote Mr. Burl Ives from his narration of *Rudolph the Red-Nosed Reindeer* when a horrible blizzard hit just before Christmas, "Well, he was just about to leave when suddenly … It hit!, the storm of Storms and only two days before Christmas."

Translation for our two companies:The storm that hits both HSI and TTI in the second quarter of 2013 is the equivalent of the Great Recession that reshapes companies and industries across the economy. Further, each companies' business model will be significantly impacted by the following three events and changing trends:

1. Access to capital, debt, or equity, is restricted during the year as companies and financing sources scramble to conserve liquidity (or cash). So neither HSI nor TTI can approach debt or equity sources to secure funding.
2. Customer buying patterns abruptly change during the second half of the year. More customers defer or delay large capital investments, and when they do purchase, demand the most up-to-date technological solution and restructure payment terms, moving away from a prebilling for the annual licenses to quarterly or even monthly payments requesting a SAAS model (software as a service).
3. Creditors tighten up payment terms and are generally unwilling to work with customers to offer increases in available financing and extended terms.

So how do our two case study companies fare?We find out in our next two sections, but please remember to bear with our analysis as there are a number of moving parts and changes to each company's financial statements that are addressed. To assist with understanding the changes, bullet points using letters have been provided, which correlate to the letter reference in each of the exhibits provided.

HareSquared, Inc.'s Financial Results and Ending Position

Exhibit 24.1 presents HareSquared, Inc.'s (HSI) financial statements for the two-year comparison period for the fiscal years ending 12/31/12 through 12/31/13.

First we focus on the income statement (comparing 2012 results to 2013), as it was clearly a rough year for HSI based on:

A. Net sales revenue decreased from $38,281,000 to $21,807,000, representing a 43 percent reduction. A number of factors contributed to HSI's poor revenue performance including utilizing more aggressive amortization periods to recognize revenue from annual ERP licenses (i.e., HSI front-loaded revenue recognition and is paying the price now), incurring sales order delays from customers waiting for the new ERP software release, and adapting to changes in customer buying habits and preferences (more SAAS purchase agreement and fewer annual license purchase agreements).

B. HSI's gross profit decreased from $20,331,000 to $10,531,000 representing a 48 percent reduction (even worse than sales). The company's gross margin (added in Exhibit 24.1 for ease of reference) dropped from 53.1 percent in 2012 to 48.3 percent in 2013, which indicates that either direct costs of sales expense has increased or that HSI is experiencing pricing pressure from customers.

C. Large cuts were made to the company's SG&A expenses (decreased from $13,800,000 in 2012 to $9,600,000 in 2013) but were not enough to offset lower sales and reduced gross profit. Reducing SG&A expenses is a common strategy used by companies that experience significant reductions in sales, some of which is natural (e.g., lower sales commissions expense due to lower sales revenue), and other which tends to be forced (e.g., pay reductions for executives or other headcount reductions).

D. HSI incurred other expenses of $1,456,000. What could this be? First off, the company had to write-off $1,000,000 of unamortized software development costs. If you recall, HSI capitalized $2,500,000 in software development costs in 2010, which was amortized at a rate of $500,000 per year for three years through 2012. This leaves an unamortized balance of $1,000,000, which was deemed worthless by management and the auditors (based on lack of customer demand for the old ERP platform that was sorely outdated as customer's switched to the new ERP software solution). Second, HSI wrote-off $456,000 of obsolete inventory that no longer had a market value.

E. HSI experienced a significant change in net income, decreasing from a net profit of $4,493,000 in 2012 to a net loss of ($835,000) in 2013. Also, notice the income tax benefit of $450,000. The company is planning on using its net operating loss to carryback against previous year's income tax obligations and is anticipating a refund of $450,000 (which has

EXHIBIT 24.1—SUMMARY FINANCIAL STATEMENTS, TWO YEARS

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2013

Balance Sheet as of the Year-End		**12/31/2012**	**12/31/2013**
Assets			
Current Assets			
Cash and Equivalents		$ 9,053	$ 4,789
Accounts Receivable, Net	A,F	$ 6,800	$ 2,700
Inventory, LCM	D,G	$ 2,640	$ 1,080
Prepaid Expenses		$ 100	$ 75
Total Current Assets	G	$18,593	$ 8,644
Fixed Assets			
Property, Plant, and Equipment		$ 1,250	$ 1,500
Accumulated Depreciation		$ (600)	$ (900)
Net Fixed Assets		$ 650	$ 600
Other Assets			
Intangible Assets and Goodwill, Net	D,H	$ 1,000	$ 1,840
Other Assets	E	$ 75	$ 500
Total Other Assets		$ 1,075	$ 2,340
Total Assets		$20,318	$11,584
Liabilities and Stockholders' Equity			
Current Liabilities			
Accounts Payable		$ 1,323	$ 870
Accrued Expenses	C	$ 945	$ 444
Current Portion of Debt		$ 0	$ 0
Other Current Liabilities	F	$ 8,679	$ 1,734
Total Current Liabilities	G	$10,947	$ 3,048
Long-Term Liabilities			
Notes Payable, Less Current Portion		$ 0	$ 0
Other Long-Term Liabilities		$ 0	$ 0
Total Long-Term Liabilities		$ 0	$ 0
Total Liabilities		$10,947	$ 3,048
Stockholders Equity			
Capital Stock—800,000 Authorized, 550,000 Outstanding		$ 7,000	$ 7,000
Retained Earnings		$ 2,371	$ 1,536
Total Owners' Equity		$ 9,371	$ 8,536
Total Liabilities and Stockholders' Equity		$20,318	$11,584

Income Statement for the Fiscal Year Ending		**12/31/2012**	**12/31/2013**
Sales Revenue, Net	A	$38,281	$21,807
Costs of Goods Sold		$17,950	$11,276
Gross Profit	B	$20,331	$10,531
Gross Margin	B	53.11%	48.29%
Selling, General, and Administrative Expenses	C	$13,800	$ 9,600
Depreciation and Amortization Expense	H	$ 750	$ 760
Operating Earnings		$ 5,781	$ 171
Other Expenses (Income)	D	$ 0	$ 1,456
Interest Expense		$ 0	$ 0
Net Income (Loss) before Income Taxes		$ 5,781	$ (1,285)
Income Tax Expense (Benefit)	E	$ 1,288	$ (450)
Net Income (Loss)	E	$ 4,493	$ (835)
Shares Outstanding		700	700
Earnings (Loss) Per Share	E	$ 6.42	$ (1.19)

Statement of Cash Flows for the Fiscal Year Ending		**12/31/2012**	**12/31/2013**
Net Income (Loss)		$ 4,493	$ (835)
Operating Activities, Cash Provided or Used:			
Depreciation and Amortization	H	$ 750	$ 760
Decrease (Increase) in Accounts Receivable	F	$ (2,225)	$ 4,100
Decrease (Increase) in Inventory	D,G	$ (1,760)	$ 1,560
Decrease (Increase) in Other Current Assets		$ (25)	$ 25
Increase (Decrease) in Trade Payables		$ 591	$ (453)
Increase (Decrease) in Accrued Liabilities	C	$ 341	$ (501)
Increase (Decrease) in Other Liabilities	F	$ 4,366	$ (6,945)
Net Cash Flow from Operating Activities	F	$ 6,531	$ (2,289)
Investing Activities, Cash Provided or Used:			
Capital Expenditures		$ (250)	$ (250)
Investments in Other Assets	E,H	$ 0	$ (2,725)
Net Cash Flow from Investing Activities		$ (250)	$ (2,975)
Financing Activities, Cash Provided or Used:			
Dividends or Distributions Paid		$ 0	$ 0
Sale (Repurchase) of Equity		$ 4,000	$ 0
Proceeds from Issuance of Debt		$ 0	$ 0
Repayments of Long-Term Debt		$ (1,600)	$ 0
Other Financing Activities		$ 0	$ 0
Net Cash Flow from Financing Activities		$ 2,400	$ 0
Other Cash Flow Adjustments—Asset Impairments	D	$ 0	$ 1,000
Net Increase (Decrease) in Cash and Equivalents		$ 8,681	$ (4,264)
Beginning Cash and Equivalents Balance		$ 372	$ 9,053
Ending Cash and Equivalents Balance		$ 9,053	$ 4,789

been treated as an other long-term asset in the balance sheet as the refund may take longer than one year to receive). Finally, HSI's basic EPS decreased from a positive of $6.42 in 2012 to a negative of ($1.19) in 2013.

These events had the following impact on the balance sheet and statement of cash flows:

F. The significant decrease in sales revenue resulted in large decreases to HSI's accounts receivable and other current liabilities balances on the balance sheet, and had a dramatic impact on the company's net cash flow from operating activities. Further, the changes in these two asset balances had the most significant impact on net cash flow from operating activity, which went from a positive $6,531,000 in 2012 to a negative $2,289,000 in 2013.

G. The balance sheet compressed or shrunk as sales revenues and expenses decreased significantly. The decrease in inventory is expected as a result of reduced sales and the write-off for obsolete items. Overall, net working capital decreased from $7,646,000 at 12/31/12 to $5,596,000 at 12/31/13 (remember, net working capital is defined as total current assets minus total current liabilities). But interestingly enough, HSI's current ratio increased from 1.70 at 12/31/12 to 2.84 at 12/31/13 as the company "deleveraged" during the year (generally a sign of improved financial strength). This is one of the oddities of completing financial analyses as sometimes the improvement of a ratio may actually be indicating a problem somewhere else.

H. The company had to accelerate investment in new software development to meet customer demands and stay relevant with the competition. This required an additional investment of $2,300,000 during the year that supported the release of the new ERP software platform during the third quarter. So to keep straight on the math, remember we started the year with a balance of $1,000,000 in capitalized software development costs. This was written off due to market conditions. The company then invested $2,300,000 in new software development, which was capitalized with the product released in the third quarter. The ending balance is $1,840,000, which indicates the company recorded $460,000 of amortization expense during the year. Makes sense, right, as $2,300,000 divided by five years equates to $460,000 per year. Wrong! As remember, the new ERP platform was released mid-year so what this indicates is the company has changed its amortization period from 5 years or 60 months to 2.5 years or 30 months (as $460,000 over six months assuming a 7/1/13 release date amounts to $76,667 of amortization expense per month, which multiplied by 30 months amounts to $2,300,000). Why the change? Well, maybe the company and its auditors learned from history and realized that the market is going to demand a new ERP platform product every two to three years instead of five.

Tips, Tidbits, and Traps

Wow, a lot of activity and changes in HSI's financial statements for 2013, which may be confusing at first glance to thoroughly understand. But don't disappear as we provided this somewhat complex analysis on purpose and for two reasons.

1. Financial statements represent dynamic, living documents, which are constantly changing. Rarely if ever will you see financial statements that have just one or two key changes (which comparing multiple years). To truly understand a

company's financial statements and results, be prepared to apply multiple reviews, analyses, and evaluations.

2. A primary objective of this book was to provide tools to the reader to assist with completing a comprehensive analysis and evaluation of a company's financial statements. Every issue addressed in the previous bullet points was at one point or another, discussed in this book. And no, we didn't make it easy for you by cross-referencing every topic to a specific chapter as this should not be needed at this stage.

It's easy (relatively speaking) to see from HSI's fiscal year ending 12/31/13 operating results that it was a difficult year for the company. However, what really should raise concerns with HSI's financial performance are two critical items:

1. The significant drop in revenue is very concerning and indicates multiple potential problems including has proper revenue accounting been applied? Is the company behind the competition with its ERP platform offerings? Are customers moving to a different solution or company to support their needs? Understanding this dramatic decrease in sales revenue is issue number one (as the impact on future years operating results could be even more dramatic).
2. Questions need to be raised about the company's accounting policies and quality of the audit report. Areas of concern include revenue recognition (as noted previously), inventory valuation (are proper allowances and reserves being taken to account for rapidly changing product technology?), and intangible asset accounting (is the amortization period too long or more importantly, should all costs simply be expensed as incurred and no software development costs capitalized?).

So are the company's accounting policies illegal? No. Are they aggressive? Yes. And most importantly, are HSI's accounting policies appropriate (that best match sales revenue and expenses)? We leave this to you to decide. Maybe management had the best intentions and conditions just changed so fast that the 2013 results were the outcome (and the company had to take all of their lumps at once). Or maybe they just understood how to massage the numbers better, know when to raise capital at the best time (peak availability and pricing in 2012 before the market turned), and planned accordingly to build large amounts of cash and liquidity going into a difficult period.

The bottom line is that this is one of the great mysteries and uncertainties surrounding the CART of financial statements (completeness, accuracy, reliability, and timeliness). We suspect that most people felt that Enron's financial statements and accounting policies were appropriate. As everyone discovered in late 2001, even the biggest corporations need to have the utmost scrutiny applied to their financial statements and reports.

TortTech, Inc.'s Financial Results and Ending Position

Exhibit 24.2 presents TortTech, Inc.'s (TTI) financial statements for the two-year comparison period for the fiscal years ending 12/31/12 through 12/31/13.

Now let's see how TTI faired for the fiscal year ending 12/31/13 starting with the income statement (spoiler alert, much better except for one fatal error):

A. Net sales revenue decreased from $31,977,000 to $27,840,000, representing a relatively low 13 percent drop. The combination of utilizing a more conservative accounting policy to recognize revenue from annual ERP licenses and being two quarters ahead of the competition on the product development and release front (early 2013 compared to the competition in the third quarter of 2013) greatly assisted the company during the year. You may ask how we came to this conclusion. Well, first, TTI's revenue recognition policy as summarized in Chapter 6 was relatively conservative. Second, TTI's internal financial statement offered a hint that they were investing more money in research and development expense than HSI (for 2012, TTI spent $2,000,000 on R&D where HSI spent only $1,000,000). Granted, the company's internal financial statements were not released to external parties for review but this information is generally available in the financial statement footnotes. Third, we paid attention to company press and product releases that promoted the new ERP software platform six months before HSI.

Tips, Tidbits, and Traps

Not all relevant and critical information about a company and its financial results come from the periodic financial statements and reports. Invaluable information is available from numerous sources including third-party articles, industry reports, and internal company produced material. Sometimes, you just have to pay attention!

B. TTI's gross profit decreased from $15,011,000 to $13,444,000 representing a small 10 percent reduction. The company's gross margin (added in Exhibit 24.2 for ease of reference) actually increased from 46.9 percent in 2012 to 48.3 percent in 2013, which indicates the company has solid control of costs of goods sold expense and/or has passed on higher prices to its customers.

C. Almost no cuts in SG&A expenses were made, decreasing from $12,300,000 in 2012 to $11,900,000 in 2013, or 3.3 percent (a logical decrease stemming from lower sales commission expenses as a result of the decrease in sales revenue). TTI appears to have been able to retain infrastructure and internal staff (thus not experiencing a brain drain from cutting expenses too deep).

EXHIBIT 24.2—SUMMARY FINANCIAL STATEMENTS, TWO YEARS

Dollar Amounts in Thousands

HareSquared, Inc.
Audited Financial Statements
for the Fiscal Year Ending
12/31/2013

Balance Sheet as of the Year-End		**12/31/2012**	**12/31/2013**
Assets			
Current Assets			
Cash and Equivalents	H	$ 1,259	$ (1,345)
Accounts Receivable, Net	A,F	$ 5,950	$ 6,500
Inventory, LCM	D,G	$ 1,995	$ 1,860
Prepaid Expenses		$ 100	$ 75
Total Current Assets	G	$ 9,304	$ 7,090
Fixed Assets			
Property, Plant, and Equipment		$ 1,250	$ 1,500
Accumulated Depreciation		$ (600)	$ (900)
Net Fixed Assets		$ 650	$ 600
Other Assets			
Intangible Assets and Goodwill, Net	D,H	$ 0	$ 0
Other Assets		$ 75	$ 50
Total Other Assets		$ 75	$ 50
Total Assets		$10,029	$ 7,740
Liabilities and Stockholders' Equity			
Current Liabilities			
Accounts Payable		$ 1,219	$ 1,096
Accrued Expenses	C	$ 839	$ 869
Current Portion of Debt		$ 400	$ 400
Other Current Liabilities	F	$ 9,625	$ 7,625
Total Current Liabilities	G	$12,083	$ 9,990
Long-Term Liabilities			
Notes Payable, Less Current Portion	H	$ 800	$ 400
Other Long-Term Liabilities	H	$ 1,000	$ 0
Total Long-Term Liabilities		$ 1,800	$ 400
Total Liabilities		$13,883	$10,390
Stockholders' Equity			
Capital Stock—800,000 Authorized, 550,000 Outstanding		$ 3,000	$ 3,000
Retained Earnings		$ (6,854)	$ (5,650)
Total Owners' Equity		$ (3,854)	$ (2,650)
Total Liabilities and Stockholders' Equity		$10,029	$ 7,740

Income Statement for the Fiscal Year Ending		**12/31/2012**	**12/31/2013**
Sales Revenue, Net	A	$31,977	$27,840
Costs of Goods Sold		$16,966	$14,396
Gross Profit	B	$15,011	$ 3,444
Gross Margin	B	46.94%	48.29%
Selling, General, and Administrative Expenses	C	$12,300	$11,900
Depreciation and Amortization Expense	H	$ 250	$ 300
Operating Earnings		$ 2,461	$ 1,244
Other Expenses (Income)	D	$ 0	$ 0
Interest Expense		$ 110	$ 40
Net Income (Loss) before Income Taxes		$ 2,351	$ 1,204
Income Tax Expense (Benefit)	E	$ 0	$ 0
Net Income (Loss)	E	$ 2,351	$ 1,204
Shares Outstanding		550	550
Earnings (Loss) Per Share	E	$ 4.27	$ 2.19

Statement of Cash Flows for the Fiscal Year Ending		**12/31/2012**	**12/31/2013**
Net Income (Loss)		$ 2,351	$ 1,204
Operating Activities, Cash Provided or Used:			
Depreciation and Amortization		$ 250	$ 300
Decrease (Increase) in Accounts Receivable	F	$ (3,925)	$ (550)
Decrease (Increase) in Inventory	D,G	$ (1,311)	$ 135
Decrease (Increase) in Other Current Assets		$ (25)	$ 25
Increase (Decrease) in Trade Payables		$ 536	$ (123)
Increase (Decrease) in Accrued Liabilities	C	$ 392	$ 55
Increase (Decrease) in Other Liabilities	F	$ 5,607	$ (2,025)
Net Cash Flow from Operating Activities	F	$ 3,875	$ (979)
Investing Activities, Cash Provided or Used:			
Capital Expenditures		$ (250)	$ (250)
Investments in Other Assets	E	$ 0	$ 25
Net Cash Flow from Investing Activities		$ (250)	$ (225)
Financing Activities, Cash Provided or Used:			
Dividends or Distributions Paid		$ (1,500)	$ 0
Sale (Repurchase) of Equity		$ 0	$ 0
Proceeds from Issuance of Debt		$ 0	$ 0
Repayments of Long-Term Debt	H	$ (1,400)	$ (1,400)
Other Financing Activities		$ 0	$ 0
Net Cash Flow from Financing Activities		$ (2,900)	$ (1,400)
Other Cash Flow Adjustments	D	$ 0	$ 0
Net Increase (Decrease) in Cash and Equivalents	H	$ 725	$ (2,604)
Beginning Cash and Equivalents Balance		$ 534	$ 1,259
Ending Cash and Equivalents Balance	H	$ 1,259	$ (1,345)

D. TTI has no write-offs to account for as other expenses as all software development is expensed as incurred and allowances were made to account for obsolete inventory over the years. So no surprises, which is always a big plus.

E. So even in a down year during a severe recession, TTI has been able to generate $1,204,000 of net income resulting in a positive basic EPS of $2.19. Further, you note that TTI had no income tax during the year as it was able to utilize net operating loss carry-forwards from 2010 through 2012 to offset any income tax obligation.

So with all of this good news, where's the bad news and fatal error. Now we turn to the balance sheet and statement of cash flows to see what transpired during the year and where TTI stumbled:

F. TTI's accounts receivable balances increased as customers begin to request and receive a change in payment terms and license purchase agreements during the second half of the year. Customers were no longer willing to pay 100 percent of their annual license in advance at the beginning of the year but requested monthly and quarterly installments. This had the impact of slowing cash receipts from sales revenue and increasing the company's DSO in accounts receivable (from 67 days to 84 days). The impact on this can be seen in the statement of cash flows as normally we would expect a decrease in accounts receivable balance between the years but instead, an increase of $550,000 was realized. Combining this with lower balances in unearned revenue, TTI's net cash flow from operating activities was a negative $979,000 for the year. This event would have probably been manageable if not for the company's debt service requirements discussed in bullet point H.

G. TTI's balance sheet compresses slightly, which would be expected given the reduction in sales revenue and expense. Net working capital levels basically remain the same at a negative $2,779,000 as of 12/31/12 compared to a negative $2,900,000 at 12/31/13. The company's current ratio decreased during the year from .77 at 12/31/12 to .70 at 12/31/13 (indicating further strain on its liquidity).

H. The pressure on TTI's cash and liquidity is squarely based on two areas. First and as summarized in bullet point F, the change in customer payment terms and habits has consumed added cash during the year (to support higher account receivable balances and lower unearned revenue balances). Second, TTI has a regular annual principal payment due on the loan it secured in 2010 of $400,000. Further and as described in Chapter 13, TTI is required to repay $1,000,000 of a bridge loan (secured in 2011) if certain operating goals are achieved (which in this case was based on TTI earning at least $1,000,000 of net income in 2013), which it did.

So with all of this activity accounted for, TTI's total net cash flow for the year was a negative $2,604,000 comprised primarily of negative operating cash flow of $979,000, cash required for financing activities of $1,400,000, and a small amount of cash consumed from investing activities (of $225,000). With available cash of only $1,259,000 to start the year, TTI will exhaust all cash, which per our case study, produces a negative cash balance at the end of the year of $1,345,000. This is hypothetical as companies and their banks aren't going to run negative cash balances of this size but the point that needs to be driven home is this. For TTI to maintain even a small cash balance to operate with in 2013, the company would have to approach its lenders and ask for the loans to be restructured (with the principal payments deferred for

at least 12 to 24 months). Possible, yes. Desirable, no (but TTI may have no other options). Expensive? Absolutely, as lenders will be difficult to work with and incorporate all types of additional fees, terms, and conditions to restructure debt during a severe economic downturn.

In summary, TTI is the tail of two different companies. On the operating and accounting front, its strategic investments in new technology and conservative accounting policies provided the ground floor for a strong operating performance year while most other competitors, including HSI, were suffering. But the end result (hypothetical as a negative cash balance is not feasible) is that unfortunately, TTI ran out of cash and liquidity during the year as evidenced by the negative cash position of $1,345,000. And with capital markets frozen and creditors unwilling to budge on terms, the company's poor foresight with its balance sheet and access to cash has left it in a difficult and unenviable position.

The Good, the Bad, and the Ugly

Now for the moral of our story, which unfortunately does not have a happy ending similar to Rudolph leading Santa's sleigh to ensure that Christmas is saved. Rather, in today's fiercely competitive business world, even some of the best run businesses can be subjected to unforeseen events that can render a solid business plan worthless in a matter of months. As summarized in our evaluation of the good, the bad, and the ugly for HSI and TTI, and to quote my favorite piece of advice that the senior author on this book and my father gave me over the years, "Who ever said life was fair?"

- The good: HSI's planning and foresight on the financial front positioned the company well by selling additional equity when capital markets were receptive, allowing it to build cash and liquidity levels (to support multiple operating scenarios). TTI's more conservative accounting strategy and focus on continued investment in technology provided a leg-up on the competition in 2013 as its results were much stronger than HSI's.
- The bad: Poor planning on the financial front by TTI has left it illiquid and out of cash by the end of 2013 and at the mercy of its lenders and creditors. HSI's aggressive accounting strategies and slow response to changing customer demands and needs has left it vulnerable in 2013 as sales have decreased significantly, products launches were delayed, and shareholders are rumbling to management and the board of directors about the quality of financial information being received and the direction of the company.
- The ugly: TTI, the tortoise in our case study, eventually loses its battle with the lenders to restructure the loans who force TTI to look to a stronger competitor to survive. Or in other words, TTI has to offer itself for sale at the worst possible time, when it's the weakest, has limited negotiating power, and its valuation has been hammered. HSI, the hare in our case study, scoops in for the kill. Taking advantage of its stronger financial position to buy TTI for below market value, thus saving face with its shareholders for pulling off a great coup and leapfrogging to the front of the pack on the technology front.

Is this fair? Again, we let you be the judge, but let's face it, the business world is brutally competitive, a dog-eat-dog world that provides no margin for error. Or maybe to put it in perspective, this quote offers a great assessment of what a capitalist system really represents. We can't take credit for this quote and can't seem to identify the appropriate party to give credit to, but it goes something like this:

> A capitalist system is based on the accumulation of wealth by one party at the expense or misfortune of another.

As we conclude this case study, one final concept needs to be emphasized with managing a business's interests and risks as it relates to the current economic environment. The combination of more volatile and violent economic corrections and expansions

during the past decade, very fickle and conservative capital markets (debt and equity), and the dynamics of the global marketplace (e.g., foreign exchange rate fluctuations), have resulted in the need for companies to retain more cash and ensure that higher levels of liquidity are maintained (to manage through these peaks and valleys). Is it any wonder why Apple, Inc. sits on close to $150 billion of cash, equivalents, short-term securities, and long-term securities as of 6/30/13?

Apple, Inc. may be a little extreme, but drives home this key concept on how important it is to have a strong balance sheet with ample liquidity. But who better to reference when it comes to understanding the concept of a strong balance sheet and liquidity other than Mr. Warren Buffett as follows:

> Only when the tide goes out do you discover who's been swimming naked.

Part Five

FINANCIAL REPORT TRUTHFULNESS

25

CHOOSING ACCOUNTING METHODS AND MASSAGING THE NUMBERS

Chapter Preamble

The accounting methods used to record the activities of a business and to prepare its financial statements should conform to authoritative financial accounting standards. These standards are always in a state of flux to one degree or another.The accountant should keep abreast of the latest changes in the standards. The shareowners and creditors who read the financial reports of a business are entitled to assume that its financial statements comply with accounting standards in effect at the time of preparing the financial statements, and that there are no serious violations of these standards.

The primary purpose of an audit of a financial report by an independent certified public accountant (CPA) is to ensure that proper accounting methods are used by the business and that it follows proper disclosure in its financial report. Chapter 26 discusses audits of financial reports by independent CPAs.

As you may have gathered from the chapter's title, the numbers reported in its financial statements depend on which *accounting methods* the business uses and whether the numbers have been massaged, or manipulated by the business. For that matter, the financial statements could be fraudulent and provide bogus numbers for sales revenue and expenses. Or a business may discover later that financial statements it has issued had serious errors. In this situation, the business issues a *restatement* of its original financial statements to set the record straight.

Critical Terminology Alert

It is important to understand the difference between commonly referenced accounting terms as it relates to mistakes in the financial statements—*errors* and *irregularities*. Errors in the financial statements are generally viewed as the result of making honest or unintentional mistakes. Irregularities are more serious in nature and indicate intentional or willful effort by the company's management to deceive and alter financial statements.

Financial statements have the appearance of accuracy and finality, don't they? In financial statements you see a lot of numbers that seem to be well organized and lined up in neat columns. But never lose sight of the fact that the numbers you see in financial statements depend on the accounting methods used to prepare the financial statements. And don't forget that if the recordkeeping process and accounting procedures of a business have errors (unintentional or deliberate), then its financial statements have errors—maybe very serious errors.

In this chapter we encourage you to develop a healthy skepticism when reading financial statements. First, you should understand that the profit performance of the business and the values of its assets and liabilities depend on which particular accounting

methods are chosen by the business. Second, you should understand that a company's managers may take actions to affect the amounts of expenses and sales revenue for the year, in order to make profit come out closer to the number they want. Third, there's always a chance that the financial statements are fraudulent and seriously misleading. We don't want you to throw out the baby with the bathwater. But you should understand that some babies are given a bath in dirty water.

Let us make one thing clear: We believe that the large majority of businesses have reliable recordkeeping systems and use honest, good faith accounting methods. At the same time, the evidence is indisputable that many businesses do not exercise good faith in applying accounting methods and they deliberately prepare heavily biased or outright fraudulent financial statements. John's late father-in-law was a shrewd businessman who used to say, "There's a little bit of larceny in everyone's heart." We might say that there's a lot of larceny in the hearts of those businesses that put out misleading financial statements.

Choosing Accounting Methods

In choosing its accounting methods, a business should stay within the boundaries of authoritative accounting standards that apply to it. Don't think that the established standards put a business in a straitjacket regarding its accounting methods. Having accounting and reporting standards narrows down the range of choices but does not pin down a business to only one particular accounting method. In fact, for recording sales and many expenses a business can choose between alternative methods that are equally acceptable.

A business can adopt *conservative* accounting methods that delay the recording of profit, record lower values of certain assets, and record higher values of certain liabilities. Refer to our case study for Tortuga, Inc. as an example of a company utilizing more conservative accounting methods.

Alternatively, a business can adopt *liberal* or *aggressive* accounting methods that have the reverse effects. Refer to our case study for HareSquared, Inc. as an example of a company utilizing more aggressive accounting methods.

Making decisions between liberal and conservative accounting methods is not a matter of choosing between good and bad accounting. Both conservative and liberal accounting methods are considered good accounting. Whether you vote Republican or Democratic doesn't mean you're a good or bad citizen.

Financial accounting would seem to be like measuring a person's weight on a scale that gives correct readings, wouldn't it? But, as a matter of fact, financial accounting standards permit a business to select which kind of scale to use—one that weighs light or one that weighs heavy.

This is not a textbook on accounting methods. All we can do here is give you a general idea of some areas in which a business can, quite legitimately, choose between alternative accounting methods. Here's a partial list of accounting methods which a business may have to choose between:

- The exact timing for recording sales as complete and final, particularly when customers can return products, when there are significant postsale expenses, and when sales prices are subject to later negotiation.
- When to record the expense of uncollectible accounts receivable from credit sales, and how to estimate the amount of these bad debts before they are actually written off at a future time.
- Whether to use first-in, first-out (FIFO), last-in, first-out (LIFO), or some other method for recording cost of goods sold expense and the cost value of inventory.
- Whether investments in intangible assets or unproven developments should capitalized or expensed as incurred.
- Whether to use an accelerated (front-end loaded) depreciation method or the straight-line method, and whether to use short or longer (more realistic) useful life estimates.

- Whether to anticipate the likely loss in value of intangible assets or wait for clear evidence of the diminishment in value of intangible assets before recording the expense.
- Whether to immediately recognize future warranty and guarantee costs for products sold or wait until the work is done in later periods.
- Whether to use low-end or high-end estimates for key variables that determine the cost of an employee-defined benefit retirement plan and a postretirement health/medical benefit plan.

This list is just a sampling of the decisions a business has to make for recording sales revenue and expenses. The net income for the period depends on the accounting methods selected by the business. In summary, a business has many accounting choices. According to financial reporting standards it must disclose its significant accounting methods in the footnotes to its financial statements. (Chapter 21 discusses footnotes.)

Most business managers probably welcome having a choice of accounting methods. In fact, they might prefer to have a broader range of choices for their accounting methods and for their financial report disclosures. The evolution of accounting standards over the years has been in the direction of narrowing the range of approved accounting methods and expanding financial reporting disclosure requirements.

Note: A business does not have to disclose the difference it would have made in its net income and in its asset and liability values if it had used alternative accounting methods. A business doesn't have to go to the trouble of recomputing its sales revenue and all its expenses as if alternative accounting methods had been used instead of the accounting methods it actually uses. For example, a business does *not* say anything such as the following in its financial report:

> In the footnotes to the financial statements we explain that we use conservative accounting methods. If, instead, we had used liberal accounting methods, net income for the year just ended would have been $50 million higher, and assets and liabilities would have been significantly different than the amounts reported in the year-end balance sheet.

Finally, keep in mind that the choice of accounting methods does not affect cash flows during the year. The statement of cash flows (see Chapters 17 and 18) is the same regardless of which accounting methods are used. The statement of cash flows reports actual cash flows that occurred during the period. (However, a business may use a questionable technique called *window dressing* to improve its ending cash balance, which we discuss later in the chapter.)

Massaging the Numbers

During the year, business managers get regular profit reports from their accounting department. Toward the end of the year, and perhaps sooner, they should have a pretty good idea of the profit number that will be reported in the company's annual income statement. The projected profit may be significantly lower than they had forecast for the year (or much higher, for that matter). Broadly speaking, business managers have two courses of action in such a situation.

The managers could conduct business as usual. This means that they don't do anything special to deliberately affect the numbers that will be recorded for sales revenue and expenses in the year. (This does not preclude reducing costs where they can.) Or the managers could take action to cause net income for the year to come closer to what they want it to be. There are various steps managers can take to make net income "behave," as it were.

In short, managers can do certain things for the main purpose of reducing or increasing expenses for the year (and sales revenue also). These management actions are generally called *massaging the numbers*. Managers put their thumbs on the scale, as it were, which has the effect of boosting or dampening the recorded profit for the year. Massaging the numbers raises ethical and moral questions that, unfortunately, do not have easy and clear-cut answers.

Let us make clear the distinction between massaging the numbers and *cooking the books*. The latter term refers to *accounting fraud*. Fraud goes way beyond massaging the numbers. Fraud involves falsifying sales revenue and expense amounts. Massaging the numbers refers to situations in which a business has recorded legitimate sales revenue and expenses, but managers take action to nudge the numbers up or down for the year. The best description of massaging the numbers we've heard was from John's late father-in-law, a successful business owner/manager in his day. He said it was like "fluffing the pillows." We've always liked that characterization.

One can argue that massaging the numbers is not any worse than telling white lies, or embellishing the truth for the sake of a good story. Some say that massaging the numbers is like putting cosmetics on the financial face of the business (like putting lipstick on a pig in some cases, we would say).

Most accountants are uncomfortable with it, but they understand that massaging the numbers is tolerated in the worlds of business and finance. (A Catholic might look on massaging the numbers as a venial sin, but cooking the books would be a mortal sin.) Accountants would prefer that business managers not do it, but they go along with massaging the accounting numbers. You hardly ever hear of an accountant that blew the whistle on a business for massaging its numbers. You could argue that the reason for this silence is that the company's accountant is a member of its management team. CPA auditors also tolerate some degree of massaging the numbers. (More on this in Chapter 26.)

One reason that managers massage their accounting numbers is to *smooth reported profit* year to year. Managers think that left on its own the accounting system generates net income numbers that

behave too erratically, and that are too jerky year to year. They justify massaging the numbers on the grounds that they should "sand off the rough edges" of profit year to year. They argue that investors are better off because they don't overreact to year-to-year perturbations in reported net income because the business reports a flatter trend line of earnings.

Well, such reasoning for massaging the numbers is difficult to judge. When a business has manipulated its accounting numbers for the year, it does not disclose what net income would have been without intervention by management. In any case, investors and creditors should realize that there's a good chance that the accounting numbers in the financial statements they are reading have been manipulated (massaged) to one degree or another.

Managers can massage the numbers in a variety of ways. For example, most businesses have *discretionary expenses*, which are those that depend heavily on the judgment of managers regarding how much to spend and when to make the expenditures. Consider repair and maintenance costs, for instance. Until the work is actually done, no expense is recorded. A manager can simply move back (or move up) the work orders for these expenditures. The building isn't painted this year, though it was scheduled to be. Or tires on delivery trucks are not replaced until next year. Using such tactics, a manager controls the amounts of some expenses that are recorded in the year.

Most businesses have many discretionary expenses. Two other discretionary expenses come to mind—employee training and development costs, and advertising expenditures. The manager in charge can delay sending employees on their normal schedule of training courses. An advertising campaign could be delayed until next year. The subsequent impacts of these actions on employee productivity and sales are difficult to assess.

Another way in which managers can massage the accounting numbers involves the *end-of-year adjusting entries* that are recorded to bring certain expenses up to their full and complete balances for the year. Many of these year-end adjusting entries require estimates: the amount of accounts receivable that may not be collected in the future, the costs of future warranty work on products sold to customers, the rate of return that will be earned on the funds in the defined benefit employee retirement plan sponsored by the business, the decline in value of its intangible assets, and so on. Managers can lay a heavy hand on these estimates, thereby controlling the amount of expenses recorded in the year.

Managers can take certain actions to boost the amount of sales revenue recorded in the year. Sales can be accelerated, for example, by shipping more products to the company's captive dealers, even though they didn't order the products. This is called *stuffing* the channels of distribution. The business is taking away sales from next year to put the sales on the books this year. There are many other ways a business can give its sales for the year an artificial boost.

So far we have discussed massaging the numbers from the point of view of manipulating the amount of profit (net income) reported for the year. There is also a type of massaging the numbers that does not affect profit. Instead, the purpose is to make the short-term solvency and liquidity of the business look better than it really was at the end of the year. One practice is called *window dressing*.

Here's a common example of window dressing. A business holds open its books (its accounting records) for a few days after the end of its accounting year. The purpose is to record additional cash collections of accounts receivable. The cash collections are not actually received and in the hands of the company until the first few days in January 2014, for example, but the cash inflows are recorded as if they were collected December 31, 2013. The result is that its cash balance is higher and its accounts receivable is lower, which makes the company look more liquid (a larger cash balance). When we were in public accounting, we had clients who did this regularly. We suspect the same is true today.

Real World Stories

A perfect example of how a company can window dress its year-end financial statements was provided in the previous paragraph. This example focused on accelerating cash receipts to lower accounts receivable (a common practice indeed). While helpful for publicly traded companies, the exact opposite happens in the real world with smaller companies that report taxable income using the "cash basis" method. This method reports sales only when cash is received and expenses only when cash is paid. So for businesses that are looking to defer or push out taxable income into the next year (to lower the current year taxable income figure), somehow and mysteriously (sarcasm intended), cash receipts slow to a crawl at the end of the year and then explode higher in January of the following year. Excuses range from the mail was slow, our staff was out on vacation and didn't process payments, our customer doesn't process payments during the last two weeks of the year, to offering just about every reason you can think of. Whatever the reason, sales get pushed out into the next year when used to calculate taxable income and thus taxable income drops (lowering tax payment requirements). You would be amazed at how creative companies are and how often this strategy is used by small businesses so be aware that window dressing is utilized by both large, publicly traded companies and smaller, closely held businesses.

Again,we should make clear that cooking the books goes beyond massaging the numbers. Cooking the books refers to recording sales revenue when in fact no sales were made, and not recording actual expenses or losses during the period. In short, cooking the books involves falsification of the accounting records. If massaging the numbers is carried too far, it can end up being equivalent to cooking the books (i.e., accounting fraud). In other words, massaging the numbers is a slippery slope that can lead to accounting fraud.

Business Managers and Their Accounting Methods

The chief executive officer (CEO), and to a lesser extent, the board of directors, of a business have the responsibility that the company's financial statements are fairly presented. This means that the accounting methods used to measure the company's profit comply with the established accounting standards that apply to the business. If its accounting methods are outside these limits, the company could stand accused of issuing false and misleading financial statements. The CEO and potentially board of directors would be liable for damages suffered by the company's creditors and stockholders who relied on its misleading financial statements. If for no other reason than this, the CEO and board of directors should pay close attention to the choices of accounting methods used to prepare the company's financial statements.

Ideally, the chief executive of the business and its other top-level managers should decide which accounting methods and policies are best for the company. The top-level managers should seek the advice of the company's chief financial officer and controller (chief accountant). They have to decide between conservative (cautious) versus liberal (aggressive) profit-accounting methods, which means whether to record profit later (cautious) or sooner (aggressive). The sooner sales revenue is recorded, the earlier profit is reported; and the later expenses are recorded, the earlier profit is reported.

If a business wants to report profit as soon as possible, the CEO should instruct the accountants to choose those accounting methods that accelerate sales revenue and delay expenses. In contrast, if the business wants to be conservative, it should order its accountants to use those accounting methods that delay the recording of sales revenue and accelerate the recording of expenses, so that profit is reported as late as possible. The accounting methods selected for cost of goods sold expense and depreciation expense are two key choices for businesses that sell products and invest heavily in long-term operating (fixed) assets.

Business managers may prefer to avoid getting involved in choosing accounting methods. We think this is a mistake. Somebody has to choose the accounting methods—if not its managers, then by default probably the company's controller. The controller, being the chief accounting officer of the company, should work hand in glove with the CEO and the other top-level managers to make sure that the accounting methods used by the business are not working at cross-purposes with the goals, objectives, strategies, and plans of the organization.

Consistency of Accounting Methods

Once a business chooses which accounting methods to use, the business sticks with these methods. A company does not flip-flop between accounting methods year to year. For one thing the Internal Revenue Service takes a dim view of switching accounting methods one year to the next. Furthermore, changing accounting methods causes a lot of disclosure problems in a business's financial statements and footnotes. Changes in accounting methods may be needed in unusual circumstances, but the large majority of businesses don't switch their accounting methods except on rare occasions.

In short, consistency of accounting methods is the norm. Investors and lenders demand consistency of accounting methods year to year. Inconsistency would cause all sorts of problems in their year-to-year comparative analysis of a company's financial statements. It's tough enough as it is to analyze financial statements. Inconsistency of accounting methods would add another layer of difficulty. Financial accounting standards do not prohibit changing accounting methods. However, a business should change methods only if there is sufficient reason to do so.

Quality of Earnings

You see the phrase *quality of earnings* in the business and financial press. Reported net income is put to a quality test, or litmus test as it were. The term does not have a uniform definition, but most persons who use this term refer to the integrity and trustworthiness of the accounting methods used by a business.

Conservative accounting methods are generally viewed as high quality. Stock analysts and professional investment managers view aggressive accounting methods with more caution. They like to see some margin for safety or some cushion for a rainy day in a company's accounting numbers. They know that many estimates and choices have to be made in financial accounting, and they would just as soon a business err on the low side in reporting profit rather than the high side.

Professional investors and investment managers are especially alert for accounting methods that appear to record revenue (or other sources of income) too early, or that fail to record losses or expenses that should be recognized. Even though the financial statements are audited, investment professionals go over them with a fine-tooth comb to get a better feel for how trustworthy are the reported earnings of a business.

A basic principle of investing in stocks is to diversify your portfolio, so that investment risks are not too concentrated in just one stock or only a few stock holdings. One risk is that a company's financial report may be misleading, based on suspect accounting methods, or even be fraudulent. Therefore, diversifying your stock holdings offers some protection against the risk of misleading and fraudulent financial reports.

26

AUDITS OF FINANCIAL REPORTS

External Examinations of Financial Statements—What Types and Why

Businesses of all shapes, sizes, and forms are often required to produce financial statements that have been examined in one form or another by an outside party. The most commonly utilized outside party is a CPA, or the dreaded Certified Public Accountant, but you should also be aware that other parties are sometimes used to examine financial statements and present a report or findings (e.g., an insurance company preparing an actuarial analysis on a business to estimate future potential losses). Further, it is important to understand that there are different types of examinations completed by CPA firms that generally fall into three primary types of reports:

1. Compilations: A compilation is basically nothing more than a CPA firm taking the financial statements produced by a company, reformatting them to a more accounting friendly appearance (along with placing the financial statements on the CPA's letterhead), and then offering a worthless disclosure that basically states, "Here's the financial statements for XYZ, Inc., read them at your own risk as we can't provide any assurance that they comply with GAAP." Generally speaking, "compiled" financial statements are only used by very small businesses with a limited need to disclose financial results to external parties. Further, compiled financial statements almost never include financial statement footnotes (Chapter 21).

   If you can't tell from our language, we don't really believe that compiled financial statements offer much value and they certainly shouldn't be relied on solely to make significant financial decisions. Rather, compiled financial statements are only be one source of information that should be analyzed when evaluating or completing "due diligence" on the entire financial results and operations of a business.

Critical Terminology Alert

The term *due diligence* refers to the process of thoroughly and completely evaluating a business's operations to determine whether a proposed deal should be completed. A perfect example of this is when an external financing source such as a venture capitalist (VC) or private equity group (PE) is evaluating a business to determine if an investment should be made to support future growth. These types of external parties will undertake a significant amount of due diligence to support making a decision on whether an investment should be made. But never assume due diligence is based solely on evaluating the financial results of a company. Due diligence covers the entire spectrum of a company's operations including legal, technology, marketing, operations, management, and other critical areas. So if you think having a CPA firm complete an audit is bad, just wait until you deal with full-blown due diligence (basically the difference between turning your head and coughing for the doctor and having both a bottom-up and top-down colonoscopy completed).

2. Reviews: Next up in the food chain for externally examined and prepared financial statements is what is commonly referred to as reviewed financial statements. Normally completed by a CPA firm, a review represents a more thorough and detailed examination of a company's financial statements that applies extended analytical procedures to financial data. For example, a comparison of cost of goods sold gross margin levels (Chapter 8) between two years may be applied on the data to investigate why one year's gross margin is much higher than another. The idea is to take a macro-level look at the financial statements and identify potential accounting issues, problems, or errors that may conflict with generally accepted accounting principles (GAAP; or basically, just don't make sense).

   When reviewed financial statements are completed, the CPA firm does attach a report clearly stating that a review was completed and that it is not aware of any material GAAP differences but at the same time, no assurances are provided that the financial statements are prepared in accordance with GAAP.

   It should also be noted that reviewed financial statements may or may not include financial statement footnotes (Chapter 21) and when they do, the footnotes are generally limited in scope and detail.

   Reviewed financial statements are generally used by small- to mid-size businesses that need to provide some additional level of confidence to external parties (e.g., a bank extending credit) and in a more efficient manner (simpler format that is often 75 percent to 80 percent cheaper than having an audit).

3. Audits: Finally, at the top of the food chain is the audit, which is the focal point of this chapter. An audit is a full-blown examination of a company's financial statements and report to provide assurance to external parties that the financial information is being presented in accordance with GAAP. A business may hire an independent CPA to audit its financial report for a multitude of reasons. For instance, many people think an audit is done for the purpose of discovering wrongdoing or ferreting out dishonest and illegal behavior. A CPA is duty-bound to maintain a mental attitude of professional skepticism in doing an audit. In carrying out audit procedures the CPA may discover embezzlement or theft by employees, or uncover accounting fraud orchestrated by high-level managers. These are by-products or side effects of an audit as its primary purpose is summarized in the following paragraph.

   The main purpose of an audit by a CPA firm is to examine accounting records and gather other evidence in order to render an opinion on the financial report of the business. Based on the audit the CPA attests, or "swears" to the *fairness* of the financial statements and disclosures in the financial report of the business. Fairness means, primarily, that the company's accounting methods and disclosures are in accordance with established accounting and financial reporting standards that apply to the entity. In short, the CPA auditor states whether the business is playing fairly according to the rules in its financial report.

Why Audits?

Suppose you have invested a fair amount of money in a privately owned business. You are not involved in managing the company; you're an absentee owner—a passive investor. Being a stockholder, you receive the company's financial reports. You read the financial statements and footnotes to keep informed about how the company is doing, and whether there might be any storm clouds on the horizon.

Let us ask you a question: How do you know whether the company's financial statements provide adequate disclosure and whether the business uses proper accounting methods to measure its profit? Do you just presume this? Are you sure you can trust the company's financial reports?

Or suppose you are a bank loan officer. A business includes its latest financial statements in its loan application package. Does the business use correct accounting methods to prepare its financial statements? Have the financial statements been tweaked for purposes of securing the loan, to make them look better than they really are? It's not unheard of, you know. (See Chapter 25 on massaging the numbers in financial statements.)

Or suppose you're a mutual fund investment manager in charge of a large portfolio of stocks traded on the New York Stock Exchange and Nasdaq. Market values of stock shares depend on the net income and earnings per share amounts reported by companies in their financial reports. How do you know that their profit numbers are reliable?

Financial statements can be seriously misleading for two basic reasons, one type being innocent in nature and the other type not so innocent:

1. ***Honest mistakes and incompetency:*** A company may not have adequate internal accounting controls. Accounting errors can become imbedded in its accounting records, and the business fails to detect and correct the errors. Or, its chief accountant may not understand current accounting and financial reporting requirements and standards.
2. ***Deliberate dishonesty:*** The top-level managers of a business may intentionally distort the company's profit performance and financial statements, or withhold vital information that should be disclosed in the financial report. This is called *financial reporting fraud* or *accounting fraud*. More popularly, it's called *cooking the books*.

One way to protect against the risks of errors and fraud is to conduct an *audit* of the accounting system of the business by an independent expert accountant, to ascertain whether its financial statements are free of errors and adhere to appropriate accounting and financial reporting standards. The audit provides reassurance that the company's financial report is reliable and follows the rules. Audits of financial reports are done by independent *certified public accountants*, the profession we turn to next.

Certified Public Accountant (CPA)

A person needs to do three things to become a certified public accountant (CPA). He or she must earn a college degree with a major in accounting with a fairly heavy load of accounting and auditing courses. The American Institute of Certified Public Accountants (AICPA) has encouraged all states to enact laws requiring five years of education. Most but not quite all states have passed such laws.

Second, a person must pass the national CPA exam, which is a rigorous exam testing knowledge in accounting, income tax, auditing, and business law. Third, a person must satisfy the experience requirement of the state in which he or she lives. State laws and regulations differ regarding the time and nature of public accounting experience that a person must have; one year is generally the minimum.

After the three requirements are completed—education, exam, and experience—the person receives a license by his or her state of residence to practice as a CPA. No one else may hold him- or herself out to the public as a CPA. Most states (perhaps all, but we haven't checked this out) require 30 or 40 hours of continuing education each year to renew a person's CPA license. Every state has a Board of Accountancy that regulates the practice of public accounting and has the power to revoke or suspend the licenses of individuals who violate the laws, regulations, and ethics governing CPAs.

CPAs do more than just audit financial reports. They offer an ever-widening range of services to the public—income tax compliance and planning, personal financial consulting, business valuation, computer systems and information technology, production control and efficiency, forensic functions, and other fields of specialization. (*Note:* CPA firms that audit the financial reports of *public* companies are under tight restrictions regarding which particular nonaudit services they can provide to their audit clients.)

The CPA license is widely recognized and highly respected as a professional credential. The professional status of CPAs rests on their expertise and experience, and their independence from their clients. The word *certified* in their title refers to their expertise and experience. The term *public* refers to their independence. In doing audits of financial statements, the independence of the CPA is absolutely essential. To be independent, a CPA must be in public practice and not be an employee of any organization (other than the CPA firm itself).

Public accounting experience is a good stepping-stone to other career opportunities. Many persons start in public accounting and end up as the controller (chief accountant), financial vice president, or chief financial officer (CFO) of an organization. Some CPAs become presidents and chief executive officers (CEOs) of business organizations. Some CPAs go into politics (a few have become state governors). Persons who have left public accounting are still referred to as CPAs even though they are not in public practice any longer. This is like a person with an MD degree who leaves the practice of medicine but is still called *doctor*.

Are Audits Required?

Corporations whose debt and stock securities are traded publicly are required by federal securities laws to have their annual financial reports audited by an independent CPA firm. According to a recent survey there are about 5,000 companies listed on major securities exchanges in the United States (which is down considerably from just a few years ago). The number of private businesses, in the usual sense of the word *business*, is more difficult to pin down. In the United States there are more than 9 million for-profit business corporations, partnerships, and limited liability companies, as well as millions of sole proprietorships (one-owner business ventures). Private businesses are not covered by federal securities laws, but are subject to such state laws as apply to them. Although they are not *legally required* to have audits, many private business entities have their annual financial reports audited by a CPA firm.

Lawyers should be consulted regarding state corporation and securities laws; an audit may be required in certain situations. A private business may sign a contract or agree informally to have its annual financial reports audited by an independent CPA as a condition of borrowing money or when issuing capital stock to new investors in the business.

Public corporations have no choice; they are legally required to have audits of their annual financial reports by an independent CPA firm. But, if not required, should a business hire a CPA firm to audit its annual financial report? What's the payoff? Basically, an audit adds *credibility* to the financial report of a business. Audited financial reports have a higher "believability index" than unaudited statements.

Audits by CPAs provide protection against misleading financial statements. CPA auditors are expert accounting detectives, and they thoroughly understand accounting and financial reporting standards. Being independent of a business, the CPA auditor should not tolerate a misleading financial report.

Audits don't come cheap. CPAs are professionals who command high fees. A business cannot ask for a "once-over lightly" audit at a cut rate. An audit is an audit. CPA auditors of private businesses are bound by generally accepted auditing standards (GAAS), and the auditors of public companies have to follow the regulations of the federal agency created by the Sarbanes-Oxley Act of 2002. Violations of auditing standards and regulations can result in lawsuits against the CPA, sanctions by the federal regulatory agency, and damage to the CPA's professional reputation.

An audit takes a lot of time because the CPA has to examine a great deal of evidence and make many tests of the accounting records of the business before being able to express an opinion on the company's financial statements. The time it takes to complete an audit causes the relatively high cost of the audit. A business, assuming an audit is not legally required, has to ask whether the gain in credibility of its financial report is worth the cost of the audit.

A bank may insist on an audit as a condition of making a loan to a business. The outside (nonmanagement) stockholders of a business may insist on annual audits to protect their investments

in the business. In these situations, the audit fee can be viewed as a cost of using external capital. In many situations, however, outside investors and creditors do not insist on audits. Even so, a business may choose to have an audit as a checkup on its accounting system. Or a business may decide it needs to have a forensic check—an independent examination focusing on whether the business is vulnerable to fraud and embezzlement schemes.

An annual audit by a CPA is like an individual having a general physical exam once a year. The physician performs standard tests and evaluates your overall condition, and at the same time should be alert for any trouble signs out of the ordinary. Unless there is some reason to look for cancer or heart problems, the doctor does not do extensive examinations for these problems. For instance, the doctor doesn't order an X-ray unless he or she suspects a problem that requires this additional procedure.

The auditor does not examine every transaction of a business during the year and does not examine every item making up the total balance of specific assets and liabilities. In a word, auditors rely a great deal on *sampling*. CPA auditors, therefore, pay particular attention to the *internal controls* of the company that are designed to deter and detect errors and irregularities. CPA auditors are required to carry out *risk assessment procedures*, to identify the likely areas of errors and irregularities and to concentrate their audit procedures in the high-risk areas.

CPA auditors are required to plan their audit procedures to search for possible accounting fraud and to identify weak internal controls that would allow such fraud to go undetected. Nevertheless, the main purpose of an audit is to express an opinion on the fairness of financial statements (including footnotes), and whether the financial statements adhere to appropriate accounting and financial reporting standards.

Fraud would undermine the integrity of the financial statements so the CPA auditor has to be on the lookout for fraud of all types (as well as for accounting errors). But the CPA says nothing at all about fraud in the audit report. There is no statement such as "We looked for fraud but didn't find any." We discuss what the CPA auditor does say next.

Clean Audit Opinion

First of all, let's be clear on one point. We are talking specifically about *audits of business financial reports by a CPA*. There are many other kinds of audits, such as an audit of your income tax return by the Internal Revenue Service (IRS), audits of federally supported programs by the Government Accountability Office (GAO), and audits by the internal auditors of an organization. The following discussion concerns audits by CPAs of financial reports prepared by businesses that are released to the outside world—primarily to their lenders, shareholders, and others who have a right to receive a copy of the financial report.

Financial report readers are not too concerned about how an audit is done, nor should they be. The bottom line to them is the opinion of the CPA auditor. They should read the opinion carefully, although there is evidence that most don't or at best just give it a quick glance. Evidently many financial report readers simply assume that having the financial report audited is, by itself, an adequate safeguard. They assume that the CPA would not be associated with a financial report that is incorrect or misleading.

Many financial report readers seem to think that if the CPA firm gives an opinion and thereby is associated with a financial report, then the financial statements and footnotes must be okay and are not wrong in any significant respect. Doesn't the CPA's opinion constitute a stamp of approval? No, not necessarily!

The best audit opinion is termed an *unqualified opinion*, or more popularly is called a *clean* opinion. Basically, this unqualified, or clean, opinion states that the CPA has no significant disagreements with the financial statements and disclosures of the company. Putting it differently, the CPA *attests* that the financial statements have been prepared according to appropriate accounting and financial reporting standards and that the footnotes plus other information in the financial report provide adequate disclosure. (These standards leave management a range of choices of accounting methods, which we discuss in Chapter 25.)

The standard language for a clean, or unqualified, opinion for a business named the XYZ Company, Inc. that uses U.S. accounting standards goes like the following:

> In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of XYZ Company, Inc. as of December 31, 2014, and the results of its operations and its cash flows for the year then ended in accordance with U.S. generally accepted accounting principles.

This is called the *opinion paragraph*. The auditor's report also contains other parts, including an opening paragraph, a reminder about management's responsibility for the financial statements, and a fairly lengthy discussion about the auditor's responsibility (and limits of responsibility) in doing the audit. We spare you reading these other parts of the auditor's report. The bottom line of an auditor's report is the opinion paragraph. The most important words are *present fairly*. What exactly do these two words mean?

In a clean opinion, the CPA auditor says, in effect, "We don't disagree with the financial report." The CPA, if he or she were the controller of the business, might have prepared the financial statements differently and might have written the footnotes differently. In fact, the CPA auditor might prefer that different accounting methods had been used. What the CPA expresses in a clean opinion is that the company's financial statements and disclosures do not in any material manner violate established accounting and financial reporting standards.

The standard version of the CPA auditor's report runs more than 200 words of fairly technical jargon, and in our opinion demands a lot from the reader. Even if you're in a hurry, or just don't want to struggle though the whole auditor's report be sure to read the auditor's opinion.

Do Auditors Discover Accounting Fraud?

In Chapter 25 we distinguished between *massaging the numbers* and *accounting fraud*. Massaging the numbers involves nudging accounting numbers one way or the other. Business managers take actions to control the amounts of sales revenue and expenses recorded in the period, in order to smooth profit year to year or to give profit a temporary boost up (or a push down). Such accounting tactics are in a gray area of accounting ethics. CPA auditors certainly don't like to discover these management machinations regarding the accounting numbers. However, manipulating the accounting numbers is tolerated in the business world—as long as it doesn't go too far so as to cause seriously misleading financial statements.

Massaging the numbers can be likened to a misdemeanor. In this vein, accounting fraud is a felony. Cooking the books goes way beyond nudging the numbers up or down a little. Accounting fraud involves falsification or fabrication of sales revenue and expenses, and reporting assets that don't exist or not reporting liabilities that do exist. In short, accounting fraud creates financial statements that are deliberately misleading—and seriously so.

Do CPA auditors always discover accounting fraud? The short answer is: not necessarily. CPA auditors *may* discover accounting fraud. However, if the managers who commit fraud cleverly conceal the fraud and if their schemes are well thought out, accounting fraud can go undiscovered for years. There are many examples of companies carrying on fraud for 5, 10, or more years. In many cases the fraud collapses of its own weight or someone blows the whistle. But, having an audit by an independent CPA certainly increases the chances of uncovering accounting fraud, even though the audit does not guarantee that fraud will be uncovered in every instance.

Critical Terminology Alert

One of the most common and unfortunately difficult forms of fraud to detect is based in one simple word, *collusion*—secret or illegal cooperation or conspiracy, in order to cheat or deceive others. Collusion can occur at many levels, both inside and outside of a business and is almost always based on attempting to realize financial or economic gain. The bottom line with collusion is that if it is occurring at the senior-most level of a business, it is almost impossible to detect.

What it comes down to, in our view, is that the cost of an audit has to be kept under control. The audit cost has to be reasonable relative to the benefits of the audit. Given the cost constraint on an audit, the CPA cannot search and test for every conceivable fraud that could be going on in the business. The CPA auditor should evaluate the controls established by the business to guard against financial reporting fraud. If the auditor discovers weaknesses in these controls, the auditor should investigate the vulnerable areas

and work closely with the company's audit committee to remedy the weaknesses.

At the end of the day, there's always some risk that the CPA auditor may not discover accounting fraud—especially if the top-level managers of the business instigate and orchestrate the fraud. The cost of making all audits absolutely fail-safe would be prohibitive. In the grand scheme of things, a few audit failures are tolerated in order to keep the overall cost of audits within reason. In moments of deep cynicism, it has occurred to us that perhaps the real reason for audits is to provide business lenders and investors someone else to sue when they suffer losses and there is evidence that the company's financial report was seriously misleading or fraudulent.

Reading an Auditor's Report

The majority of financial report readers, in our opinion, simply want to know whether the CPA has any objection to the financial statements and footnotes prepared by management. They don't care that much about the specific wording used in the CPA auditor's report. They want to know one main thing: Does the CPA auditor give his or her blessing to management's financial report? If not, they want the CPA auditor to make clear his or her objections to the financial report.

Financial report users should read the CPA auditor's report to see first, whether the auditor gives a clean opinion, and second, whether the auditor provides any additional information that might constitute something less than a clean opinion. The standard audit report is expanded or modified in the following situations:

- The CPA auditor wants to emphasize one or more points, such as related-party transactions reported in the financial statements, significant events during the year, or unusual uncertainties facing the business.
- The company has changed its accounting methods between the most recent year and previous years, which causes inconsistencies with the originally issued financial reports of the business.
- There is substantial doubt about the entity's ability to continue as a going concern, because of financial difficulties in meeting the due dates for payment of its liabilities, or because of other large liabilities it is not able to pay.

Such additional information in the audit report does not constitute a qualification on the company's financial report; it just provides more information.

In contrast, the CPA auditor may take exception to an accounting method used by the company, or to the lack of disclosure for some item that the CPA thinks is necessary for adequate disclosure. In this situation, the CPA renders a *qualified opinion* that includes the key words *except for* in the opinion paragraph. The grounds for the qualification (what the auditor takes exception to) are explained in the auditor's report. To give a qualified opinion, the CPA auditor must be satisfied that, taken as a whole, the financial statements and footnotes are not misleading.

A qualified opinion may be due to a limitation on the scope of the CPA's examination (collection of evidence). The CPA is not able to gather sufficient evidence for one or more accounts in the financial statements, and therefore has to qualify or restrict his or her opinion with regard to these items.

How serious a matter is a qualified opinion? The auditor points out a flaw in the company's financial report, but not a fatal flaw. A qualified audit opinion is a yellow flag, not a red flag. Keep one thing in mind: The CPA auditor must judge that the overall fairness of the financial report is satisfactory, even though there are one or more deviations from established accounting and disclosure

standards. If the auditor is of the opinion that the deviations are so serious as to make the financial statements misleading, then the CPA must issue an *adverse opinion*. You hardly ever see an adverse opinion. No business wants to put out misleading financial statements and have the CPA auditor say so for everyone to see!

A CPA auditor may have to *disclaim an opinion* due to limitations on the scope of the audit or due to very unusual uncertainties facing the business. In some situations a CPA may have very serious disagreements with the client that cannot be resolved to the auditor's satisfaction. The CPA may withdraw from the engagement (i.e., walk off the audit). This is not very common, but it happens every now and then. In these situations the CPA has to notify top management, the board of directors of the company, and its audit committee, and make clear the nature of the disagreements and why the CPA is withdrawing from the audit.

The CPA does not act as a whistle-blower beyond the inner confines of the company. For public companies, the CPA has to inform the SEC and its Public Company Accounting Oversight Board that the firm has withdrawn from the audit engagement and whether there were any unresolved disagreements between the CPA and the company. Also, the CPA auditor should work closely with the audit committee of a public company, and is duty-bound to communicate to the committee issues that come up in the course of the audit.

Post-Sox

Congress passed the Sarbanes-Oxley Act of 2002 (SOX) in response to many well-publicized audit failures, culminating in the infamous Enron fiasco. This important piece of federal legislation is designed to improve the quality of audits and the independence of CPA auditors. Congress was upset with the fact that auditors failed to discover enormous accounting frauds that happened under their very noses. Congress was in no mood to hear any more excuses and promises from the auditing profession.

The act created a new federal agency called the *Public Company Accounting Oversight Board* (PCAOB), which is a branch of the Securities and Exchange Commission (SEC). The PCAOB has enormous power over the CPA firms that audit public companies. It might have been better to call the board the "Public Company *Auditing* Oversight Board." The PCAOB is given broad powers and has the dominant role in regulating the auditing of public companies.

The Sarbanes-Oxley Act also imposed financial reporting duties on corporate management. The CEO has to certify that his or her company's financial report is presented fairly and is in full compliance with all relevant accounting and financial reporting standards. Also, management is required to state its opinion on the internal controls of the business in the annual financial reports.

The CPA auditing profession is presently split into two basic segments: audits of *public* companies and audits of *private* companies. The Auditing Standards Board of the AICPA issues authoritative auditing pronouncements that govern audits of private companies. The PCAOB controls the rules for auditing public companies, although areas in which the agency has not taken action are still governed by the standards of the AICPA's Auditing Standards Board.

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SMALL BUSINESS FINANCIAL REPORTING

Identifying a Small Business

In the United States today there are, quite literally, millions of small businesses. Although there is no clear definition of what actually constitutes a small business, the following definition gives you a better idea of what the term *small business* refers to:

- Annual sales revenues under $50 million (with an average of closer to $5 to $20 million).
- Under 500 employees.
- Private ownership (not publicly traded).
- Limited number of shareholders (often under 10).
- Primarily structured as an LLC, subchapter S corporation, partnership, or sole proprietorship (pass-through entities).
- Limited need for audited financial statements with most obtaining reviewed financial statements or producing only internal financial statements.

In comparison, there are about 5,000 public companies whose stocks are traded on U.S. securities markets. And there are thousands of large private companies whose ownership shares are not traded in a public marketplace.

Regardless of size, all businesses need effective accounting systems for conducting operations, for complying with tax laws, and for providing essential financial information to their managers (especially profit or loss, financial condition, and cash flows). Then there is the fourth function of accounting—preparing the *external financial reports* of the business to its lenders and outside investors who don't participate in managing the business.

Tips, Tidbits, and Traps

Companies need to prepare financial statements for both internal management needs and external reporting needs. The primary difference between these two types of financial statements is the level of detail provided. For internal financial statements, far more information, data, detail, and analyses are usually incorporated to assist management with understanding key operating trends, critical economic data points, and so on. When external financial statements are produced, the information is presented in a more summarized or compressed format for a number of reasons including (a) generally accepted accounting principles (GAAP) compliance, (b) ease of review by outside parties, and (c) to avoid disclosing confidential business information. One tip every business owner, manager, or executive needs to remember is that internally prepared financial statements should not be distributed to external parties, unless a very specific need or situation arises (supporting this distribution). There's just too much risk to the company if vital and confidential information leaks to the inappropriate external party.

The financial statements of a business depend on the completeness and accuracy of its accounting records and on the profit accounting methods the business uses. In Chapter 4 we explained the assets and liabilities used in recording revenue and expenses. Profit accounting drives a large portion of the assets and liabilities reported in the balance sheet. Suppose a company's profit accounting methods are wrong. Then the values reported by the company for some of its assets and liabilities would be inaccurate. Both its income statement and balance sheet would have errors.

Up to the time of revising this book all businesses, large and small, private and public, were subject to the same accounting and financial reporting standards. In actual practice, however, small businesses are cut a lot of slack although small businesses don't see it this way. Rather, most small businesses don't really think they're cut slack but rather just do what's necessary (right or wrong) to get by. No one really gets too excited if a small business deviates from the standards (well, within limits). Nevertheless, small businesses were supposed to follow the same rules. But this "one size fits all" approach is changing. Recently the accounting profession has taken steps to differentiate the standards for public and private businesses, and for small and large businesses.

Different Standards for Different Businesses

Public companies in the United States are required to use GAAP (reference previous discussion). The codification of these standards runs more than 2,000 pages. Public companies are required to have annual audits of their financial reports by an independent CPA firm to test whether the business is complying with GAAP, or we should say *American* GAAP. In the near future, international accounting standards probably will come into effect—although it's difficult to predict when and to what extent the "internationalization" of accounting standards for public companies will take place. It's still a work in progress at the time of revising this book. The Securities and Exchange Commission has not yet approved the adoption of international standards by U.S. companies.

Confused yet? Well, we're just getting started with the different versions of GAAP that can be applied. As far as we can tell, large private companies use GAAP and most have annual audits by independent CPAs. Having said this, we should quickly mention that in 2013 the accounting profession established the Private Company Council (PCC), which provides a mechanism to allow exceptions and modifications to GAAP for private companies. Therefore, in the future there will be a private company version of GAAP. Okay, so let's quickly summarize where we stand with the different versions of GAAP that a company may use:

- United States GAAP, Public Companies.
- United States GAAP with exceptions, Private Companies (PCC).
- International Accounting Standards, Global Businesses.
- Small Business modified GAAP (in process).

One impetus behind permitting different accounting standards for private companies is to relieve them of the burden of applying provisions in GAAP that have questionable informational value to the users of private company financial reports. The idea is to allow private companies to issue financial reports that are easier to read and to understand. Undoubtedly exceptions and modifications will be enacted. In fact, the PCC is off to a running start. We cannot hazard a guess regarding how different private company accounting standards will deviate from GAAP for public companies.

Real World Story

Granting stock options to different parties is often used by small, start-up companies looking to retain high-quality staff but with limited budgets available. So to attract these employees, a "piece" of the action is offered in the form of granting the right to obtain a future equity interest in the company for a low initial price today. Accountants, in their infamous wisdom, decided that companies should account for stock option expense to properly record the estimated compensation these employees earn during a period where the value of the company's stock is increasing. The accounting for stock option expense is dominated by

the Black-Shoals method, which fortunately for you, will not be discussed in detail here. However, a number of small companies that have issued stock options are required to calculate this expense and disclose it in the financial footnotes to the audited financial statements, no matter how small. One such start-up company had to record a $6,000 expense (that costs about as much to calculate as the expense), compared to a loss of more than $1,500,000—which you can see is completely meaningless in the grand scheme of things. The point is, when applying an accounting principle that has little or no value or impact on the company's financial statements, there is really no point in requiring the company to apply the principle.

Small businesses, it is fair to say, never have been overly concerned about sticking tightly to GAAP. For one thing many provisions of GAAP do not apply to small businesses. Also, their accountants were too busy to take the time to keep up with the many changes in GAAP. Small business accounting procedures are guided more by expediency than by close adherence to good accounting theory. The result is that small businesses take a lot of accounting "shortcuts" (for lack of a better term). The goal isn't to deceive but rather to utilize limited resources in the most efficient manner to produce reasonably reliable financial statements.

Here's a simple example of an expedient accounting shortcut. The amount of a prepaid expense should be allocated over the months benefited by the cost (e.g., prepaid insurance premiums). Instead, the small business may simply record the entire cost to expense when paid. You might refer to Chapter 4, which can be used as a checklist of profit accounting questions that small businesses must decide. Instead of the preferred accrual basis accounting methods we explain in Chapter 4, many small businesses use what might be best referred to as a *hybrid* system, which blends guidance from accrual, tax, and cash-based accounting systems into one single system to prepare financial statements (for both recording sales revenue and expenses).

As a general rule the larger a small business, the better qualified is their accounting personnel and the more often the business uses an outside CPA to advise them on accounting and financial reporting issues. A business with $50 million annual sales revenue is more likely to use better accounting methods and issue better financial reports than a small business with $5 million annual sales revenue. As you move down the scale to smaller businesses, our experience is that you find a bigger percent of "GAAP-challenged" financial reports.

In June 2013 the American Institute of Certified Public Accountants (AICPA) issued a *financial reporting framework for small- and medium-sized entities*. Here's the description of this new framework (taken from an online announcement of an AICPA webcast explaining the new framework):

> The Financial Reporting Framework for Small- and Medium-Sized Entities (FRF for SMEs) is the tool to prepare streamlined, relevant financial statements for privately held small- and medium-sized entities that do not need GAAP-compliant reports. With this framework financial statements can be generated that clearly and concisely report what a business owns, what it owes and its cash flow. Lenders and others can clearly and quickly understand key measures and whether a business is credit-worthy. The FRF for SMEs is the CPA profession's answer to the financial reporting needs of small- and medium-sized companies.

The framework runs about 200 pages and is designed as guidance for the accountants of small- and medium-size businesses. You could call the new framework an *easing* away from the complex and technical GAAP standards. The new framework allows for deviations from GAAP. We suspect that one reason

for releasing the new framework was the substandard accounting and financial reporting practices of small- and medium-size businesses. But even with this effort to simplify accounting guidelines, compliance is still going to be a big problem. Most small businesses won't even bother with these guidelines because 200 pages is still 195 too many. As the old saying goes, "You can lead a horse to water, but can't make it drink"—maybe the best way to summarize this effort.

Hopefully the new framework will improve the overall accounting and financial reporting of small- and medium-size businesses. However, we doubt that the new framework will have widespread effect. Only time will tell. The new framework should have its biggest impact on larger small businesses. The larger a business, the more likely it employs a staff of qualified accountants. And, the more likely its lenders and individual investors demand that the business toe the line in its profit accounting and financial reporting.

The Challenges of Reading a Small Business Financial Report

In this section we identify problems you will likely encounter in reading the financial report of a small business. We take the point of view of the outside readers of the financial report, namely the company's primary lender(s) and the individual investors in the business. The financial report does circulate beyond this narrow group of readers. It goes without saying that its managers should get the financial information they need to run their business. See our *Small Business Financial Management Kit for Dummies* (Tracy and Tracy, 2007, Wiley).

A small business that has only one owner/manager may not regularly prepare external financial reports—although its bank or other lenders may demand a financial report. In the following discussion we assume that the small business has prepared a financial report that summarizes the company's financial activity and condition for the most recent period. As we explain early in the book, these summaries consist of three core financial statements—the income statement, the balance sheet, and with some luck, the statement of cash flows. Why the reference to luck? Well it's been our experience that the vast majority of smaller businesses (those with less than $5 million in annual revenue) rarely produce a state of cash flows and when they do, they have no idea what it means.

We cannot list every possible problem you might encounter in reading a small business financial report. You will probably not bump into these problems, but you should be aware of the following potential problems.

- **Are you reading a financial report?** The information you get from the small business may not actually be an external financial report. What you receive could be a copy of the financial schedules and summaries that the manager of the business uses. In other words, what you have in your hands may not be an external financial report as such. The manager may be sharing information with you that he or she uses, without preparing a separate financial report. Further, the format of the financial information tends to be a big problem for small businesses. That is, small businesses have a terrible habit of simply punching a report key from QuickBooks, spitting out the information, and then sending it to the external party. Wrong, wrong, wrong as if the format is poor, the results won't make sense, and the list of problems go on and on.
- **Are second-best accounting methods being used?** The small business may use some accounting methods that are not entirely kosher and strictly according to the rulebook. Generally, these are accounting shortcuts and are not deliberate manipulations of profit and financial condition. On the other hand, the small business could be massaging the numbers. A small business might even cook its books and commit accounting fraud but not in the sense most public companies might commit fraud. Rather, the fraud is committed to deflate earnings and reduce taxable income (to lower tax liabilities). Worst yet, owners of small businesses may not even realize

that their books are cooked as how many times have we heard about the reliable bookkeeper of 20-plus years that has taken the company for tens of thousands of dollars. Remember, fraud comes in numerous forms.

- **Was an independent CPA involved in preparing the financial report?** Very few small businesses have an annual audit or (even) reviewed financial statements by an independent CPA. The cost would be too high. On the other hand, a small business might hire a CPA to review its accounting methods and financial report, or a CPA might have assisted in the compilation of the financial report. The involvement of a CPA adds credibility to the financial report.
- **Which accounting and financial reporting standards are used?** One advantage of an audit by an independent CPA is that the auditor states clearly which accounting and reporting standards are used by the business. It would be helpful if the small business would identify the accounting and reporting standards used to prepare the financial report. But, don't expect to see this in a small business financial report.
- **Is there adequate disclosure?** Most small businesses put a high premium on confidentiality and privacy—so, they are reluctant to disclose information beyond what is absolutely essential in their financial statements. For that matter big businesses are also reluctant to divulge more financial information than they have to. The bottom line is that small businesses rarely provide disclosures and when they do, the disclosures are incomplete or poorly structured.
- **Is the company's accountant qualified?** The small business may not employ a qualified accountant (not necessarily a CPA, but one that has sufficient education and experience). Accounting computer software can help in pulling together the financial statements of a small business. But a qualified accountant is needed as well. Don't rely on accounting software as the concept of GIGO is a significant problem (garbage in, garbage out).
- **Is a statement of cash flows included?** The financial report may not include a statement of cash flows. This omission is a big red flag! This financial statement has been required for more than a quarter of a century. The absence of the cash flow statement may signal that the company's accountant does not know how to prepare this financial statement or is unaware that it is a required financial statement. As previously noted, preparing a statement of cash flows is often very challenging for small businesses.
- **Sales skimming?** The owner/manager of the small business could be *sales skimming*. As you may know, this term refers to diverting some of the company's revenue directly into the manager's pocket. The amount skimmed is not recorded in the books of the company, and is not included in sales revenue in the income statement. Bottom-line profit is reduced by the amount of revenue skimmed during the year. Sales skimming tends to be centered on businesses that handle large amounts of cash such as junk yards, recycling companies, laundromats, and gambling establishments.
- **Are personal expenses run through the business?** The company may be used to pay personal and family expenses of the owner/manager of the small business. You could argue that this is just an additional form of compensation to the manager. But doing this may violate agreements entered into by the business with other persons, and it could border on income tax evasion. The bottom line is that basically, most small businesses do push through a certain amount of personal expenses, which are reasonable and don't cross the line on income tax evasion

(as there is some type of economic purpose and value associated with the expenses).

- **Are there related party transactions?** Transactions with related parties may not be disclosed in the small business report. For example, the owner/manager of the small business may also own a real estate investment business, which leases space to the small business. Because of the common ownership of both companies setting the rent is not an arms-length transaction. The rent could be set deliberately higher or lower than the going rate, in order to raise or lower the expenses of the small business. Not only is this a common strategy but the government actually encourages this type of transaction through the use of SBA programs.

Summing up, small business lenders and outside investors should be cautious and somewhat skeptical when reading the financial report of a small business. They should be on the lookout for the problems we discuss above. As the saying goes, "it is what it is." While not perfect, the reporting of financial information by small businesses to their lenders and individual investors is better than no financial reporting at all. Lenders and investors can ask questions and request more information from the business—and they may have to.

Tips, Tidbits, and Traps

It's important to understand the primary objective of financial reporting by small companies. That is, it needs to be just good enough to please the lenders, just within "norms or standards" to avoid any scrutiny by taxing authorities, and just informative enough to give management base data to work with.

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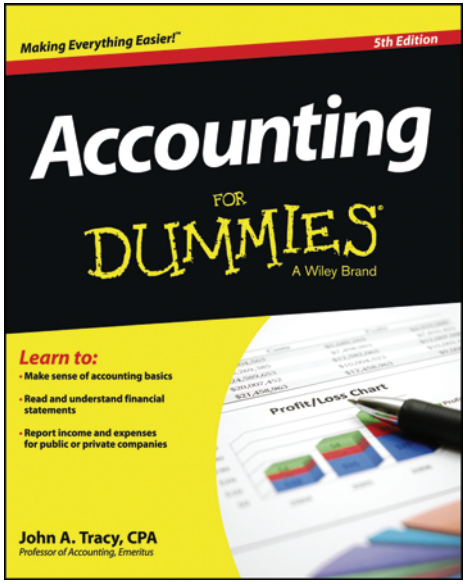
BASIC QUESTIONS, BASIC ANSWERS, NO BS

As we bring this book to a close, and from one co-author to another (that is myself, to my father), I turn this last chapter over to my father who really deserves the credit for not just this book, but all of the books we've had the chance to work on together over the past 10 years. What type of businessmen would we be if we didn't seize the opportunity to direct our readers toward other material that could provide an additional benefit in understanding the concepts we discuss in this book, so here are the books. You can go to www.dummies.com for more information.



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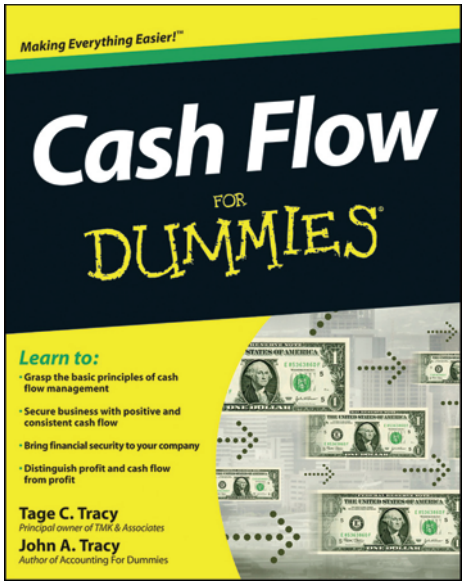

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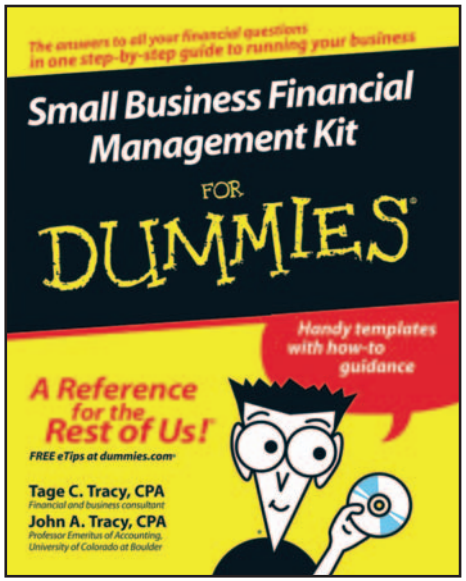

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The point of providing these additional book links, other than to line our pockets, is to emphasize just how complex are the subjects of financial statements and financial reports, and that to truly gain a proper and thorough understanding of the information readers really need to dig into the topics discussed in more detail. What is different about the three books noted above is that although this book focused on reading financial statements and reports from the "outside looking in," these books look at small business finance, accounting, and cash flows from the "inside looking out" and really dive deep into accounting and financial transactions that are the basis for all financial statements, including those released to the public.

So, with that said, it's time to turn our attention to some great Q&A that my father had the opportunity to respond to years ago.

No Question Is Out of the Question!

Some years ago a women's investment club invited John to their monthly meeting to explain financial statements. It was a lot of fun. These women were a savvy group of investors who pooled their monthly contributions and invested mainly in common stocks traded on the major securities exchanges.

These women investors asked thoughtful questions. We'd like to share these with you in this chapter, and answer a couple of other questions that are important for anyone who invests in stock and debt securities issued by public corporations, or who has an investment in a private business. Other financial statement readers should also find this chapter helpful.

Business investors and lenders should know the answers to certain questions concerning financial statements. We answer these questions from the viewpoint of a typical individual investor, not an institutional investor or a professional investment manager. John's retirement fund (TIAA-CREF) manages about $400 billion of investments. We assume its portfolio managers know the answers to these questions. They'd better!

When You Sell a Stock Does the Company Get Your Money?

One point caught John quite by surprise, and it's an important one to understand. At that time the women were thinking of buying common stock shares of General Electric (GE). Two members presented their research on the company with the recommendation to buy the stock at the going market price. The discussion caused John to suspect that several of the members thought their money would go to GE. John pointed out that the money would go to the seller of the stock shares, not to GE.

They were not entirely clear on the difference between the *primary* capital market (the original issue of securities by corporations for money that flows directly into their coffers), and the *secondary* securities trading market (in which people sell securities they already own to other investors, with no money going to the companies that originally issued the securities). John compared this with the purchase of a new car in which money goes to General Motors, Ford, or Honda (passing through the dealer) versus the purchase of a used car in which the money goes to the previous owner.

John cleared up that point, although he thinks they were disappointed that GE would not get their money. Once John pointed out the distinction between the two capital markets, they realized that whereas they were of the opinion that the going market value was a good price to buy at, the person on the other side of the trade must think it was a good price to sell at.

Are Financial Reports Reliable and Trustworthy?

Yes, the large majority of financial reports by *public* companies are presented fairly according to established standards, which are called *generally accepted accounting principles* (GAAP) in the United

States and *generally international financial reporting standards* (IFRS) outside the United States. If not, the company's CPA auditor calls deviations or shortcomings to your attention. So, be sure to read the CPA auditor's report. The U.S. and international accounting and financial reporting standards have not yet (2013) been completely merged into one set of converged standards—if they ever will be. How and when this "harmonization" process will end up is hard to predict.

The financial reports of *private* companies that are audited by CPAs are as generally reliable as those of public companies. (At least this has been our experience.) However, *unaudited* financial reports of private companies are more at risk of violating one or more accounting and financial reporting standards. For example, we have seen private company annual financial reports that did not include a statement of cash flows, even though this financial statement was required at the time. Much depends on the competence of the chief accountant of the business. When reading unaudited financial statements of smaller private companies, you should be more on guard particularly if there is no statement of cash flows in the annual financial report.

You should realize that accounting and financial reporting standards are not static. The rule-making authorities constantly monitor financial reporting practices and identify emerging problem areas. They make changes when needed, especially to keep abreast of changes in business and financial practices, as well as developments in the broader political, legal, and economic environments in which businesses live and operate.

Nevertheless, Are Some Financial Statements Misleading and Fraudulent?

Yes, unfortunately. The *Wall Street Journal* and the *New York Times* carry stories of accounting fraud instigated by high-level managers in businesses. These financial report shenanigans are done in various ways. Sales revenue can be overstated. Expenses and losses can be understated or not recorded at all. Net income can be inflated in order to prop up the market price of the stock shares. Or, a business may not disclose serious problems in its financial condition. In committing accounting fraud, the business lies to its lenders and shareowners. The company deliberately misleads its stakeholders by reporting false financial information, and the managers know that it is false.

It is difficult for CPA auditors to detect accounting fraud that is instigated and implemented by high-level managers, especially if it is cleverly concealed and involves conspiracy among managers and other parties to the fraud. (Chapter 26 discusses financial statement audits by CPAs.) Auditors are highly skilled professionals, and the failure rate of auditors to discover fraud has been relatively low. However, in some cases CPAs, including those with the Big Four international CPA firms, were negligent in carrying out their audit procedures or they were complicit with management. The CPA firms deserved to be sued—and were!

The bottom line is that there is a small risk that the financial statements you depend on are, in fact, false and seriously misleading. You would have legal recourse against the company's executives and its CPA auditors once the fraud is found out, but this is not a happy situation. Almost certainly you'd end up losing money, even after recovering some of your losses through legal action.

Is It Worth Your Time to Compute Financial Statement Ratios?

We doubt it. The conventional wisdom is that by diligent reading of financial statements you will discover under- or overvalued securities. However, the evidence doesn't support this premise.

Market prices reflect all publicly available information about a business, including the information in its latest quarterly and annual financial reports. (Insiders may be privy to information about coming events and take advantage of their position to make trades before the information becomes public knowledge.)

Computing financial statement ratios can be a valuable learning experience. But don't expect to find out something that the market doesn't already know. It's unlikely that you will find a nugget of information that has been overlooked by everyone else. Forget it; it's not worth your time as an investor. The same time would be better spent keeping up with current business and economic developments reported in the financial press.

Why Read Financial Statements, Then, If You Won't Find Information That Has Been Overlooked by Others?

You should know what you are getting into. Does the company have a lot of debt and a heavy interest load to carry? For that matter, is the company in bankruptcy or in a debt workout situation? Has the company had a consistent earnings record over the past 5 to 10 years, or has its profit ridden a roller coaster over this time? Has the company consistently paid cash dividends for many years? Has the company suffered a major loss recently? Has the company given its executives stock options on a large number of shares? Has the company issued more than one class of stock shares?

You would obviously inspect a house before getting serious about buying it, to see if it is in good condition and whether it has two stories, three or more bedrooms, a basement, a good general appearance, and so on. Likewise, you should know the "financial architecture" of a business before investing your capital in its securities. Financial statements serve this getting-acquainted purpose very well, as long as you know what to look for.

One basic stock investment strategy is to search through financial reports or financial statement data on websites, to find corporations that meet certain filtering criteria—for example, whose market values are less than their book values, or whose cash and cash equivalent per share are more than a certain percent of their current market value. Whether these stocks end up beating the market is another matter. In any case, financial statements can be culled through to find whatever types of companies you are looking for.

The Financial Statements and Footnotes of Large Public Companies Would Take Several Hours to Read Carefully. What's the Alternative?

Large businesses produce large financial reports! Their financial statements generally are long, complex, and include several pages of densely written footnotes. Quite literally it would take you several hours, or even longer, to conscientiously read every item in all the financial statements of a company, and every sentence in every footnote. Also, don't forget the auditor's report (also written in technical language), the letter from the CEO to shareholders, and the statement by top management concerning its responsibility for internal controls designed to prevent fraudulent financial reporting. We have to wonder whether professional stock analysts and investment managers have the time to read through the entire financial reports of all the companies they follow and invest in. Maybe they delegate this job to their subordinates, in which case we hope *they* have the time and understand financial statements.

Being aware of how long it takes to read their financial reports cover to cover, most public companies provide *condensed annual*

financial statements to their shareholders. The actual financial statements of the business are collapsed into brief summaries of their income statement, balance sheet, and statement of cash flows. These condensed financial statements are *not* accompanied by footnotes and often do not refer to the CPA auditor's report.

If you don't have time to delve into the actual financial statements and footnotes of a company, you should at least read its condensed financial statements. This is better than nothing. By the way, most not-for-profit organizations (such as AARP) issue condensed financial statements to their members. In some situations we still want to read the actual financial statements. As we start reading them we know we're in for a long night that only an accounting professor could love.

Is There Any One Basic Litmus Test for a Quick Gauge of a Company's Financial Performance?

We suggest that you compute the percent increase (or decrease) in sales revenue this year compared with last year, and use this percent as the baseline for testing changes in bottom-line profit (net income) as well as the changes in the major operating assets of the business. Assume sales revenue increased 10 percent over last year. Did profit increase 10 percent? Did accounts receivable, inventory, and long-term operating assets increase about 10 percent?

This is no more than a so-called quick-and-dirty method, but it does point out major disparities. For instance, suppose inventory jumped 50 percent even though sales revenue increased only 10 percent. This may signal a major management mistake; the overstock of inventory might lead to write-downs later. Management does not usually comment on such disparities in financial reports. You'll have to find them yourself—hopefully not many.

Do Financial Statements Report the Truth, the Whole Truth, and Nothing but the Truth?

There are really two questions here. One question concerns how truthful is profit accounting, which depends on the company's choice of accounting methods from the menu of generally accepted alternatives and how faithfully the methods are applied year in and year out. The other question concerns how honest and forthright are the disclosures in the company's financial report.

Revenue and expenses should be recorded honestly and consistently according to the accounting methods adopted by the business. In other words, once accounting choices have been made, the business should apply the methods and let the chips fall where they may. However, there is convincing evidence that managers of public companies occasionally, if not regularly, intervene and take certain actions to affect the amounts recorded in sales revenue and expenses. They do this to produce more favorable results than would otherwise happen—something akin to the "thumb on the scale" trick. (We discuss massaging the numbers in Chapter 25.)

Manipulating the accounting numbers is done to smooth reported earnings, to balance out unwanted perturbations and oscillations in annual earnings. Investors in public companies seem to prefer a nice steady trend of earnings instead of unpredictable fluctuations, and managers oblige. So, be warned that annual earnings probably are smoothed to some extent.

Disclosure in financial reports is another matter. Both public and private companies are generally reluctant to lay bare all the facts of interest to their lenders and shareholders. Bad news is usually suppressed or at least deemphasized as long as possible. Clearly, there is a lack of candor and frank discussion in many financial reports. Few companies are willing to wash their dirty linen in public by making full disclosure of their mistakes and difficulties in their financial reports. One notable exception to this

reluctance to share bad news is the annual letter to the stockholders by Warren Buffett, chairman of Berkshire-Hathaway. He lays both good news and bad news on the line, and admits his mistakes.

Public companies include a *management discussion and analysis* (MD&A) section in their annual financial reports. Usually this is a fairly sanitized version of what happened during the year. The history of financial reporting disclosure practices, unfortunately, makes clear that until standard-setting authorities force specific disclosure standards on companies, few will make such disclosures voluntarily.

Some years ago the disclosure of employee pension and retirement costs went through this pattern of inadequate reporting until, finally, the standard-setting body in the United States stepped in and required fuller disclosure. Recalls of unsafe products, pending lawsuits, and top management compensation are examples of reluctant reporting. Here is a historical example: Until the standard was adopted in 1987, companies did not report a statement of cash flows, even though this information had been asked for by security analysts since the 1950s!

The masthead of the *New York Times* boasts "All the News That's Fit to Print." Don't expect this in companies' financial reports, however.

Does Its Financial Report Explain the Basic Profit-Making Strategy of the Business?

Not really. In an ideal world, we would argue, a financial report should not merely report how much profit (net income) was earned by the business and the amounts of revenue and expenses that generated this profit. The financial report should also provide a profit road map, or an earnings blueprint of the business. The financial report should clarify the so-called business model of the company. Financial report readers should be told the basic profit-making strategy of the business, including its most critical profit-making success factors.

In their annual financial reports, publicly owned corporations are required to disclose their sales revenue and operating expenses by major segments (lines of business). Segmenting a business into its major lines of sales provides information about which major product lines are more profitable than others. However, segments are conglomerate totals that span many different products. Segment disclosure was certainly a step in the right direction. For example, the breakdown between domestic versus international sales revenue and operating profit is very important for many businesses.

Businesses are careful not to divulge too much information in their financial reports about their profit margins on specific products (and services). For example, Apple does not reveal the gross margin it makes on sales of its iPhone versus its iPad. Profit margin information is treated as confidential, and is kept away from competitors and from investors in the business as well. The income statement in an external financial report is not the profit report you would see if you were the CEO of the business.

Does the Market Price of a Public Company's Stock Shares Depend Directly and Only on the Information Reported in Its Financial Statements?

Well, you know the answer to this question, don't you? The market price of a public company's stock shares depends on many factors, although the information reported in its financial statements is the main point of reference. We include this question only to remind you that a public company's financial statements are only one source—albeit one of the most important sources—of the information that investors use to make their buy, hold, and sell decisions.

Does the Balance Sheet of a Private Business Tell the Market Value of the Business?

No. The balance sheet of a private business does not report what the market value of the company would be if the business as a whole were on the auction block. The dollar amounts you see on a balance sheet are the results of its actual transactions and operations. The net income (bottom-line profit) reported in the annual income statement of a business summarizes its actual sales revenue for the year minus its actual expenses for the period. Likewise, the cash flows reported by the business are the actual amounts of cash flowing through the business during the year. In short, financial statements are prepared on a "look-back" or historical basis, not on a "look-ahead" basis for determining the market value of the business.

Until there is a serious buyer, it's anyone's guess how much a private business is worth. A buyer may be willing to pay much more than the book value of its owners' equity that is reported in its most recent balance sheet. The market value depends on many factors, as you probably know. Even Warren Buffett, the sage investor who is CEO of Berkshire Hathaway, admits that he has made mistakes in amounts he paid for some businesses in his annual letter to stockholders (which you can read on the company's website).

Generally, the market value of a private business depends mainly on its profit-making ability projected into the future. A buyer may be willing to pay 10 times the annual net income of a privately held business. But we would quickly add that other factors could also play a dominant role in setting the market value of a private business.

Also, we should mention that earnings-based values are quite different from liquidation-based values for a business. Suppose a company is in bankruptcy proceedings or in a troubled debt workout situation. In this unhappy position, the claims of its debt securities and other liabilities dominate the value of its stock shares and owners' equity. Indeed, the company's stock shares may have zero value in such cases.

Do Books on Investing and Personal Finance Refer to Financial Statements?

It may come as a surprise to you, but generally these books say little to nothing about financial statements. The books make little effort to explain even the basics of financial statements, or ignore financial statements altogether. Don't get us wrong. There are many excellent books on investing and personal finance, and we have read quite a few of them.

We feel obligated to warn you that some of the most popular of these books contain very little practical advice that you can actually use. Some of these books explain, for example, that if you save 10 percent of your annual income and invest it wisely, then after 40 years you will have a nice sum of money. As John's grandkids would say: duh! In any case, we are perplexed that so few of the good investing and personal finance books discuss financial statements in any depth, or they ignore financial statements altogether.

Financial statements are the essential wellspring of information for business investors and lenders. Indeed, where else do you get this vital information? Not having this financial information would be like trying to find your destination in a city without street signs and traffic signals.

A Very Short Summary

You can generally rely on audited financial statements, although the rash of accounting frauds during the past two or three decades that CPA auditors failed to discover shook our confidence somewhat. Overall, the percent of fraudulent financial reports among all public businesses is low (but not zero). In any case, investors don't really have an alternative source of financial information about a business other than its financial statements. Accounting fraud, unfortunately, is an unavoidable risk of investing.

You might think twice before investing much time in analyzing the financial statements of corporations whose securities are publicly traded—because thousands of other investors have done the same analysis and the chance of your finding out something that no one else has yet discovered is virtually nil. For a quick benchmark test, though, you might compare the percent change in the company's sales revenue over last year with the percent changes in its net income and operating assets. Major disparities are worth a look.

Reading financial statements is the best way to get acquainted with the financial structure of a business that you're thinking of investing in. Don't worry too much about the accounting methods used by public companies. For privately owned companies, however, you should keep an eye on the major accounting policies of the business and how these accounting methods affect reported earnings and asset values.

Disclosure in financial statements leaves a lot to be desired. Don't look for a road map of the profit strategy of a business in its financial reports. Keep in mind that the total value of a business is not to be found in its balance sheet. Until an actual buyer of a business makes a serious offer, there is no particular reason to determine the value of the business as a going concern. Value depends mainly on the past earnings record of the business as forecast into the future.

The main message of this chapter is to be prudent and careful in making decisions based on financial statements. Many investors and managers don't seem to be aware of the limitations of financial statements. Used intelligently, financial reports are the indispensable starting point for making investment and lending decisions. We hope this book helps you make better decisions. Good luck, and be careful out there.

ABOUT THE AUTHORS

John A. Tracy (Boulder, Colorado) is professor of accounting, emeritus, at the University of Colorado in Boulder. Before his 35-year tenure at Boulder, he was on the business faculty for four years at the University of California, Berkeley. Early in his career he was a staff accountant with Ernst & Young. John is the author of several books on accounting and finance, including *Accounting For Dummies*, *Accounting Workbook for Dummies*, *The Fast Forward MBA in Finance*, and *Cash Flow for Dummies*, and *Small Business Financial Management Kit For Dummies* with his son Tage C. Tracy. John received his BSC degree from Creighton University. He earned his MBA and PhD degrees at the University of Wisconsin in Madison. He is a CPA (inactive status) in Colorado.

Tage C. Tracy (Poway/San Diego, California) has operated TMK & Associates (a niche consulting service firm) since 1993. TMK & Associates has focused on providing executive level accounting, financial, and strategic business planning management, training, and consultative services to businesses of all shapes, sizes, and forms (in the role of an interim/part-time CFO, a senior financial/accounting executive, and/or by providing training and seminar programs to broader audiences).

Including *The Comprehensive Guide on How to Read a Financial Report*, Tage has now co-authored a total of four books with his father John A. Tracy including *Cash Flow for Dummies*, *Small Business Financial Management Kit for Dummies*, and *How to Manage Profit and Cash Flow*.

Tage received his baccalaureate in accounting in 1985 from the University of Colorado at Boulder with honors. Tage began his career with Coopers & Lybrand (now merged into PricewaterhouseCoopers) and obtained his CPA certificate in the state of Colorado in 1987 (now inactive).

http://site.tracyandtracybooks.com/

ABOUT THE COMPANION WEBSITE

This book includes a companion website, which can be found at the following site: www.wiley.com/go/tracyfinancialreport (password: comprehensive).

The companion website contains "Test My Knowledge: Questions" for most chapters in this book. These questions and exercises test the reader's knowledge and understanding of the material presented in the chapters (as well as a little trickery thrown in related to testing previously presented material). The answers are provided.

Further, the electronic version of this book contains numerous direct electronic links to articles, financial reports, reference material, and the like, which have been included to emphasize or amplify a discussion topic with real world examples or stories. As authors, we sometimes forget how "second nature" the material presented in the book is to us and how challenging certain concepts may be to our readers, so the idea is to provide "reinforcement" material to help your understanding. And as the old saying goes, truth is often stranger than fiction, which will be clearly evident in some of the links provided (especially when fraud is involved) since there is no way some of this stuff can be made up!

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