

Introduction to Financial Accounting

Chapter 1 gets you started. It begins with an overview of the whole book and then introduces the people who prepare and use financial accounting's information and the way accounting measures an enterprise's performance. The chapter also introduces financial accounting's underlying system and ideas about the kinds of analysis that are central to using financial statements and to accountants' value in society.

C1 Introduction: Linking Financial Accounting's Production and Uses



Introduction: Linking Financial Accounting's Production and Uses

1.1 Book Overview: Financial Accounting's Illumination of the World

Welcome!

Welcome to this exploration of an interesting and thought-provoking subject: financial accounting, which provides information about companies and other enterprises. To illustrate the role accounting plays in lighting the way for investors, managers, and other decision makers, or should play if it is done properly, we will

use the Canadian company Enbridge Inc.'s financial statements throughout the book. Before we move to Chapter 1, this book overview will explain how Enbridge illustrates this concept and explain how the book is organized.

FYI

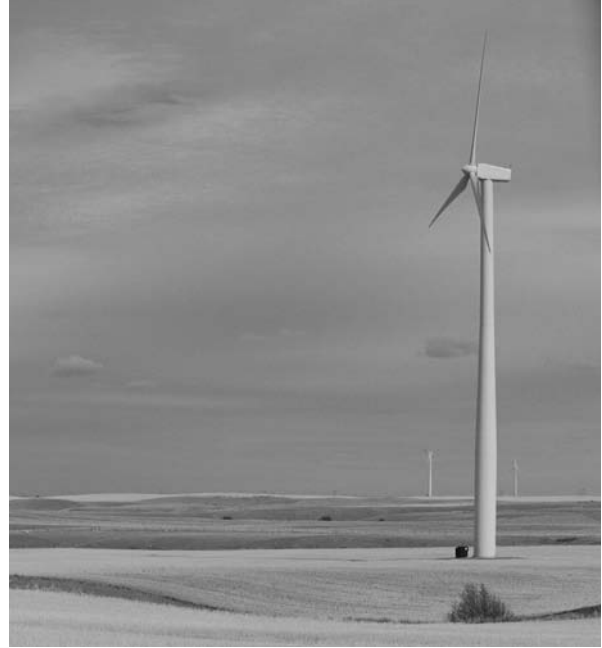
Financial accounting's reports tell a financial story about the organization.

In an introductory course, learning terminology is important. To help you with that, this book has a Glossary of Terms at the back. Any term printed in light brown, such as *financial accounting*, is included in

the glossary. Marginal comments, such as the one on the left, highlight important ideas, and at the end of each chapter there is a list of new terms from that chapter. If you're not sure what a term means, look it up right away.

Enbridge Inc. and Financial Accounting's Illumination

Let's start by thinking about the Canadian company Enbridge Inc. (www.enbridge.com). This company, which began as an inter-provincial oil pipeline operator, now runs businesses all over the world. It still has its oil pipeline business, but it also owns natural gas pipelines, and engages in gas distribution, wind power, and many other energy activities. Its brands and business interests include Enbridge Pipelines in Western Canada and the United States, Enbridge Gas Distribution and Gaz Métropolitain in Central Canada, Enbridge Gas New Brunswick in Eastern Canada, Enbridge Energy Partners' natural gas pipelines in the United States, Inuvik Gas in the North, Sunbridge Wind Power in Saskatchewan, and numerous energy development projects in Canada, the United States, South America, and elsewhere.





There are ten components that make up financial accounting: seven concepts and three foundations. Let's see how they apply to Enbridge, beginning with the light that financial accounting is designed to produce.

Financial position, income, and cash flow are financial accounting's main reports.

Financial Position Financial accounting produces three major reports. The first, the "*balance sheet*," or statement of financial position, describes the resources ("*assets*") and debts ("*liabilities*") of the enterprise at a specified date. Here is a summary of how Enbridge looked at the end of 2004. When you finish this book, you'll be able to pick up the balance sheet of a company like Enbridge and know where its information comes from and what it means. To equip you to do this, we'll touch on a few complex topics like aggregating data for corporate groups, but they're covered more fully in later courses.


Income Financial position is only part of the story. The second major accounting report tells you how the company has performed in making income for the owners (Enbridge's shareholders) during a specific period. Here is a summary of how Enbridge did in 2004. By

 FINANCIAL POSITION DECEMBER 31, 2004	
Total assets	\$14.9 billion
Total liabilities	<u>10.9 billion</u>
Shareholders' equity	<u>\$ 4.0 billion</u>

 INCOME FOR THE YEAR ENDED DECEMBER 31, 2004	
Revenues	\$6.5 billion
Expenses	<u>5.9 billion</u>
Net income	<u>\$0.6 billion</u>


the end of this book, you will also be able to pick up the *income statement* of a company like Enbridge and understand it. To equip you, we'll touch on a few complex topics like depreciation and income tax, which are also covered more fully in later courses.

Cash Flow Even knowing that Enbridge is earning income doesn't tell us all we'd like to know. Income is all very well, but how does the company manage its cash? The third major report tells you where the enterprise's cash came from in the year and what the company did with it. Here is a summary of Enbridge's cash generation and use for 2004. By the end of this book, you'll be familiar with this report and its particular format.

	
CASH FLOW FOR THE YEAR ENDED DECEMBER 31, 2004	
Cash from operations	\$ 0.9 billion
Cash from financing	0.1 billion
Cash for investments	<u>(1.0 billion)</u>
Net change in cash	<u>\$ 0.0 billion</u>


Good disclosure is central to financial accounting.

Disclosure The three financial reports aren't all the information that financial accounting produces. Those three reports are full of numbers, but there is a lot of judgment and effort put into how the numbers are described and organized. Beyond that, a huge amount of narrative information is included with financial accounting's reports because the bare numbers don't tell us enough. Here is an example: an excerpt from a note on acquisitions that Enbridge attached to its 2004 financial reports to describe the company's acquisitions of other companies during 2004. Financial *disclosure* has become a very controversial topic in recent years, with some people tracing the failure of Enron Inc. in the United States and other recent financial debacles to poor financial disclosure. This book will introduce you to some significant disclosure issues and help "vaccinate" you against being misled by poor disclosure.

	
EXCERPT FROM 2004 NOTE 5 ON ACQUISITIONS	
In September 2003, the Company acquired 90% of the outstanding shares of CCPC Transportation L.L.C., owner of the Cushing to Chicago Pipeline System. Of the total purchase price of \$145.8 million, \$78.3 million was paid on the date of acquisition and \$67.5 million, plus interest of \$5.5 million, was paid in December 2004.	

Financial analysis is important to interpreting financial accounting information.

Financial Analysis Let's go back to those financial reports, which accountants call "*financial statements*." Is Enbridge financed more by its creditors (debt) or by its owners (equity)? A common "ratio" to address this question is shown here: you can see that Enbridge's creditors have contributed almost three times as much money to the company as its owners have. There are other ways to calculate the debt-equity and other ratios, as we will see later in the book. Does Enbridge make a good return on its sales (revenue)? Another common ratio used to address this question is shown here: you can see that the company's 2004 net income was 9% of its revenue. The *cash flow statement* summary given earlier shows that the company generated most of the cash it

	
Dec. 31/04 Debt-equity ratio:	$\$10.9/\$4.0 = 2.73$
2004 sales return ratio:	$\$0.6/\$6.5 = 0.09$

needed for investments by borrowing rather than by day-to-day operations, and the Note 5 excerpt tells us something about what the company did with the cash it raised. Is a debt-equity ratio of 2.73 good? Is a 9% return on sales commendable? This book will show you how to use *financial statement analysis* to help evaluate the financial strength, profitability, and other characteristics of enterprises.

Internal Control Accounting information is not only used to produce financial statements. It is also very important in managing the business. It is so important that there are separate books and courses on “*management accounting*.” To give you an idea of how accounting information can help management and to show you that much more goes on than preparing financial statements, this book introduces two topics. The first is *internal control*: management’s use of information to keep track of important resources, debts, and business processes. Here is how Enbridge described this in its 2004 “*annual report*,” which includes the financial statements, notes, and other disclosures. By the end of this book, you’ll know about several internal control methods and something about preventing fraud.



EXCERPT FROM
MANAGEMENT’S REPORT IN
THE 2004 ANNUAL REPORT
Management has established systems of internal control that provide reasonable assurance that assets are safeguarded from loss or unauthorized use and produce reliable accounting records for the preparation of financial information. The internal control system includes an internal audit function and an established code of business conduct.

Financial accounting information is an input to good management.

Management The second connection this book draws to managing the enterprise is the general role that management plays in directing the enterprise’s accounting activities, along with the other functions management performs. Financial statements are representations by management, as Enbridge noted in this report excerpt. Enbridge is not a single company but rather a large group of companies, the financial information for which is “*consolidated*” so as to represent the group as if it were a single company. This book will refer frequently to management’s role, responsibilities, and motivation to show you how financial accounting fits into the enterprise.



EXCERPT FROM
MANAGEMENT’S REPORT IN
THE 2004 ANNUAL REPORT
Management is responsible for the accompanying consolidated financial statements and all other information in this Annual Report.

Accounting System Financial accounting draws its information from events in the world surrounding the enterprise as it buys, sells, borrows, invests, gains, and loses. There’s an accounting system underneath all the financial statements and analyses, gathering data about economic events. For example, when Enbridge makes a \$1,000 cash donation



ECONOMIC EVENT: ENBRIDGE
DONATES \$1,000 CASH TO A
COMMUNITY ACTIVITY
The accounting system records this event by adding \$1,000 to its record of donation expenses, and deducting \$1,000 from its record of cash.

to a community activity, that economic event is tracked by the accounting system as illustrated on p. 6. This book will show you how the accounting system works and how it generates the information needed to produce the financial statements that give management needed internal control and other information.

The accounting system and its methods are financial accounting's foundation.

Methods Enbridge experiences thousands of economic events every day. All the data gathered by the accounting system has to be organized and checked, and some events that are missed by the system or that take a long time to happen have to be added in somehow. Financial accounting has many methods to deal with the task of making sure that the financial statements and other information is complete and correct. For example, when preparing the financial statements, various records are checked for accuracy. If Enbridge discovers that a trademark asset costing \$5,000 is now worthless, someone has to decide how to insert this information into the accounting system. There is a method for doing this, the result of which is illustrated here. This book demonstrates many accounting methods to help you understand how the underlying data are shaped and corrected in forming the financial statements.

**A \$5,000 TRADEMARK ASSET
IS DISCOVERED TO BE
WORTHLESS**

The accounting records are adjusted to remove the amount from the company's assets and transfer it to expenses, thus reducing assets on the balance sheet and reducing income on the income statement.

Standards and principles are essential to quality output from the accounting system.

Standards, Principles Accounting information doesn't just happen. Financial accounting follows principles and standards, some of which apply generally to enterprises and some of which are chosen as policy by each enterprise. At the right is what Enbridge said about its adherence to general principles and about how it calculates depreciation (the straight-line method is one of several methods the company could use). *Accounting principles* involve a lot of judgment and expertise, and because many are not hard and fast, they also involve a lot of controversy. Enterprises might be tempted to choose their accounting policies, or not to follow some usual principles, so that the financial statements show better results. Manipulation of accounting information is also said to be behind numerous corporate failures and disasters. The news media remind us frequently that people whose ethics are a bit loose can get into serious trouble in accounting just as in the rest of business and society. When you have finished this book, you will understand *generally accepted accounting principles*, know about typical *accounting policy* choices, and understand some of the ethical and professional challenges involved in producing appropriate financial statements and disclosures.



**EXCERPTS FROM THE
COMPANY'S 2004
ACCOUNTING POLICY NOTE**

(General principles) The consolidated financial statements of the Company are prepared in accordance with Canadian generally accepted accounting principles...
(Specific policy) Depreciation of property, plant, and equipment generally is provided on a straight-line basis over the estimated service lives of the assets.

This Book's Integrated Approach

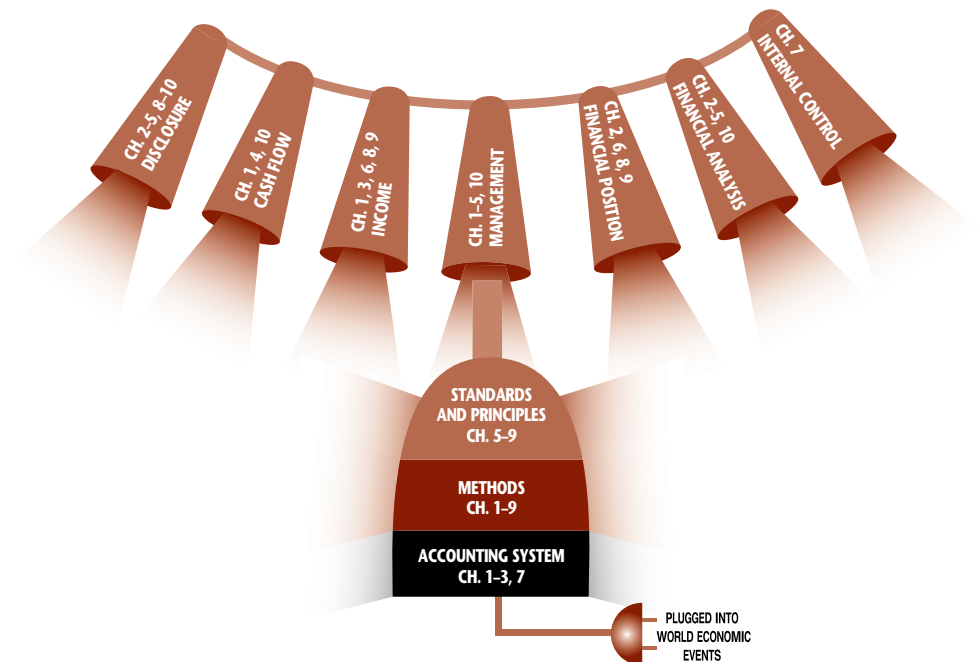
Well, this is a lot of information! But, this book will develop the concepts introduced above in manageable bites, so that your understanding and competence will develop throughout. There will be many illustrations and examples, much use of real companies like Enbridge to demonstrate topics, and other aids to your learning that are described in the preface that will be part of each chapter. But one important feature of the book to stress now is that, as the title states, it is *integrated*. The various topics illustrated for Enbridge above are all tied together and some of them appear many times in the book, so that you can see how financial statements are *prepared*, how they are *used*, and how preparation and use *fit together*. To illustrate this integration, the illumination image in Figure 1.1 shows where in the book the ten topic areas appear. You can see that some are in nearly every chapter and that the seven kinds of output and the three foundation inputs are represented throughout the book.

Integration of Use, Preparation, and Concepts

Another way to view integrating your knowledge is to think of the people wanting to use accounting's information, the people preparing it, and the concepts that link them.

USE. Financial accounting has value because the information it produces is used in many and varied ways. Users include managers, stockbrokers, bankers, financial analysts, and many others. Such people study accounting to learn how to use the information effectively and do their jobs better. Accountants also need to know how the information is used so they can understand the demand for their services and do their jobs better too.

FIGURE 1.1



Preparation, use, and concepts are integrated throughout the book.

PREPARATION. Accounting is a complex human activity. Accounting information doesn't just happen; it's produced by people. It is a human creation just as much as a skyscraper, a video, or a sweater is. To be effective users of the information, people need to know something about how and why the information is prepared. Accountants' expertise is all about the how and the why.

CONCEPTS. Users, accountants, and accounting are a connected system. The demand for useful information shapes how financial accounting information is prepared, for example, in producing annual or quarterly performance reports. How accounting is prepared shapes its use, for example, in financial analysis and managerial decisions. Tying accounting all together are the whys: the reasons it is used and prepared, and the principles that lie behind it. Many of these principles are quite interesting and controversial, but they are important in this book not so much for themselves as for the way they explain and connect the preparation with uses.

The *hows* (preparation procedures and techniques), *whys* (concepts and principles), and *uses* (analysis and decisions) of financial accounting are examined throughout this book. Sometimes one of the three concepts is emphasized for a while, but the others are never far removed, because none can stand without the others. See the diagram in Figure 1.2, which links the three concepts.

Accounting is a challenging discipline that requires many skills: assigning numbers to represent financial phenomena, providing explanations of those numbers, analyzing and verifying others' number work and explanations, understanding the needs of those who use accounting's reports to make decisions, engaging in oral and written communication with the many people involved in an organization's financial activities, having familiarity with computers and other electronic media, and maintaining judgment that is sound, objective, and ethical.

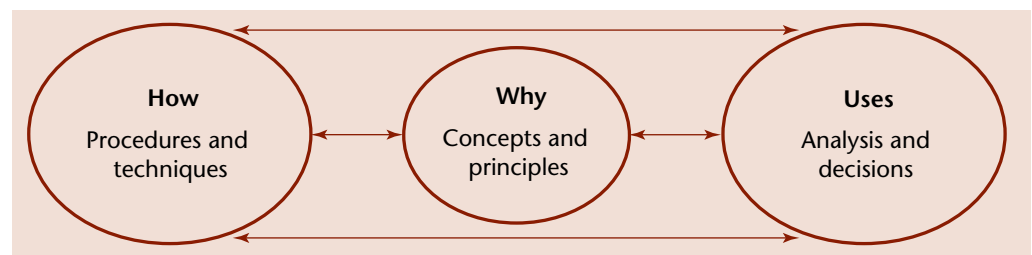
Much of the challenge of accounting is in figuring out which numbers to use, deciding what "story" the numbers should tell. Adding and subtracting the numbers is often the easy part. This challenge makes accounting both easier and harder to learn than you might have thought. Accounting is rooted in business and has its own vocabulary and viewpoints, so don't expect it all to make perfect sense at the beginning. It will take a while for you to acquire a full understanding of accounting and the business world it serves. This understanding will be based on your knowledge of both concepts and techniques, and of the viewpoints of both accountants and the users of accounting.

Accounting is a human artifact, an art, a work in progress. It can be viewed up close or from a distance, critically or with enthusiasm. It changes as human tastes and societies change, and, like a kaleidoscope, its shapes and colours change if you twist it a bit. Though referring to a great writer, *The Economist* magazine could have been talking about accounting when it said: "... the saga is not finished. But no work of art ever is."¹ Enjoy this book's exploration of accounting; relax about the occasional difficult parts of accounting, and be prepared to be surprised at how sophisticated your knowledge will become.

Accounting uses numbers but requires many skills beyond number work.

Accounting is an unfinished human creation, continuing to change as conditions change.

FIGURE 1.2



FYI

Accounting reports contain many examples of art, humour, and sophisticated design. Chicken producer Tyson Foods structured a recent annual financial report around its cover, which featured a close-up of a chicken crossing the road, and remarks in the report like “Who’s Chicken?” The CBC used pictures of its newscasters, puppets, and other radio and TV characters in its financial reports. Big Rock Brewery used pictures of beer bottles and labels to jazz up its numbers, and reported its results using

pictures of beer steins. Coors also likes to use pictures of beer bottles, but also uses pictures of fresh Rocky Mountain water. You might enjoy looking at the companies’ Web sites to see how they do their financial reporting. Within company sites, try searching under Investor Relations, Investing, Annual Report, and Financial. Tyson is at www.tyson.com, CBC is at www.cbc.ca, Big Rock is at www.bigrockbeer.com, and Coors is at www.coors.com, or www.molsoncoors.com.

The Book’s Organization

The book’s chapters are grouped into four parts. This first chapter is an introduction. Chapters 2–5 show you how the financial statements are prepared and why they are prepared (what their uses are). Chapters 6–9 delve into more specific accounting methods and policies that are important to anyone preparing financial statements or trying to understand them. Chapter 10 focuses on financial statement analysis. (It can be covered any time after Chapter 4, when the set of financial statements has been introduced.)

This book’s goals are to help you

- understand the subject of financial accounting well enough to be able to use accounting statements and explain them to others; and
- acquire the basics of how accounting works and how to prepare the statements.

Meeting these goals will benefit you whether or not you become an accountant. Nonaccountants are affected by accounting in many ways, as this book will show. For their part, accountants need to know how and why accounting reports are used, as well as how to prepare them. The going will not always be easy, but if you give it your best effort, you may be surprised at the level of understanding you reach.

Now let’s turn to the rest of Chapter 1. We’ll begin with a business vignette and an outline of what you can expect to get from the chapter. All chapters will start the same way.

1.2 Chapter Introduction: Linking Financial Accounting’s Production and Uses

Canada is a large country, sea to sea to sea, as they say. It’s essential that we be able to get around our country, but the distances are immense. You can probably think of folk songs, beer commercials, and various images that portray the vastness of Canada. Now, let’s also think about the companies that help us get around this country. Three of many possible examples are Air Canada (www.aircanada.com), Canadian Pacific Railway (www.cpr.ca), and WestJet (www.westjet.com). How do you tell how well such companies are performing, and whether each is a good company to invest in or lend to? Here’s a manager’s comment:

“We have to finance an equipment refit and small expansion project next month. We know what we have to do to operate safely and keep our customers happy, and we hope we know what to do to fend off our competitors. But to raise the money we need,



we have to convince our lenders and investors that putting money into the company is good for them. We have to show that we can perform well with the money we get, and can make enough money to give the lenders and investors the return they expect. It's not easy! To make our case, we have to figure out what revenues and expenses will result from the project, figure out our cash flows so that we know there will be enough cash to pay our bills, and reconcile the various numbers to make sure there aren't any mistakes. And we have to remember to allow for enough margin to pay income tax on the profit we hope to make!"

Learning Objectives

This chapter begins to build your ability to deal with the issues the manager raised. You will learn

- Who the people are in the world of financial accounting: lenders, investors, accountants, managers, and others, and in doing so what the social setting of financial accounting is;
- How financial accounting “filters” the masses of information in the world and selects the data that enter the foundation accounting system (whether the washroom of the bus or plane is clean is very important to customers, but is not part of accounting’s data, though accounting certainly shows the results of having unhappy customers);
- How financial accounting goes beyond the exchange of cash to portray the enterprise’s economic position and performance;
- How to do some basic “reconciliation” analysis and recognize the impact of income tax on analyses for decision making.

1.3 Financial Accounting

Financial accounting measures an enterprise’s performance *over time* and its position (status) *at a point in time*, and does so in Canadian dollars, US dollars, yen, euros, or whatever currency is judged relevant to the enterprise. This measurement of *financial performance* and *financial position* is done for all sorts of enterprises: large and small businesses, governments from local to national levels, universities, charities, churches, clubs, international associations, and many others. The *financial statements*, which are financial accounting’s reports, summarize the measurements of financial performance and position in standard ways thought to be useful in evaluating whether the enterprise has done well and is in good shape. These financial statements include **notes** (sometimes dozens of pages) that contain many words of explanation and interpretation in addition to the numbers. For companies listed on stock markets, the financial statements and notes are included in a package of more words and numbers called the *annual report*. (Listed companies report more often than annually, in *quarterly reports* or other “interim” reports.) The statements report on the economic and financial side of things and are largely for the use of people outside the enterprise, such as investors, club members, regulatory agencies, and taxation authorities.

In summary,

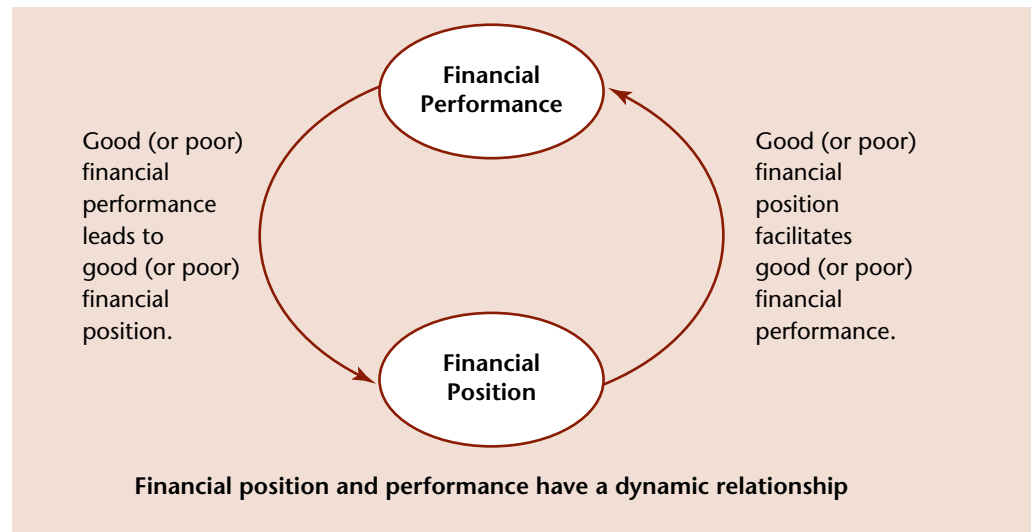
- *financial performance* means success (or failure!) in generating new resources from day-to-day operations over a period of time;
- *financial position* is the enterprise’s set of financial resources and obligations at a point in time;
- *financial statements* are the reports describing financial performance and position;
- *notes* are part of the statements, adding explanations to the numbers;
- *annual* and *quarterly reports* include the statements and notes and much more.

As we will see throughout the book, financial performance and position are highly related. Good performance is likely to lead to a healthy financial position: if you make money at your job, you are more likely to have money in the bank. Furthermore, a healthy financial position facilitates performance: if you have money in the bank, that helps you afford the activities that lead to good performance and avoid the risks and worries that come from being broke. The relation between performance and position, which we will see repeatedly in later chapters, can be illustrated with the diagram in Figure 1.3.

Financial accounting focuses on financial performance, position, and explanation.

Financial position and financial performance are closely related.

FIGURE 1.3

Performance–Position
Relation

Management accounting focuses on helping managers operate the enterprise.

Another branch of accounting, *management accounting*, is oriented toward helping *managers* and others inside the enterprise, in contrast to financial accounting's more external focus. While management accounting is not examined in this book, students interested in how financial accounting measures managerial performance will find frequent references to the relationship between managers and financial accounting. In the end, all forms of accounting exist to help people, such as managers, investors, bankers, and legislators, make decisions. As the book overview in Section 1.1 portrayed, decision making by management and other users of accounting's reports is important to all aspects of accounting, and is therefore examined throughout this book.



HOW'S YOUR UNDERSTANDING?

Here are two questions you should be able to answer based on what you have just read. If you can't answer them, it would be best to reread the material.

1. What are the two main things that financial accounting measures?
2. How are these two main things connected to each other?

1.4 The Social Setting of Financial Accounting

This book will show you the many ways in which financial accounting has been shaped by the development of business and society. Some of the numerous functions of financial accounting include the following:

- It helps stock market investors decide whether to buy, sell, or hold shares of companies.
- It helps managers run enterprises on behalf of owners, members, or citizens (in addition to the help provided by management accounting and other sources of information).
- It provides basic financial records for the purposes of day-to-day management, control, insurance, and fraud prevention.
- It is used by governments in monitoring the actions of enterprises and in assessing taxes, such as income tax and sales taxes.

We could go on for some time listing major and minor functions of financial accounting. Whole books have been written about each of the many functions! And, though this book emphasizes externally oriented financial accounting for business firms (to avoid overwhelming you with all of accounting's uses at once), don't forget that there are many other organizations that use, and are affected by, accounting. When words like "organization," "company," or "enterprise" are used, the implications often go well beyond business firms. You'll get a taste of those implications in this book and will see them more fully in other courses.

Accounting is active, affected by, and affecting, business and society in general.

Financial accounting for the enterprise, the centre of interest in this book, operates within and serves a complex social setting. It seeks to monitor and report on financial events initiated by or happening to the enterprise. These events come from and, in turn, affect the social setting, so that accounting is not passive: it tells us what is going on, but in doing so it affects our decisions and actions and, therefore, also affects what is going on.

The social setting is composed of many people. There are at least four parties directly concerned with what financial accounting says about the enterprise:

This book focuses mostly on the perspectives of owners, managers, and auditors.

1. the owners (for example, *shareholders* of a *corporation*)
2. the managers, who are running the company on behalf of the owners
3. the external *auditors*, who are employed by the owners to evaluate the accounting reports presented by the managers
4. all levels of government for taxation and regulatory purposes

Shareholders own portions of the corporation—shares that can be bought and sold—but the corporation is a legal entity existing separately from its shareholder owners. Auditors report on the credibility of the enterprise's financial statements on behalf of owners and others.

These parties have relationships with each other, as well as with financial accounting.

Owners, managers, and auditors forge many relationships, including through accounting.

- Managers, for example, may work for a company throughout their careers and, therefore, may have as much a feeling of ownership as do shareholders who may, through buying and selling shares on the stock market, be part owners of the company for only a few months before moving on to another investment.
- In smaller companies, managers and owners may be the same people.
- The external auditors are formally appointed by the owners, for example, at the annual shareholders' meeting, but they work with the managers day-to-day and may also offer advice on tax, accounting, and other topics of practical interest to managers, separately from the knowledge they use in their role as auditors.
- But an enterprise's external auditor is not permitted to be an owner or manager of the enterprise too. This is to ensure that the auditor is financially and ethically independent and can therefore be objective about the enterprise's financial affairs. *Independence* and *objectivity* are fundamental ideas that are encountered frequently in this book.

Many people are involved in financial accounting, but not all necessarily have common interests.

In addition to these three central parties, and often hard to distinguish from them, is a host of other groups, companies, institutions, and parties interested in or having an influence on the company's financial accounting. As we will see many times in this book, these parties do not share the same interest in the company's accounting and may even be in competition or conflict with each other. Most will be in the same country as the company and its management, but, increasingly, companies and other enterprises are operating internationally. So, the other groups interested in and affecting the company's financial accounting may be all over the planet. Let's see a little more about who all these people are.

FYI

Accounting and auditing can actually be quite controversial, as you're probably aware from the extensive media coverage given to such recent examples as the Enron bankruptcy in 2001, then the largest bankruptcy in US history, and the subsequent attacks on Enron's auditor, Arthur Andersen LLP. Much of the argument about what went wrong at Enron and Andersen focused on allegations about Enron's accounting methods, and the effects of Enron's business relationships with Andersen on Andersen's objectivity. We'll see more about accounting problems like those at Enron later in the book. Here are just three other examples. (1) IBM's shares lost billions of dollars in value in one day in November 1999 when the company was accused of mixing one-time gains it had made in with its regular operating income. The numbers were right, but it was alleged they were in the wrong place in the report. IBM's accounting troubles did not go away; on April 29, 2002, *Business Week* commented that "convulsions in share prices of General Electric and IBM" earlier that month were

"flare-ups" over the companies' accounting (www.ibm.com)(www.ge.com). (2) Also in November 1999, conglomerate Tyco International Ltd. lost 23% of its total stock market value in two quick blows, first, on allegations that it was using "accounting gimmicks" to make itself look better than it was, and second, on rumours that the company's auditors, embarrassed by all the fuss, would resign. In the general controversy about accounting that resulted from the collapse of Enron, Tyco's accounting methods have come up for more scrutiny. *Business Week* reported in January 2002 that rumours of an investigation of Tyco's accounting had contributed to a further large drop in Tyco's share price (www.tyco.com). (3) Accounting for movies has been as much an art form as making movies for a long time. Many famous movies, seen by zillions of people, haven't made any money for the people who invested in them. Said a commentator: "Some of Hollywood's greatest special effects never make it to the screen. They're found in studio accounting books."²

1.5 The People Involved in Financial Accounting

Users: decision makers; Preparers: decision facilitators; Auditors: credibility enhancers.

There are many participants in the art of financial accounting. The main ones are

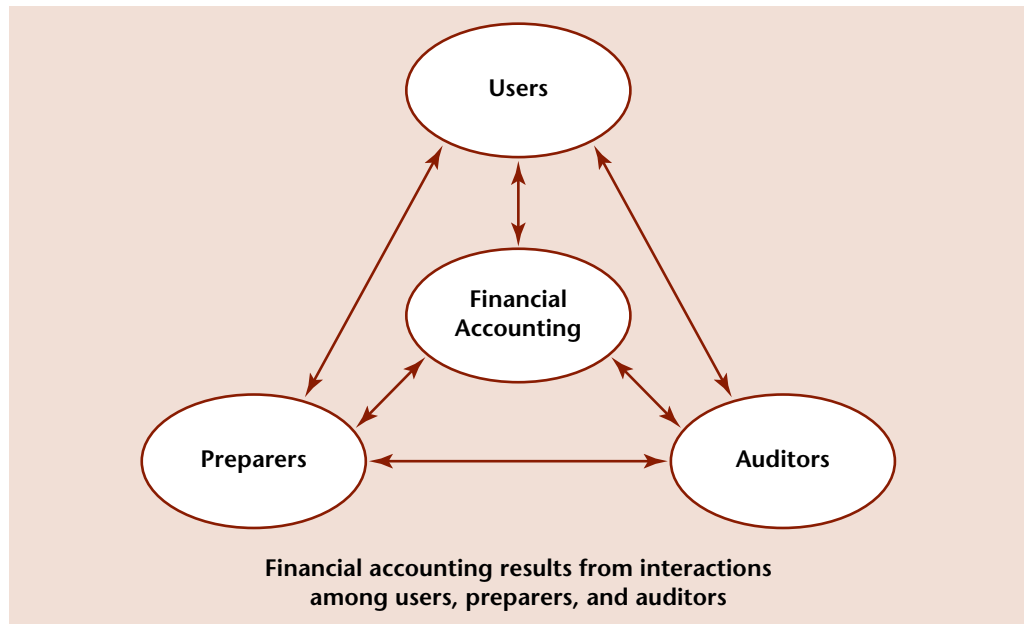
- the information *users* (the decision makers);
- the information *preparers*, who put the information together to facilitate the users' decision making; and,
- the *auditors*, who assist the users by enhancing the credibility of the information, providing a professional opinion that the information is fair and appropriate.

These groups of people interact with and influence each other, and the dynamics among them shape financial accounting. In turn, financial accounting affects their interests and their behaviour. All these interactions are important to accounting, as the diagram in Figure 1.4 illustrates.



FIGURE 1.4

People and Financial Accounting



Users (Decision Makers)

User demand is the reason financial statements exist

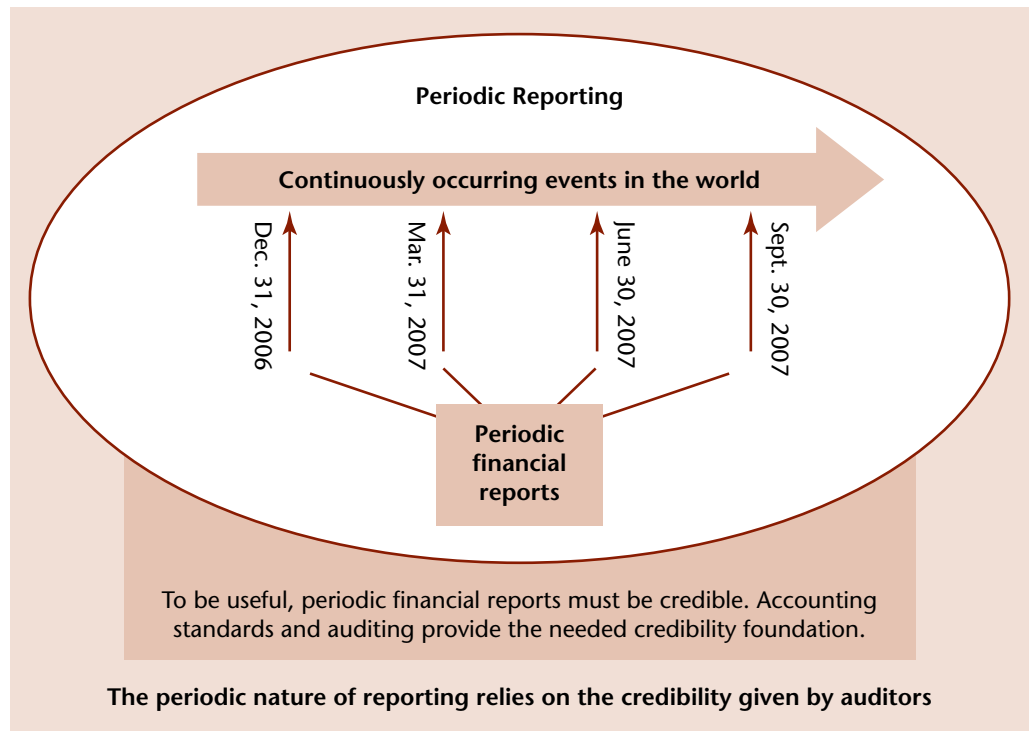
In financial accounting, a user or decision maker is someone who makes decisions on the basis of the financial statements, on his or her own behalf, or on behalf of a company, bank, or other organization. Financial accounting is utilitarian: ultimately, the nature and contents of financial statements are functions of the demand for decision information from users. This is not to say that such people are the only ones who matter in the process, nor are they always clear about what information they need, or necessarily satisfied with what they get. User demand, however, is the fundamental reason for financial statements; therefore, understanding the demand is important.

A user's main demand is for *credible, periodic reporting* of an enterprise's financial position and performance.

- *Credible* means that the information in the reports (the financial statements) appears to be sufficiently trustworthy and competently prepared for it to be used to make decisions. There is a *cost-benefit* issue here: huge amounts of money could be spent trying to make the reports absolutely perfect, but since that money would have to come out of the enterprise's funds, spending it would make the enterprise's performance and position poorer. Users, such as owners and managers, may not want that to happen, so credibility is a relative condition, not an absolute one. Accounting information has to be worth its cost.
- *Periodic* means that users can expect reports on some regular basis (for example, yearly or quarterly). The longer the wait, the more solid the information is. But waiting a long time for information is not desirable; users are usually willing to accept some imprecision in the information in return for periodic reports with timely, decision-relevant information. As illustrated in the diagram in Figure 1.5, the events in the world are ongoing so accounting information takes a periodic snapshot of events.

Financial accounting supplies a demand for credible, periodic information.

FIGURE 1.5



The main groups of users are:

Owners: individual business **owners**, such as proprietors, partners, and other entrepreneurs; individual investors (shareholders) in shares on stock markets who can vote on company affairs; companies that invest in other companies; pension plans and other institutions that invest in companies; people with quasi-ownership interests, such as members of clubs or voters in municipalities; and so on.

Owners and potential owners are examples of users with different interests.

Potential owners: people, of the same sort as the owners listed above, who do not at present have a financial interest in the enterprise, but may be considering making an investment. Because potential owners often buy shares from present owners, for example, by trading shares on the *stock market* rather than investing directly, there is often a significant difference in outlook between present owners, who would like to sell their shares for as much as possible, and potential owners, who would like to pay as little as possible. Saying that accounting responds to demands from users does not mean that all the users will have the same demands!

Creditors often have a substantial interest in an enterprise and a say in its decisions.

Creditors and potential creditors: suppliers, banks, bondholders, employees, and others who have lent money to the enterprise, or who are owed funds in return for supplying something of value, or who are considering taking on such a role. **Creditors** do not have the legal control of the enterprise that owners have, but they often have a large say in enterprise decisions, especially if the enterprise gets into difficulty. In cases of extreme difficulty, creditors may have the right to take control of the enterprise from the owners. Sometimes the difference between creditors and owners is hard to discern because it may depend on subtle legalities about who has what rights, and some people may play both roles for a given enterprise; for example, an owner invests money in a business, but also may lend the business further money, becoming a creditor as well.

Managers are very interested in what financial accounting says about their performance.

Managers: those who run the enterprise on behalf of the owners. They have a great interest in the way accounting reports on their activities and results. Often,

managers' salaries, bonuses, and the likelihood of staying in their jobs are directly affected by the contents of the financial statements. Especially in small businesses, the owner may also be the main manager.

Employees: nonmanagement employees and their unions or other associations. These groups are interested in the enterprise's ability to pay wages, maintain employment levels, and keep such promises as paying pensions.

Taxation authorities and other government bodies and agencies: groups that may use the financial statements to calculate taxes payable or to evaluate whether the enterprise is following various rules and agreements.

Government stock market regulators, stock exchange administrators, and accounting standard setters: groups that establish rules and regulations affecting accounting and monitor enterprises' compliance with them.

Financial and market analysts: people who study companies' performance and prepare reports for others by analyzing those companies. Analysts often make recommendations about whether to invest, lend, or do neither.

Accounting information intended for one group of users may inform others also.

Competitors: some of the people who get the financial statements may be trying to understand the enterprise's operations for the purpose of making life more difficult for the enterprise. Sometimes managers are reluctant to disclose information to shareholders, for example, because competitors can then also obtain it and act to reduce the enterprise's prospects.

Accounting researchers: people (mostly university professors, but also some based in public accounting firms and other organizations) who study accounting with the objective of understanding it and contributing to its improvement.

Miscellaneous third parties: various other people who may get access to an enterprise's financial statements and use them in various ways. Once statements have been issued, many people may make use of them. Politicians may make judgments about industry efficiency or taxation levels, for example. News reporters may write stories about employment practices. Judges and juries may evaluate enterprises' ability to pay damages in the course of lawsuits.

FYI

If you plan to be an accountant, the value of studying financial accounting is clear. It may not be so clear, however, if you have other plans, such as a career in management, marketing, finance, engineering, law, human resources, or production. To provide some perspective for those of you not planning an accounting career, and to help you understand the managers you will work with if you do become an accountant or auditor, comments will be made frequently about managers and financial accounting. Financial accounting is directly relevant to managers because it reports on their performance as decision makers, as caretakers of the enterprise, as representatives of the owners, as legal officers of the enterprise, and so on. Any

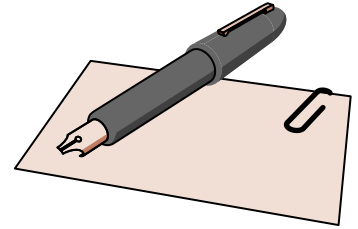
manager cannot help but be interested in how her or his performance is being measured and in how that performance is analyzed, projected, and evaluated. Managers' bonuses, promotions, dismissals, transfers, and other rewards and penalties are often directly based on the numbers and commentaries prepared by accountants. Every manager should have an intimate understanding of how accounting is measuring his or her performance and should be able to conduct a "reasonableness check" of the information being provided to her or him and have a comfortable understanding of the accounting implications of what is going on.

Financial accounting serves many users with many interests and decisions to make.

Think about all these users and decisions! It is a great challenge to develop one set of periodic financial statements for an enterprise so that they can be useful for all. Perhaps you will not be surprised that there is much controversy about whether financial statements do this well, and whether financial accounting methods serve some users or decisions better than others.

Preparers (Decision Facilitators)

Three main groups are responsible for the information in the financial statements:



Managers are both preparers and users of financial accounting information.

Managers: people responsible for running an enterprise, including issuing accounting and other information and controlling its financial affairs. The fact that managers are also users, vitally interested in the results, has created a fundamental conflict of interest for them and has led to the development of the auditing function, as will be discussed below. Managers, as a group, are often referred to as “management.”

Bookkeepers and clerks: those who, under the direction of management, keep the enterprise's basic records and create the data upon which financial accounting is built. Many bookkeeping and clerical functions are now performed by computers with all the benefits and frustrations those machines provide.

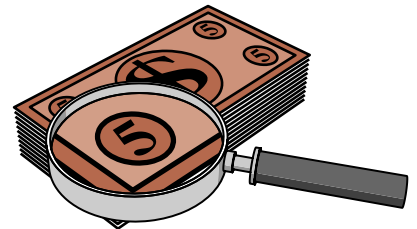
Professional accounting designations include CA, CGA, CMA, and CPA.

Accountants: people whose job it is to shape the financial statements by applying the principles of accounting to the enterprise's records under the direction of management. Many *accountants* are members of professional societies and are accredited as CAs (chartered accountants), CGAs (certified general accountants), CMAs (certified management accountants), and CPAs (certified public accountants, the largest group in the United States). Often, accountants and their societies also have auditing experience and interests, and sometimes auditing roles, but the task of preparing the financial statements is quite different in principle from the task of verifying those statements once they are prepared.

Auditors (Credibility Enhancers)

Professional accountants may act as accountants or auditors—very different roles.

Auditors have the job of assisting the users by providing their professional opinion that the financial statements have been prepared fairly, competently, and in a manner consistent with accepted principles. The auditing role is a very old one, arising because users demanded some assurance that managers' reports on their performance were not self-serving, biased, or downright untruthful. This book refers frequently to *external auditors*, who report on the financial statements on behalf of external users, but there are also *internal auditors*, who work within the enterprise to support the credibility of information being used by management, and other auditors (such as tax auditors, who verify taxpayers' computation of tax). While external auditors may be asked for advice in preparing the statements, especially for small companies, they must avoid responsibility for the



statements because their role is to scrutinize the preparation process. They cannot credibly audit statements they have prepared! (Professional accountants often do prepare financial statements, but in doing so they are not acting as external auditors, and they should make this clear in covering letters and footnotes attached to the statements.)

External auditors are expected to be objective and expert professionals.

The external auditor's role falls between those of the preparer and the user, so he or she must be acceptable to both. Such acceptability is helped if the auditor is an independent professional who will collect his or her fee whether the financial results are good or bad—or whether the managers or users are happy or unhappy. The external auditing function is considered so important that the right to perform it is usually restricted to members of recognized professional accountants' societies who have auditing expertise and experience.

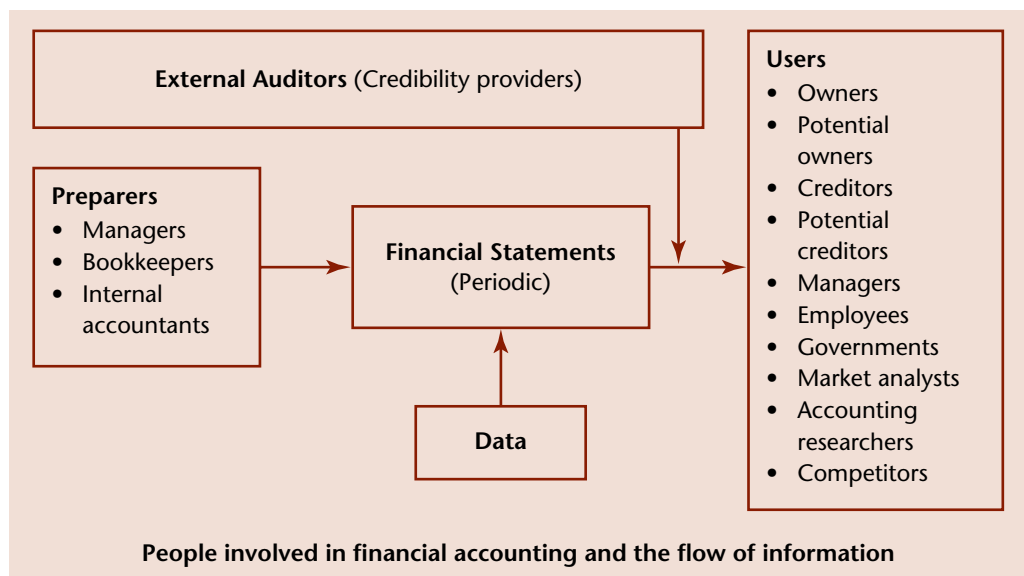
Public accounting firms offer a wide range of services beyond external auditing.

External auditors may work alone, but most work with other auditors in *public accounting firms*. Some of these firms are very large, having thousands of partners and other senior people, tens of thousands of employees, and offices in many cities and countries. Public accounting firms offer their clients not only external auditing, but also “consulting” advice on income tax, accounting, computer systems, and other issues. In offering such other advice to enterprises that they also audit, public accountants are not supposed to get so involved that they are in effect auditing their own work, or creating any conflict-of-interest problems. Managing this requires considerable professional skill and attention to ethics and rules of professional conduct, and whether this is being done successfully is a matter of much controversy at present. Beginning in 2000 to 2001, large US companies were required to disclose how much they pay their auditors for auditing and for various kinds of consulting. These disclosures indicated that many companies paid their auditors much more for consulting than to be auditors. Can auditors be independent scrutineers when there is more money in being consultants? In March 2002, for example, *Business Week* reported a survey of top financial managers indicating that many managers thought auditors of a company should not also be consultants to the company.³ In December 2003 chartered accountants voted to adopt new, more rigorous independence requirements. Intended to ensure auditor independence, the new standard prohibits the provision of certain non-audit services to audit clients. These non-audit services include bookkeeping, valuation, actuarial, internal audit outsourcing, IT design or implementation, HR functions, and corporate finance activities.⁴

Figure 1.6 shows the accounting flow among the people involved. The information starts with the preparers, who fashion periodic financial statements from the underlying data, then the auditors add credibility to the statements, which are then provided to the many users.

FIGURE 1.6

People Involved in Financial Accounting



People and Ethics

Should the financial statements provide information that could damage the enterprise?

What if the auditor's responsibilities to different clients conflict?

Should managers implement an accounting method that makes them better off?

Ethics, mentioned above, will be raised throughout this book. Ethical issues can arise in just about any area of accounting. Here are some examples, all of them real:

- An enterprise has been sued by a recently fired employee, who claims that the firing was based on the employee's age and so broke employment laws. The enterprise's president denies any impropriety. The enterprise's chief accountant, who personally feels the former employee's claim is justified, has suggested to the boss that the lawsuit should be mentioned in a note to the financial statements, so that users of the statements will know there is a potential for loss if the former employee wins. The president feels the chief accountant should ignore the lawsuit in preparing the financial statements to avoid embarrassment and the appearance of admitting guilt. The president fears that such an apparent admission could be used against the enterprise in court and so could cause the enterprise to lose the lawsuit. What should the chief accountant do?
- While doing the audit, another enterprise's external auditor learns that the enterprise may have been cheating one of its customers. The customer, who is unaware of this and quite happy with things, is another client of the auditor. The auditor, who is bound by rules of conduct designed to protect the confidentiality of information gained during the audit, knows that saying anything to anyone could result in lawsuits in all directions. Should the auditor just keep quiet about what was found?
- A third enterprise's president is paid a bonus each year, calculated as a percentage of the enterprise's income. The president is considering a proposed change in an accounting method that, among other things, will raise income and increase the president's bonus. So the proposal would put money in the president's pocket. Should the president refuse to implement the accounting change, or request that the bonus calculation ignore the change, or just go ahead and enjoy the higher bonus?

These illustrative problems do not have easy answers, so none are offered at this point. They are dilemmas for the chief accountant, the auditor, and the president. This book will address ethical issues from time to time and so help you sharpen your ethical sense along with your accounting knowledge, for the two are inseparable.

FYI

In an effort to understand and help with problems, many people conduct research into accounting issues, such as: choosing appropriate accounting methods; maintaining auditor independence; stock market responses to accounting information; disputes about accounting among contending parties; exercising professional judgment about accounting; ethics of professional accountants; history of accounting methods; social issues, such as the role of women in accounting; practical solutions to computing

management bonuses and other performance incentives; income tax calculation; and even the use of graphs and pictures in accounting reports. A lot of *accounting research* is going on and there are many accounting research journals with titles such as *Accounting, Organizations and Society*, *The Accounting Review*, *Contemporary Accounting Research*, *Journal of Accounting and Economics*, and *Journal of Accounting Research*. In this book, references to helpful research results are often made.



HOW'S YOUR UNDERSTANDING?

Here are two questions you should be able to answer based on what you have just read. If you can't answer them, it would be best to reread the material.

1. Who is a "user" of financial reports, and why would such a person want them?

2. What is the difference between a "preparer" and an "auditor," why is the difference important, and where does company management fit into the picture?

1.6 An Example: Grades

To outline how financial accounting works, let's use an analogy: the example of students going to university and getting grades for their efforts. The parallel with financial accounting isn't exact, but it will illustrate the main issues.

Students go to university to learn, among other reasons, and they get grades as a measure of their learning. Grades are not a perfect measure of learning, but they are a very important part of the process in modern universities.

Grades are used, for better or worse.

Grades have standard features thought to make them more useful.

Grades may affect students' learning choices; they don't just report on results.

- Grades are used by the students themselves and by others, including parents and university administrators, to assess students' knowledge at various stages and to monitor their performance over time. They are also used by employers to predict future job performance, by scholarship agencies to allocate awards, and so on. Many good and bad things can happen because of a student's grades, even though the student and other people who use grades may feel that they are not necessarily the best measure of learning.
- Grade reports come out at standard times of the year and in standard formats, and preparing them occupies much of professors' time. Great effort goes into minimizing error and fraud. For example, official transcripts are prepared carefully and certified so that anyone using them can be confident that they have not been tampered with.
- Because grades are important, students may choose courses and make other choices in the expectation that these choices will mean better grades, whether or not they care much about what they are learning. Sometimes the grades, which are only supposed to reflect the learning, seem so important that they drive the system instead!

Here are some parallels between the grade example and financial accounting:

1. The student is in university to learn about particular topics, but not only for that reason. Similarly, businesses and other organizations are concerned about the financial position and performance accounting measures, but not only those.
2. Learning has many dimensions, and course grades represent only some of them. Financial performance and position also have many dimensions. Financial accounting keeps track of several of these dimensions, but not all. They are not perfect, but grades and financial accounting have been with us for a long time and continue to be important.
3. Grades are measures of performance. Good grades may be used to predict good performance in the future. In accounting, good financial performance is expected to accumulate to provide a healthy financial position, and a healthy financial position is expected to lead to good subsequent performance. While they are useful to have, such expectations do not always work out, either for students or enterprises.
4. Like grades and grade reports, which summarize the results of many tests, projects, and other activities, financial accounting's reports (financial statements) are summaries of a large number of individual events. In a course, the final exam may matter more than the term paper does in calculating the course grade. In accounting, too, some events may be more important than others in compiling the financial report.
5. Knowing how employers, student loan offices, graduate schools, parents, students, and others use grade transcripts helps us to understand why they are as they are. Similarly, the use of financial accounting's reports must be understood to appreciate the role they play. A company president may be just as anxious about how people will interpret and use an accounting report as a student is about people's reaction to a grade transcript. Factors like career prospects and salary may be in the minds of both president and student.

Grades and financial accounting are information systems with many parallels.

6. Grade transcripts summarize the student's performance over specific periods of time, such as the school year. Comparisons to performance in other years are made easier by the format of the transcripts. Financial statements also appear at regular intervals (at least once a year and often on a quarterly or even monthly basis) and are prepared using a fairly standard format to increase their usefulness as a tool of comparison for different companies or the same company in different years. Grades may appear in slightly different formats, such as a four-point scale, percentage, or letter grade, just as the financial statements of companies are adapted to individual circumstances. Both offer consistent and comparable measures of results within the university or company, but sometimes create problems when comparing grades against the standards of other universities, or comparing financial statements against other companies or industries.
7. Much trouble is taken to minimize error and fraud in both grading and the preparation of financial statements. So that people may rely on the statements, auditors verify that they are prepared in a fair manner and in accordance with accepted principles.
8. It is unfortunate, but understandable, that some students choose courses not because they will learn much, but because a high grade can be easily obtained. Because financial statements are so important, some managers similarly seem to worry more about making their accounting numbers look good than about running the business properly. They may avoid investing in long-term projects or research and development that may hurt short-term results but create longer-term benefits.



HOW'S YOUR UNDERSTANDING?

Here are two questions you should be able to answer based on what you have just read. If you can't answer them, it would be best to reread the material.

1. Why are students interested in the grades they receive for courses taken?

2. What are some parallels between students' interest in grades and people's interest in accounting reports?

1.7 Financial Accounting's Transactional Filter

Accounting is an *information system* to filter and summarize data. Information systems select observations from the world, collect those results into data banks, and organize and summarize the data to produce specific kinds of information. This is useful because decision makers cannot cope with masses of raw, unorganized observations, and it is economically efficient to have one system organize data into information on behalf of various users.

An everyday example of filtering and summarizing is the daily newspaper: the editors group stories and features so that you know where to look for what you want. There's a sports section, an entertainment section, a page for letters to the editor, and so on. No newspaper contains exactly what you want, but it gets close enough to what most people want so that it can be published at a low cost compared to what it would cost you to hire reporters to get information just for you. In order to make this work, every information system has to be choosy; it has to filter all the available data and pick what is relevant to its purpose. You don't expect the newspaper or accounting reports to contain glossy reproductions of Rembrandt paintings suitable for framing or to print the grades you got in your university courses; you go to other information sources for such things.

An information system such as financial accounting is inherently limited. It can report only what its sensors pick up as it seeks out or filters data from the mass of

Accounting is an information system, filtering and summarizing data.

Information systems are choosy, designed to select and present relevant data.

ongoing events. No information system tells you “*the truth*” and certainly not “*the whole truth*”; it passes along information based on the data it has been designed or permitted to gather as data.⁵ See Figure 1.7.

- The gaps in the wall are the system’s filter or “window on the world.”
- Once a piece of raw data is admitted, it is recorded and stored in a bank of data (in accounting it is stored on paper or in computerized files with names like accounts, ledgers, journals, the *books*, which we will learn about later).
- The data in this bank are then organized to produce usable information (financial statements and reports).
- Users receive and interpret the information that has been funnelled from a large number of events into concise statements.

In accounting, we generally refer to the left part of the diagram, the data recording and some routine classifying and summarizing, as “*bookkeeping*.” We refer to the right part, the turning of data into information for users, as “accounting” or “reporting.” Financial accounting information is contained in the system’s final product, the financial statements and notes.

Accounting reports are based on and limited by the data collected. Therefore, if you are to understand the reports, you have to understand how accounting filters, notices, and chooses events to record into its data bank. Financial accounting’s filter, its window on the world, is the *transaction*. Generally, if an event is a transaction, it is recorded into financial accounting’s database; if it is not, the routine accounting system ignores the event. (Later on, we will see how accounting can incorporate some kinds of nontransactional data.)

The following are examples of accounting transactions. They should be recorded routinely by the financial accounting system.

- The payroll department issued a cheque to pay an employee.
- A customer paid, in cash, an account owing since last month and gets a receipt.
- A sales clerk prepared an invoice for a customer for the sale of goods the customer took with her and promised to pay for.
- The head cashier deposited the day’s receipts into the bank.
- The stockroom received a shipment of spare parts for the delivery trucks, along with an invoice from the parts supplier.

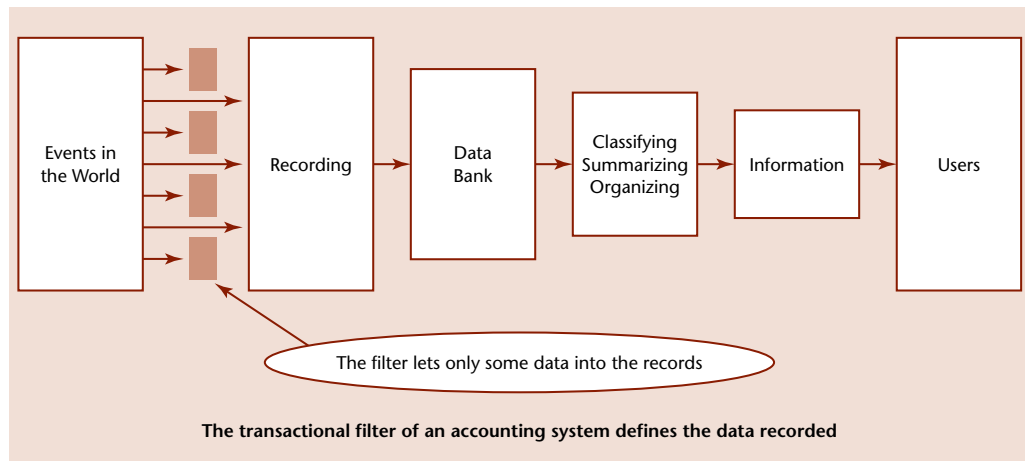
There is no limit to the number or kinds of transactions that human ingenuity can devise. Accounting has to deal with them, and must change as they change. Nowadays, many companies are scrambling to handle Internet transactions, those happening through Web pages and other areas of *e-commerce*, all of which are promising to fundamentally change many accounting systems. Transactions are partly defined by the legal

The transaction is financial accounting’s window on the world.

The financial accounting system should record transactions routinely.

FIGURE 1.7

Accounting’s Transactional Filter



and economic system. In our society, promises to pay can be enforced in the courts, so they are considered transactions, as in example (c) above. Speaking very roughly, there are two general kinds of transactions important in accounting—*cash transactions*, in which cash is exchanged immediately, and *credit transactions*, in which there is a promise to exchange cash in the future.

Events that are not transactions will not be recorded routinely, if at all.

The following are examples of events that are *not* accounting transactions and that will therefore *not* be recorded routinely, if at all, by the accounting system.

- i. The president of the company broke her leg while skiing.
- ii. The credit department manager decided that a particular customer is probably never going to pay the account the customer owes.
- iii. The main warehouse burned to the ground overnight.
- iv. A customer ordered a machine to be delivered next month.
- v. Real estate reports indicate the company's land has gone up in value by 14% since last year.

The transactional records can be "adjusted" to incorporate nontransactional data.

Some such events may be brought into the system by special *adjustments* to the routine recording system that we will learn about later. Events (ii) and (iii) are examples. But many are never included in financial accounting's information system. Event (i) is an example. Other events are recorded only after something more has happened. Event (iv) is recorded by the accounting system only when the machine is delivered, and in Canadian accounting, event (v) is recorded only if the land has been sold. (Some countries, such as Australia and the United Kingdom, have permitted such events to be reported in financial statements.)

Some large or innovative companies have accounting systems that routinely record events that are not transactions, which other or smaller companies ignore or leave to be done as special adjustments. Examples of nontransactions recorded by some companies are internal transfers of goods from department to department in the company, changes in the market values of investments, estimated income earned on partially completed construction contracts, and revisions in estimates for warranty payments. These may be included for various reasons; for example, other information systems in the company provide the necessary data, or management believes more finely tuned accounting information to be useful in internal decision making.

What distinguishes accounting transactions, such as those in the first list above, from the sorts of events in the second list? All of those in the second list may be important economically, but they are not routinely recorded by the accounting system. In order to qualify as a financial accounting transaction, an event must normally have *all five* of the following characteristics:

Three fundamental economic and legal characteristics

1. *Exchange*: the event must involve an *exchange* of goods, money, financial instruments (such as cheques or bonds), legal promises, or other items of economic value.
2. *Past*: The exchange must have *happened*, even if just seconds ago (financial accounting is essentially a historical information system).
3. *External*: the exchange must have been between the entity being accounted for and someone else, such as a customer, an owner, a supplier, an employee, a banker, or a tax collector (the exchange must have been across the entity's boundary, so to speak).

Two supplementary characteristics, needed for accounting's recordkeeping

4. *Evidence*: there must be some documentation of what has happened (on paper, or electronically recorded).
5. *Dollars*: the event must be measurable in dollars, or the currency unit relevant in the country where the transaction happens.

Financial accounting transaction: exchange, past, external, evidence, dollars.

The following transaction characteristics indicate the nature and value of financial accounting information:

Transactions are based on the legal and economic concept of exchange.

- First, transactions are linked to the legal and economic concept of an *exchange*: completing a contract by giving or receiving consideration in return for goods or services. The transactional basis of financial accounting thus has roots in the fundamental legal and economic processes by which society and business operate. It is no accident that accounting recognizes as transactions events that have a broader legal and business importance too. Transactions are the basis of financial accounting as a historical information system.
- Second, they constitute a large part of the underlying rationale for the *historical cost* basis of accounting, which is firmly founded on the transaction. If a transaction has *happened*, it should be in the accounting system and in the financial statements. It is history. If it has not happened, it is not the same sort of legal event and will not be in the historical accounting system. We can figure out how to get some events that have not happened into accounting anyway, but they often do not fit in well and can be controversial because reasonable people often disagree about whether and how to bring them in.
- Third, the characteristics of the transaction provide the basis on which the records can be verified (audited) later as part of the process of ensuring that the accounting information is credible. Events that do not have these characteristics would be difficult to verify later, and therefore inevitably lack credibility as measures of financial performance or position.

Transactions are documented and therefore make verifiable accounting records.

Let's look at the events from the first list above (list a–e, page 24) and see if they fit the set of transaction characteristics:

	Exchange	Past	External party	Evidence	Dollars
a.	money	yes	employee	cheque	cheque
b.	money	yes	customer	receipt	cash
c.	goods, promise	yes	customer	invoice	price
d.	money	yes	bank	deposit slip	cash
e.	goods, promise	yes	supplier	invoice	price

The events in the second list (i–v, page 25) lack several characteristics, especially that they are not past economic exchanges. Event (iv), for example, is not yet an exchange; the machine hasn't been delivered.



HOW'S YOUR UNDERSTANDING?

Here are two questions you should be able to answer based on what you have just read. If you can't answer them, it would be best to reread the material.

1. Why is a "transaction" important in financial accounting?
2. How do we distinguish transactions from events that are not transactions?

1.8 Demonstration Problem: Transactions

Use the five transaction criteria to determine whether each of the following events would be recorded routinely by Inglewood Electronics Inc.'s accounting system:

1. A customer brought back a faulty TV set and got a credit towards buying another TV.
2. Inglewood Electronics had a new sales promotion of "Buy Now and Don't Pay for Six Months." A customer bought a new car stereo system and had it installed immediately.
3. A hacker invaded the company's Web site and sent crazy messages to anyone using the site.
4. A customer agreed to buy a DVD player for cash as soon as the sales manager agreed to the price the customer wanted to pay.
5. The company received a loan of \$350,000 from a bank toward an expansion and renovation of its existing store. The loan will be paid back over 10 years.
6. A judge awarded a settlement of \$1,500 to Tom Loudish after he sued Inglewood Electronics claiming the company's "Battle of the Bands" event violated city noise regulations and damaged his hearing. In the original lawsuit, Tom had sought \$3,000 from the company.
7. An employee used company cash to bribe an electrical inspector to ignore a problem in the company warehouse.
8. In writing, the company promised a customer who had just bought a new home entertainment system that it would provide a 100% warranty on the system as part of the deal.

Answers:

1. Yes, it should be recorded routinely. The customer is an external party, and the faulty TV and promise of future credit are an exchange that has happened. There would have to be evidence, such as a note, that specified how many dollars of credit the customer had toward another TV.
2. Yes, such an event would be a transaction since the customer is an external party, the car stereo system has been exchanged, and there is a promise to pay in the future. There would be evidence of this promise to pay, such as a bill or other document, signifying payment is required in six months.
3. No, such an event would lie outside accounting's domain, even if serious. There is no exchange as the company has not given the hacker anything, and there would be no routine document specifying the dollar amount of damage. The cost of fixing the Web site would be a subsequent transaction, as would any cash the company got later from suing the hacker.
4. No, the exchange has not been completed, and there is as yet no dollar amount to assign to the event. Agreeing to the dollar amount and exchanging the player for cash are still to come.
5. Yes, this is a transaction because the company has received the full amount of the loan for renovation and promises to repay. An external party has supplied the loan and it is measurable in dollars. The future loan payments are not yet recorded as transactions.
6. Yes, the judge's awarding the \$1,500 settlement is a transaction since the event occurred in the past, and, by law, there is a promise for Inglewood Electronics to pay Tom Loudish. The original \$3,000 claim would not have been recorded as a transaction since the amount of the settlement was not certain at that time. The outcome of the lawsuit is necessary for a transaction to occur.
7. Yes, this should be recorded. Company cash was used, creating an exchange between it and the inspector. The exchange was cash for "helping" the company, as

the employee saw it. Documentation of the dollar amount might be difficult, but if the company had a good internal control system (Chapter 7), the employee would have had to fill in some sort of document in order to get the cash. Accounting takes no moral position here: the whole thing may have been illegal or immoral, but it was still a transaction. Determining legality or morality would be a separate process. However, the dishonesty involved might cause the transaction to be recorded misleadingly, for example, as a donation or repair expense.

8. This is a difficult one. It is a proper economic exchange between the company and the external party in that the warranty promise is part of the value the customer got in exchange for agreeing to buy the system. There is evidence of the warranty, but the value of the warranty is likely unknown until the warranty period has expired. The lack of a dollar figure would cause the warranty part of the exchange to be left out of the routine accounting system. To reflect such warranties, someone would have to estimate their value once in a while and record them as “adjustments” in preparing financial statements.

Here is a summary of the eight examples using the five transactional criteria. The summary allows you to trace why events 1, 2, 5, 6, and 7 are transactions and why the other events do not meet the criteria, at least not yet.

Exchange	Past	External party	Evidence	Dollars
1. TV for credit note	yes	customer	credit note	value of TV
2. stereo for promise	yes	customer	purchase document	stereo price
3. no	yes	hacker	damage to Web site	unknown
4. not yet	yes	customer	none yet	none yet
5. money for promise	yes	bank	loan document	cash
6. legal requirement	yes	customer	judge’s ruling	judge’s ruling
7. “service” for money	yes	electrical inspector	payment record?	bribe amount
8. promise for money	yes	customer	warranty card	none yet

1.9 Accrual Accounting

Financial accounting must deal with large amounts of data, not all of it clear or complete.

Financial accounting’s task of producing financial statements is a complex one. For even a small business, thousands of transactions have to be recorded and their financial effects evaluated. For large corporations like Inco, McDonald’s, Bank of Montreal, Wal-Mart, and Toyota, or organizations like the University of Calgary, the City of New York, the United Nations, or the Red Cross, the number of transactions runs into the millions or billions. Frequently, when the time comes to prepare the financial statements, transactions have not been completed, are in dispute, or have an otherwise unclear status.

Here are examples in which appropriate figures may be difficult to determine:

- The University of Calgary provides courses in return for tuition from students. This meets the criteria for transactions we saw in the previous two sections. But figuring out who owes how much, when, and which students might not get around to paying, and allowing for course cancellations, etc., is very complicated. The transactional records are really only the starting point for figuring out the university’s revenue from tuition.
- The value of Inco’s supply of nickel ore depends on the cost of digging it out, smelting and finishing it, and on international nickel prices that can vary significantly from day to day.

- The value of the Bank of Montreal's loans to foreign governments (that is, the money actually to be received back from those loans) depends on the health of the borrowing countries' economies, stability in international money transfer arrangements (often disrupted by wars, politics, and natural disasters), and the relative values of various countries' currencies, which, like nickel prices, can fluctuate from day to day.

Important business complexities must somehow be fitted into financial statements.

Accrual accounting's objective is to provide economically meaningful information.

To cope with these complexities, financial accounting for most businesses and organizations uses the *accrual accounting* approach to financial accounting. This means that in preparing the financial statements, attempts are made to

- include all the cash receipts and payments that have already happened,
- incorporate future cash receipts and payments that should be expected based on existing transactions (such as the lawsuit payment in the previous section),
- measure the value of incomplete transactions (such as the warranty in the previous section),
- estimate figures when exact amounts are unknown, and generally make an economically meaningful assessment of awkward problems.

Accrual accounting thus builds on the transactional records to produce a more complete measure of financial performance and position. The simplest transactional records are just cash receipts and payments, and accrual accounting's basic job is to incorporate economically meaningful information beyond cash transactions. Some of that information, such as the customer's promise to pay, is already in the transactional record, but needs a review to see if the promise is still valid. Other information, such as wear and tear on the company's equipment or the company's promise to honour warranties, may not be in the transactional records at all. Figure 1.8 illustrates accrual accounting's task. For example:

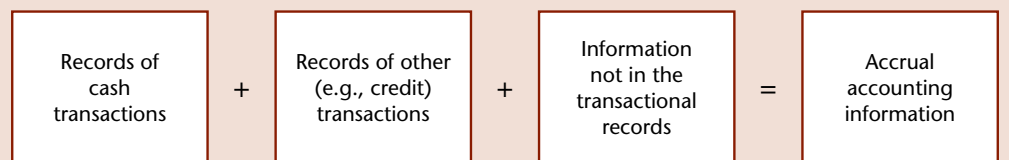
- Someone analyzes the University of Calgary's tuition cash receipts and course records and estimates how much has been earned from courses fully or partly taught, and how much of the students' promised tuition might not be collected.
- Someone determines from the cash transaction records how much money Inco spent on nickel ore and from other records how much it cost Inco to produce nickel, and estimates whether nickel prices are higher or lower than Inco's cost to produce more nickel, in order to determine whether Inco's supply of nickel is worth what it cost to produce.
- Someone studies the loan repayment transactional records for various countries for the Bank of Montreal and estimates how much money the bank will be able to collect, in order to judge the value of the bank's uncollected loans.

Accrual accounting uses estimates and judgment to produce meaningful information.

Accrual accounting has been developed because financial statements cannot be based just on the routine accounting records of what has happened. Measuring economic performance is more complex than that, and the appropriate measures can be elusive, or can depend on one's point of view. Many augmentations to the transactional record (estimates, adjustments, judgments, and verbal explanations) must be made so that the statements will be meaningful. The resulting statements, therefore,

FIGURE 1.8

Accrual Accounting Builds On Transactional Records



Accrual accounting information includes and supplements records of cash transactions

depend to a great extent on the quality and fairness of such augmentations. Managers, accountants, and auditors must use their judgment constantly.

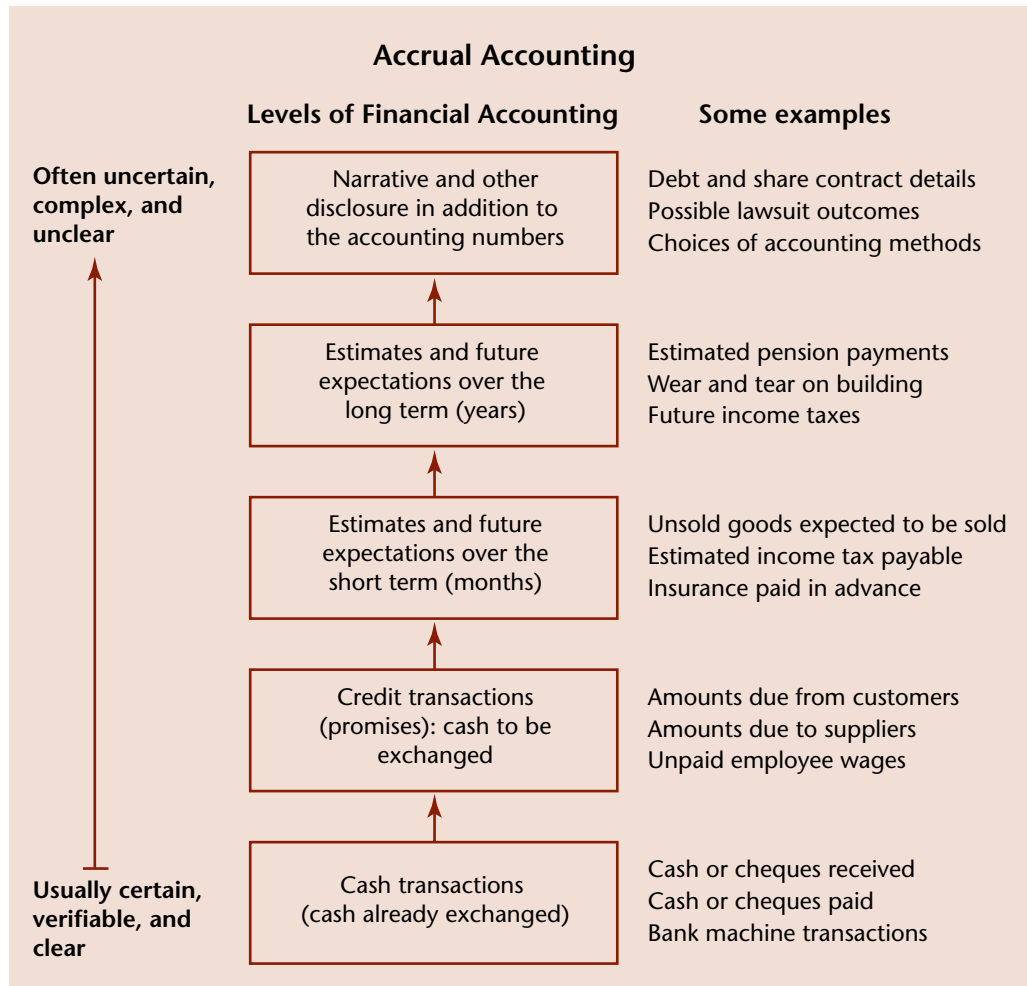
Financial statements are meaningful and useful, and therefore not necessarily precise.

Financial accounting, because it relies on many judgments, is far more imprecise than most people, even many regular users of financial statements, realize. To help you understand the reality of modern financial accounting, much time must be spent on the real-life imprecision of preparing and using financial statements. Accrual accounting is therefore the presumed method in this book, though there will be some comparisons between it and simple cash-based accounting. Modern financial accounting starts with cash receipts and payments and then builds a very large accrual accounting process *in addition to* the cash records in order to provide the sophisticated measures of financial performance and position that today's world demands.

The chart in Figure 1.9 summarizes and gives examples of the way accrual accounting information is assembled. The foundation is cash transactions, which even the simplest accounting records include. Most accounting systems also include credit transactions, because most enterprises extend credit to customers and/or use credit from their suppliers and employees. Short-term and long-term adjustments are needed in preparing financial statements, unless the company's accounting system is sophisticated enough to have already built those in (some are, though there are always new issues to be dealt with as the world keeps changing). Finally, extensive narrative and supplementary disclosures (especially the "notes" to the financial statements) are made, sometimes using many more pages than the statements themselves do. The result is that accrual accounting is a very complex information system, and it will take the rest of this book to introduce you to it properly.

FIGURE 1.9

Accrual Accounting





HOW'S YOUR UNDERSTANDING?

Here are two questions you should be able to answer based on what you have just read. If you can't answer them, it would be best to reread the material.

1. Does accrual accounting ignore cash transactions, or, instead, build on the record of them?
2. Why is accrual accounting thought necessary even though a record of transactions already exists?

1.10 An Accrual Accounting Example: Simone's Jewellery Business

Here is an example of how accrual accounting works. The example is of a small business, one you should be able to imagine easily, but the accounting issues it raises are exactly the same as those faced by big businesses.

Simone works in an office during the day, but in the evenings and on weekends she makes silver jewellery in a studio she has set up in her basement. The jewellery is sold in local craft stores, and Simone keeps a separate bank account to deposit the cash from her sales and to pay the bills for supplies.

Accounting is a way of portraying an enterprise. Another portrayal is a visual image: try to picture her working in her studio, driving around to craft stores to deliver her products and collect cash, and relaxing with her friends when things are going well. It is important that accounting's reports be consistent with the reality of her business, so keep the image in mind as this example develops.

Simone's accrual income for 2006, her first year in business:

Last year, 2006, was Simone's first year in business, and she received \$4,350 in cash from the craft stores for sales of her jewellery and paid \$1,670 in cash for silver and for other supplies and expenses. How much money did she make from her business in 2006? Well, a simple, understandable answer is that she made a *cash income* of \$2,680 (\$4,350 cash collected, minus \$1,670 cash paid out). Her bank balance increased by that amount during the year.

The notion behind accrual accounting is that the simple calculation is too simple, that it really does not properly measure what Simone accomplished during the year. Accrual accounting tries to take into account a number of things, such as the following:

- At the end of 2006, Simone was still owed \$310 for sales by one craft store because the owner had been out when she stopped by. The store paid her a few weeks later, but shouldn't that amount be counted as revenue and therefore income for the year the sales were made? It was a credit transaction in that year, not a cash transaction. The amount was legally owed to Simone at the end of the year and she expected to collect the cash.
- At the end of the year, Simone had supplies and both finished and unfinished jewellery on hand that had cost \$280. These were paid for during the year, but because they will be used to produce sales in the next year, shouldn't their cost be deducted next year instead? This is an example of a short-term expectation represented by the middle box of Figure 1.9. Simone expects to be able to use the supplies and sell the jewellery, and this expectation should be taken into account, because otherwise the economic value represented by the goods would not be recognized.
- At the end of the year, Simone had some unpaid bills for business **expenses** totalling \$85. She paid those early in the next year, but aren't they really expenses for the year in which she incurred them, rather than for the year in which she paid them?

Financial statements must be fitted to each business's circumstances.

Cash income equals cash receipts minus cash payments for day-to-day business events.

Accrual accounting: uncollected sales.

Accrual accounting: unused goods.

Accrual accounting: unpaid bills.

Accrual accounting: wear and tear on equipment.

She has bills for these so they represent other credit transactions, only this time involving promises by Simone to pay her suppliers rather than by her customers to pay her.

- In making the jewellery, Simone used some equipment she had bought earlier for \$1,200. The equipment is expected to last about ten years, so shouldn't the wear and tear on it during the year 2006 be counted as an expense? It is not easy to figure out how much wear and tear results from a particular period, but say that she feels the year was a normal one of the ten years the equipment should last. The cost of the wear and tear, therefore, is about 10% of the \$1,200 equipment cost, or \$120. (This \$120 figure is what accountants call "*amortization*." It can be calculated in several ways, as we will see later on.) This is an example of a long-term estimate or expectation. Because it involves prediction of an uncertain future, and for other reasons we'll see, people have all sorts of disagreements about amortization.

FYI

Amortization is accounting's estimate of the consumption of economic value in a period.

Accounting is continually evolving, an example of which can be seen in the shift from the use of the term *depreciation* to *amortization*. Both terms denote the measurement of "consumption" of the economic value of long-term resources such as equipment. However, amortization is slowly supplanting depreciation as the more

common term for this idea, but you will see both terms (and other terms) used in companies' financial reports and in this book.

Just using these four additional pieces of information, accrual accounting would calculate Simone's business income for the year 2006 (her first year in business) in the way shown in Exhibit 1.1, taking into account the various estimates and incomplete transactions described:

EXHIBIT
1.1

Simone's Jewellery Business

Calculation of Accrual Income for the Year 2006

Revenue*	
(\$4,350 collected, plus \$310 still to be received)	\$4,660
Expenses**	
(\$1,670 paid, minus \$280 deducted because the goods are still on hand, plus \$85 unpaid, plus \$120 estimated amortization)	<u>1,595</u>
Accrual income*** based on the information provided	<u>\$3,065</u>

Notes:

* **Revenue** is the benefit received or expected from the sale of goods or services during the year, so it goes beyond cash received.

** **Expenses** are costs incurred or resources consumed during the year in order to earn the revenue, so they go beyond cash paid.

*** **Accrual income** for the year is the difference between revenue and expenses.

Accrual accounting measures performance with revenues, expenses, and resulting income.

Accrual income is more complete than cash income.

Accrual accounting can and does handle many more complexities than the four included above. Even with this uncomplicated example, you can see that the \$3,065 accrual income is a more complete measure of Simone's business performance than is the cash income of \$2,680, which is the change in cash balance alone. (By the way, **accrual income** is not necessarily higher than cash income—it just happens to be so in this example.)

Accrual income is more complicated than cash income.

The more we try to accomplish with it, the more complex accrual accounting becomes.

But there are some difficulties:

- The accrual income requires extra calculation and so is more complex, as portrayed with the long vertical arrow in Figure 1.9. This might confuse some people, and it leaves more room for error than the simpler calculation.
- The accrual income doesn't match the change in bank account balance anymore, so Simone might be less sure of how much she can take out of the bank for her next holiday. The accrual income and cash income can always be reconciled, however. We'll see how to do this later.
- Accrual accounting is a bit of a "slippery slope." Once you start trying to add and subtract things in calculating income, where do you stop? For example, should there be some deduction for the cost of Simone's time in making all the jewellery? The accrual income calculation seems to imply that her time was free, yet she would probably not agree with that. (Accounting for the value of the owner's time in a small business like Simone's would make economic sense, but it is generally not done because it is not based on transactions, is hard to measure, and is not allowable in Canadian income tax calculations.) What about the costs of using the room in her basement for her studio and her car for deliveries? Should some calculation of such costs be made even though it would be hard to be exact about them? What about income tax? If she has to pay income tax on what she earns from her business, should that tax also be deducted as a business expense? Or is it a personal expense that does not belong in the business's financial statements?

Let's not get mired in such complexities! For now, just remember that accrual accounting tries to provide a more thorough measurement of financial performance and other aspects of an enterprise than simple cash-based accounting. In order to do so, it incorporates more complex ideas, as well as estimates and judgments. Much of your task is to understand the complexities, estimates, and judgments so that you will be able to understand the resulting financial statements and what they say about the enterprise.

Simone's accrual income if 2006 was not her first year in business:

Let's look at Simone's business again. Suppose 2006 was *not* her first year in business. That means she may have had uncollected sales, unused goods on hand, and unpaid bills at the end of 2005 (beginning of 2006). Would those make any difference to the cash income calculation for 2006? No, they wouldn't—they don't involve any change in cash receipts or payments during the year. Would they make any difference to the accrual income calculation for 2006? Yes, they would. Let's see how.

To keep the example uncluttered, let's use exactly the same numbers again, but add three new items as at the end of 2005: uncollected sales of \$240; unused goods costing \$230; and unpaid bills of \$50. What effect does this have on the accrual income calculation?

1. Some of the \$4,350 cash received in 2006 was not for that year's activity, but rather was the collection of \$240 revenue that was part of the accrual income calculation in the previous year, 2005. That amount has to be subtracted from \$4,350 in the 2006 accrual income calculation because it was already in 2005's accrual income and shouldn't be counted twice.
2. The unused goods costing \$230 at the end of 2005 have to be added to the expense calculation for 2006, because they were there at the beginning of 2006 and so got used up during the year.
3. The unpaid bills totalling \$50 at the end of 2005 were included in the cash payments in 2006 and so counted in the 2006 expenses above even though they had already been included in the 2005 expenses. So they are deducted from the 2006 expenses because they don't belong in 2006 and we don't want to count them twice.

You may wonder what the effect would be if some amounts left over from 2005 were still left over at the end of 2006. An amount owing by a customer in 2005 might still be

owed at the end of 2006. Goods unused at the end of 2005 might still be on hand unused at the end of 2006. Well, these 2005 amounts must still be adjusted for as indicated above, because they were in the 2005 calculation and if not taken out of the 2006 calculation, would be included twice. For example,

- Customer Jones owed Simone \$50 at the end of 2005, so this \$50 would be added to 2005 accrual income.
- Customer Jones still owes the \$50 at the end of 2006. Following the same logic, we would add the \$50 to the 2006 accrual income. But now the \$50 has been added to both years' accrual incomes. To avoid this double counting, we deduct the \$50 owing at the beginning of 2006, ensuring that it is counted only in 2005's accrual income, regardless of when it is finally collected. If it is collected in 2006, this deduction removes the \$50 that is in 2006 cash income; if it is not collected at the end of 2006, this deduction cancels it from the amounts owing at the end of 2006 that are added to 2006 accrual income.

Using the information above, Exhibit 1.2 shows Simone's accrual income *if 2006 was not her first year*.



Simone's Jewellery Business	
Revised Calculation of Accrual Income for 2006	
Revenue	
(\$4,350 collected, minus \$240 from 2005, plus \$310 still to be received)	\$4,420
Expenses	
(\$1,670 paid, minus \$50 from 2005, plus \$230 unused brought forward from 2005, minus \$280 unused taken forward to 2007, plus \$85 unpaid at the end of 2006, plus \$120 estimated amortization for 2006)	<u>1,775</u>
Accrual income based on the information provided	<u>\$2,645</u>

Accrual income is affected by adjustments at both the beginning and end of the year.

Cash income is still \$2,680, unaffected by the new information. But accrual income is changed, *as it always is*, by noncash items existing *both* at the beginning and end of the year.



HOW'S YOUR UNDERSTANDING?

Here are two questions you should be able to answer based on what you have just read. If you can't answer them, it would be best to reread the material.

1. Your cousin, a medical student, says, "In our course on managing a medical practice, we were told that our financial reports will use accrual accounting. What does that mean?"
2. Fred started his delivery business a few years ago. This year, he collected \$47,000 from his customers and paid \$21,000 in expenses. At the beginning of this year, his customers owed him \$3,500, and he owed his suppliers

\$700. At the end of this year, his customers owe him \$3,200, he owes his suppliers \$1,450, and his truck amortization (depreciation) for the year was \$4,600. Using just this information, what is this year's cash income? What is this year's accrual income?

You should get cash income \$26,000 (\$47,000 cash receipts minus \$21,000 cash payments) and accrual income \$20,350 (revenue of \$47,000 - \$3,500 + \$3,200 = \$46,700; expenses of \$21,000 - \$700 + \$1,450 + \$4,600 = \$26,350; income = \$46,700 - \$26,350 = \$20,350).

1.11 Demonstration Problem: Accrual Accounting

Artistic Supplies Inc. has the following information. From it, calculate Artistic's cash income for 2006 and accrual income for 2006.

- Cash received from customers during 2006: \$789,000
- Cash paid to suppliers and employees during 2006: \$717,000
- Customers owed \$45,000 at the end of 2005 and \$53,000 at the end of 2006 (\$2,000 of which was still owed from 2005)
- Artistic owed its suppliers \$31,000 at the end of 2005 and \$37,000 at the end of 2006
- Artistic owed its employees \$5,000 at the end of 2005 and \$10,000 at the end of 2006
- Unsold art supplies costing \$82,000 were on hand at the end of 2005
- Unsold art supplies costing \$63,000 were on hand at the end of 2006, \$7,000 of which had also been on hand at the end of 2005
- Artistic calculated its amortization for 2006 to be \$37,000
- Just for fun, let's add in 35% income tax, all unpaid at the end of 2006, and assume that the amortization amount is also deductible in calculating income tax

Answers:

Artistic Supplies Cash and Accrual Income for 2006

Cash revenue and expenses:

Revenues from customers	\$ 789,000
Expenses	<u>717,000</u>
Cash income	<u>\$ 72,000</u>

Noncash items:

Owing from customers	(\$53,000 end of 2006 – \$45,000 end of 2005)	\$ 8,000*
Owing to suppliers	(\$37,000 end of 2006 – \$31,000 end of 2005)	(6,000)
Owing to employees	(\$10,000 end of 2006 – \$5,000 end of 2005)	(5,000)
Unsold supplies	(\$63,000 end of 2006 – \$82,000 end of 2005)	(19,000)**
Amortization		<u>(37,000)</u>
Total noncash items		<u>\$ (59,000)</u>

Accrual income before tax	\$ 13,000
Income tax (35% x \$13,000)	<u>4,550</u>

Net accrual income after tax \$ 8,450

* Both the \$53,000 and the \$45,000 include \$2,000 uncollected from 2005, which therefore does not affect the difference between the two numbers.

** Both the \$63,000 and the \$82,000 include \$7,000 unsold from 2005, which therefore does not affect the difference between the two numbers.

1.12 Introductory Examples of Accounting Analysis: Reconciliation and Change Effects

The ability to do *analysis* is one of the most important skills accountants have. Doing it, or at least understanding it, is central to decision making. This book often focuses on analysis because it is so important to accountants and users alike, and because it is generally useful, beyond any single course. In this section, two kinds of analysis will be introduced: *reconciliation* and what we will call *change effects analysis* or “*what if*” analysis.

Reconciliation

Reconciliation is a very useful technique in general because if you can't make two numbers reconcile when they should, that may mean there are errors in one or both of them. This idea is used in business in many ways. Here are three examples.

1. *Reconciliation of cash and accrual income.* In Section 1.10, when 2006 was Simone's first year in business, we calculated her cash and accrual income. Here's a way to reconcile the two numbers (accountants often designate subtraction by putting brackets around the number, as in (205) below):

Cash income (day-to-day cash receipts minus payments)	\$2,680
Add revenue not yet received in cash	310
Add back cost of goods paid for, but not yet sold	280
Deduct expenses not paid in cash in 2006 (\$85 + \$120)	<u>(205)</u>
Equals accrual income for her first year in business	<u>\$3,065</u>

Accrual income and cash income can always be reconciled.

Your bank account record and the bank's record often differ.

Reconciliation is a method of figuring out the ways the two records may differ.

We should have more confidence in both cash and accrual income because we see that they do connect in a logical way. (Below, we'll also do a reconciliation for Simone when 2006 was not her first year, and for the Artistic Supplies example in Section 1.11.)

2. *Bank reconciliation.* Here, the idea is to figure out what the bank thinks you have in your account, and what you think you have, and identify any differences. The differences usually arise because the bank has not yet deducted all the cheques you have written, since it takes time for them to work through the system, but there may be other reasons, some of which are errors by you or the bank.

Suppose you have kept careful track of your bank deposits, cheques, and cash withdrawals from the bank machine, and your record shows that you have \$534 in the bank. You get a statement from the bank showing that you have \$613. Are both records right? Reconciliation will tell you. Let's get some more data. You check your cheques and withdrawals off against the bank statement and determine that two cheques are still "outstanding" (not deducted by the bank yet), one for \$43 and one for \$28. There are no outstanding deposits: the bank has credited you with all the deposits your own record shows. You also see on the statement that the bank has charged you \$7 for some bank charges you didn't know about. And you discover that the bank has deducted someone else's cheque for \$55 from your account. Finally, there is a deposit for \$70 you can't remember making. From this information you can do a bank account reconciliation:

EXHIBIT
1-3

Bank's records		Your records	
Balance according to the bank	\$613	Balance in your record	\$534
Add back error made by bank	55	Deduct bank charges not recorded	(7)
Deduct cheques still outstanding	<u>(71)</u>	Add deposit not recorded	<u>70</u>
Revised balance according to bank	<u>\$597</u>	Revised balance in your records	<u>\$597</u>

Now you know exactly why the two amounts differ, and you can make sure that errors in both records are corrected. You also know that you can't spend the whole amount the bank's statement shows because you have written cheques that the bank has not deducted yet, but will.

Reconciliation provides information for corrective action.

3. *Credit card reconciliation.* The idea is exactly the same as for the bank reconciliation. Suppose your Spendthrift Card statement's balance is \$492 owing, and you have credit card slips totalling \$688. Is the \$492 correct? You take your pile of credit card slips, check them off the statement you got from Spendthrift Card and identify the differences. You find out that you have \$302 of slips whose charges have not yet

appeared on the statement and that the statement includes \$106 in charges for which you don't have slips.

The two balances reconcile: $\$492 + \$302 - \$106 = \688 . So now you know what to check into further. You can ask the card company for evidence about the \$106, or maybe look around for slips you forgot to file. You can expect the card company to bill you for the other \$302 next month, which helps you predict your cash needs next month.


FYI

Use common sense when solving accounting problems.

Reconciling your bank and credit card accounts is an important procedure you should be doing to help control your financial affairs. You may feel these examples are routine, hardly worth the space they take, just common sense, but much of account-

ing is just common-sense techniques like these reconciliation examples. You may find you are already using accounting techniques without having labelled them as accounting! As you work through the book, use your common sense—it will often help you see how to handle problems that at first glance seem complicated.

Change Effects Analysis (“What If” Analysis)

To simplify the comparison of alternatives, focus on what differs between them.

This type of analysis depends on some accounting knowledge and a lot of common sense. Here is a taste of it. The central idea is to focus just on what changes or differs between two situations, thereby simplifying the analysis by leaving out everything that doesn't change. It is a form of *marginal analysis* that you may have seen used in economics.

1. *Comparison of cash versus accrual accounting.* Suppose Simone asked “What would be the effect on my income measure if we used accrual accounting instead of cash basis accounting?” A good way to answer this is to use the same sort of reconciliation analysis, but focusing on what would *change* between the two methods of calculating income.

Here's a demonstration, which works equally well for both examples of Simone's business, which we'll call “Simone” for when 2006 was her first year, and “Simone revised” for when it was not her first year. (This is where accounting knowledge comes in: we know that some items are positive in their general effect on accrual income and some are negative. Those are noted below.)


EXHIBIT
1-4

		Simone	Simone revised
Cash income		\$2,680	\$2,680
<i>Changes over the year in:</i>			
Uncollected revenue (positive)	(\$310 – \$0)	310	(\$310 – \$240) 70
Unused goods (positive)	(\$280 – \$0)	280	(\$280 – \$230) 50
Unpaid bills (negative)	(\$85) – \$0)	(85)	(\$85) – \$(50)) (35)
Amortization (negative)	(\$120) – \$0)	<u>(120)</u>	(\$120) – \$0) <u>(120)</u>
Accrual income		<u>\$3,065</u>	<u>\$2,645</u>

So if 2006 was her first year in business, the answer to her question would be that accrual income would be \$385 higher than cash income ($\$310 + \$280 - \$85 - \120). We don't even have to know what the accrual and cash income figures were, because we can use just the changes to answer the question. If 2006 was not her first year in business, the answer would be that accrual income would be \$35 lower than cash income ($\$70 + \$50 - \$35 - \120).

1. *Comparison of cash versus accrual accounting, second example.* Let's do the same sort of "changes" analysis of the Artistic Supplies demonstration problem from Section 1.11. What difference would it make to use accrual income rather than cash income for 2006? The answer is the sum of all the changes (differences) between the two methods, again remembering that some items normally add to accrual income and some reduce it:

Change in what customers owe (\$53,000 – \$45,000)	\$ 8,000
Change in what Artistic owes its suppliers (\$37,000 – \$31,000)	(6,000)
Change in what Artistic owes its employees (\$10,000 – \$5,000)	(5,000)
Change in the unsold goods on hand (\$63,000 – \$82,000)	(19,000)
Amortization for 2006, not included in cash income	(37,000)
Income tax owing on accrual income, not included in cash income	(4,550)
Accrual income would be lower than cash income for 2006 by	<u>\$ (63,550)</u>
Again, we don't need to know either income figure to answer the "what if" question. But we'd feel better if our answer also reconciled the two figures, so let's check that:	
Cash income from Section 1.11	\$ 72,000
Difference we calculated above	<u>(63,550)</u>
Accrual income from Section 1.11	<u>\$ 8,450</u>

2. *Net-of-tax analysis.* Here's another example of "what if" analysis, incorporating that factor we all love to hate: income tax. Suppose Kamble Manufacturing Inc. has annual revenue of \$11,310,200 and expenses of \$9,774,800. Its income tax rate is 40%. The president of the company wants to know, "What would be the effect on *net income* (after tax) if we revised our selling prices, which would increase revenue by \$230,000 per year?"

Well, we can laboriously figure out the net income now and the net income then and answer the president's question. Let's do that.

<u>Long Approach</u>				
	Before Revision	Revision	After Revision	Change
Revenues	\$11,310,200	230,000	\$11,540,200	\$ 230,000
Expenses	<u>(9,774,800)</u>		<u>(9,774,800)</u>	<u>0</u>
Income before tax	\$ 1,535,400		\$ 1,765,400	\$ 230,000
Tax @ 40%	<u>(614,160)</u>		<u>(706,160)</u>	<u>(92,000)</u>
Net income	<u>\$ 921,240</u>		<u>\$ 1,059,240</u>	<u>\$138,000</u>

Net-of-tax analysis focuses on what *changes* and just applies the tax to that. It then goes a bit further and notes that what we are usually interested in is what we have left after tax. If we have \$100 and it is taxed at 40%, we pay \$40 and are left with \$60. What we are left with is $\$100 \times (1 - \text{the } 40\% \text{ tax rate})$. We can apply this to the president's question. As soon as the president stops for breath, we can say, "The effect on income is $\$230,000 \times (1 - 0.4) = \$138,000$." We have the same answer but with far fewer steps. Pretty impressive, there is no worn-out pencil, little chance of calculation error, and there may be a raise for being so quick off the mark. We'll see net-of-tax analysis in various forms as the book proceeds. (This example was a simple one, which assumed that nothing else changed. For example, we assumed that to get the increased revenue the president expected, the company didn't have to spend more on advertising to persuade customers to pay higher prices.)

<u>Short Approach (Net-of-tax analysis)</u>		
Net effect =	$\$230,000 \times (1 - 0.4)$	= <u>\$138,000</u>



HOW'S YOUR UNDERSTANDING?

Here are three questions you should be able to answer based on what you have just read. If you can't answer them, it would be best to reread the material.

1. Jeanette's accounting records show that she has \$32,412 in her business bank account at June 30. The bank statement dated June 30 shows a balance of \$41,985. What sorts of things might account for the difference?
2. Jeanette received a credit card statement asking her to pay \$2,888. She had an envelope containing credit card slips totalling \$3,226. When she checked the slips off against the statement, there were \$594 worth of the slips that had not yet been billed by the credit card company. She also discovered that the company had billed her for a purchase made by someone else. How much was that purchase?

How much should she pay the credit card company?

The other person's purchase was \$256 (\$2,888 + \$594 – \$3,226) and she should pay \$2,632 (\$2,888 – \$256 not hers).

3. North Country Resorts Ltd., which pays income tax at a rate of 35%, is thinking of increasing its mosquito-control expenses by \$48,300. What will that do to the company's net income?

It will decrease net income by $\$48,300 \times (1 - 0.35) = \$31,395$. Note that to answer this, we don't need to know present income, revenue, mosquito-control expenses or anything else. They don't change so don't affect the answer.

1.13 Terms to Be Sure You Understand

The following important terms were used in this chapter. Make sure you know what they mean *in financial accounting*. If any are unclear to you, check the chapter again or refer to the glossary of terms at the back of the book. Most will be used many times as the book proceeds, so your understanding of them will deepen.

Accountant(s)	Cost–benefit	Internal auditor(s)
Accounting	Credit transaction(s)	Internal control
Accounting policy	Creditor(s)	Liabilities
Accounting principles	Depreciation	Management accounting
Accounting research	Disclosure	Managers
Accrual accounting	E-commerce	Marginal analysis
Accrual income	Exchange	Net income
Adjustment(s)	Expense(s)	Net-of-tax analysis
Amortization	External auditor(s)	Notes
Analysis	Financial accounting	Objectivity
Annual report	Financial performance	Owner(s)
Assets	Financial position	Preparer(s)
Auditor(s)	Financial statement	Public accounting firms
Balance sheet	analysis	Quarterly report
Bookkeeping	Financial statements	Reconciliation
Books	Generally accepted	Revenue(s)
Cash flow statement	accounting principles	Shareholders
Cash income	(GAAP)	Stock market
Cash transaction(s)	Historical cost	Transaction(s)
Change effects analysis	Income statement	User(s)
Consolidated	Independence	“What if” analysis
Corporation	Information systems	

INSTALLMENT 1

Toward the end of each chapter in this book is an installment of the “Continuing Demonstration Case.” The case describes the founding and initial growth of wholesale distribution company Mato Inc. and develops as the chapters’ topics develop. Each installment presents additional data and then shows the results of using that data. The main purpose is to illustrate the technical side of the chapter’s topics, so that you can use it to reinforce your learning. Make whatever use of the case is helpful to you, but remember to think about the data provided each time and sketch out what you would do with it before you look at the suggested results. If you look at the results before thinking about them, the case will be less helpful to you.

This first installment provides background information about the two people who run Mato Inc. The founding of the company will be dealt with in Installment 2.

DATA FOR INSTALLMENT 1

“Hi, Tomas, this is Mavis. Just calling to thank you for attending my grandfather’s funeral last week. I appreciate the support. Gramps was a great person and always encouraged me to make my mark in the world. Even now he’s encouraging me, because in his will he left me some money that he said was to help start my own business. Maybe in a while we could get together and talk about that.”

Mavis Janer and Tomas Brot have been friends for several years, ever since their days studying business together at university. They have often talked about going into business for themselves. Mavis majored in marketing and, since graduation, has worked for a national retailer, moving up the ladder to become a department head in one of the retailer’s local stores. While she likes the company and seems to be doing well, she would really prefer to be on her own, making decisions and taking risks. She is full of ideas that cannot be implemented at her level in the retailing company and is afraid that if she stays there too long she will lose her entrepreneurial zeal.

Tomas majored in finance and has worked as a commercial loans officer for a bank since graduating. As he puts it, “After I’d seen a hundred business plans from people wanting to borrow money, I was sure I could put together a better plan for myself, if only I had the opportunity. The local economy hasn’t been terribly encouraging, but I have seen lots of good ideas and know there’s room for mine to succeed too.”

With the catalyst of Mavis’s inheritance, and being a careful pair, the two decided to get together and get started on a business plan by writing down (a) the objectives they would have for any business they might operate together, such as making money, and (b) the risks, constraints, and worries they’d want to avoid or minimize, such as losing their own money. Tomas was more interested in list (b) than Mavis was; he already saw himself playing the role of keeping her entrepreneurial enthusiasm “within bounds,” as he called it. Their two lists are given below. Before looking at them, jot down some of the things you think they might have listed.

RESULTS FOR INSTALLMENT 1

Below are the lists summarizing what Mavis and Tomas agreed on. The lists will help determine the context within which the accounting for their eventual business will operate and the uses to which the business’s financial statements will be put. Financial statements and the accounting system behind them must fit the needs of the company, its owners, its managers, and other interested parties.

a. Objectives

- Be a source of personal pride and satisfaction.
- Be able to continue as an independent business indefinitely.

- Be a business both can contribute to, so both will want to be fully involved.
 - Be a challenge to their skills and even be fun to be involved in.
 - Provide enough cash income to support both Mavis and Tomas (moderate support now, but greater support in the future, when both expect to have families).
 - Grow in value so that it will be a future source of wealth for financing a desired comfortable lifestyle and eventually selling out at retirement.
 - Be a useful learning experience that will help them restart their careers if it does not work out.
- b. Risks and constraints
- Disagreements or problems that will strain their friendship or make it difficult for them to continue working together in the business.
 - Catastrophic financial loss (they don't want to lose what they will invest, but they especially don't want to lose even more than that).
 - Environmental degradation related to the business or its products.
 - A weak start by being undercapitalized (having too little money invested to give the business a good chance to succeed—a problem Tomas had often seen in his banking work).
 - Loss of control because of having to raise significantly more capital than they can find themselves.
 - Excessive initial business growth that may be hard to handle.
 - Excessive time demands that will damage their family lives and other life quality factors.
 - Physically difficult or dangerous products.
 - Distant physical locations, which will mean frequent, long commutes.
 - Unethical products or services (they did not define what they meant, but thought they would know something was unethical when they saw it).

1.15 Homework and Discussion to Develop Understanding

- To assist you in relating the homework and discussion problems to the chapter's material, problems are organized roughly according to the chapter's sections.
- To further assist you, some homework and discussion problems have informal solution outlines in the Student Solutions Manual. *Such problems are marked with an asterisk (*)*.
- Their solution outlines are intended to facilitate self-study and additional practice: *don't look at the solution for any of these without giving the problem a serious try first*, because once you have seen the solution it always looks easier than it is. Please note that *a problem can have several solutions*—it is possible for your answer to differ in some details from the solution outline provided and still be a good answer, especially if you have made valid, alternative assumptions or happen to know a lot about the particular situation in the problem.
- Some of the more difficult problems are marked CHALLENGING.
- Finally, some problems are marked EXTENDED TIME. These have been designed to take longer to complete than other problems. They are not necessarily harder, but typically feature a thorough examination of material and may integrate understanding from various sections of the book.

Introduction to Financial Accounting • Sections 1.2–1.6

Accounting Issues

* PROBLEM 1.1 Professional ethics

Accountants must follow ethical guidelines prescribed by their professional societies. What are these guidelines designed to produce? Why is this goal important? What would be the probable effect on the economy if these standards ceased to exist or accountants did not adhere to them?

PROBLEM 1.2 Should management be able to choose accounting methods?

Do you think professors should have the right to use their own judgment in determining course grades, or should those grades be based on objectively set exams administered by someone other than professors? Why? Do you think companies' management should have the right to choose the accounting policies and methods by which their performance is measured? Why? How do these two cases differ, if at all?

PROBLEM 1.3 Preparer self-interest and statement reliability

The self-interests of the preparers of accounting information can influence both what is reported and how it is presented. What allows the users of financial statements to rely on fair and full disclosure in the reports they receive?

People Involved in Financial Accounting

* PROBLEM 1.4 What are various people's interests in financial accounting?

Describe briefly what each of the following people would likely want to learn from the financial statements of BrandX Inc., and how each might be affected if the statements showed a good or bad financial performance or financial position.

- a. The president of the company.
- b. The company's chief accountant.
- c. The chairperson of the company's board of directors (the board evaluates the president's performance on behalf of the shareholders).
- d. The partner of auditing firm Dimbleby & Co., for whom BrandX Inc. is a client.
- e. The local manager of tax collections for the Canada Revenue Agency.
- f. John Flatstone, who owns 100 shares of BrandX Inc.
- g. Mildred Evans, who is thinking of buying some shares of the company.
- h. The local manager of Big Bank, which has made a large loan to BrandX Inc.

PROBLEM 1.5 Company performance and interests in financial accounting

ImproveIT Inc. manufactures agenda books and other stationery supplies for distribution across Canada. Describe how each of the following people or companies might be affected if the company showed a good or poor financial performance or financial position.

- a. The company's vice-president of marketing.
- b. Bill Stevens, a mailroom clerk who just started in his position two months ago.
- c. SBP Inc., a supplier for ImproveIT. ImproveIT has a credit account with SBP for supplies purchased throughout the year.
- d. The company's external auditor.
- e. Linda Mahoney, president of Creative Impressions Ltd., which is ImproveIT's main competitor.
- f. Samuel Snyder, the chief market analyst at The Atlantic Bank who is responsible for issuing reports that explain whether or not the company's stock is a strong investment or not based upon his analysis.
- g. The Competition Bureau of Canada, which had been hearing a complaint against ImproveIT from a competitor, ExPaper Inc., claiming the company was employing predatory pricing. The case claimed that ImproveIT unfairly lowered prices to drive competitors out of the industry.

PROBLEM 1.6 The impact of a proposal on different stakeholders

ABC Systems is deciding whether to implement a new accounting system to handle its financial records. The new computer software would improve inventory control and ensure that statements are more accurate than at present. Buying, installing, and training employees on the new system will require an initial investment, so only after two years will the company realize significant savings from the new system.

Explain the impact that an improved accounting system will have upon the following stakeholders:

- a. Management
- b. Shareholders
- c. Auditors

C CHALLENGING AND
E XTENDED TIME

PROBLEM 1.7 Uses and users of accounting information

Identify five users of accounting information. Discuss their information needs and list decisions for which each user would find accounting information helpful.

Transactions • Sections 1.7, 1.8

Identify Accounting Transactions

*** PROBLEM 1.8** Is the event a transaction?

The following things happened to Bartlett Inc. last month. Decide if each is an accounting transaction and explain briefly why it is or isn't.

- A customer ordered \$6,000 of products, to be shipped next month.
- Another customer paid \$528 for some marketing advice from the company.
- Bartlett's share price went up by \$0.50. As there are 100,000 shares outstanding, this was a value increase of \$50,000.
- Bartlett ran an ad on TV, and promised to pay the TV station the \$2,000 cost next month.
- One of the company's employees worked overtime earning \$120 that would be paid next pay period.
- The company paid a teenager \$50 to compensate for a ripped shirt suffered when the teenager tried to run away after being accused of shoplifting.
- Bartlett received a shipment of new goods for sale, paying \$1,000 cash and agreeing to pay the other \$12,250 in a few days.
- Bartlett paid the other \$12,250.
- The company made a donation to a political party of \$500. (The donation turned out later to have been against the election law, to the company's embarrassment.)
- Grand Bank made the company a \$20,000 short-term loan.

PROBLEM 1.9 Identify transactions

Gould Inc. experienced the following events. For each, say whether or not it is an accounting transaction and why or why not.

- A painter repainted the reception lobby bright blue.
- A customer who had owed Gould money for several years finally paid, to everyone's surprise.
- The president decided that the company's main factory would be reorganized next month.
- The company received shop supplies it had ordered earlier.
- The company signed a new five-year lease on its Windsor warehouse.
- The company sold some land, for which it would receive 10 annual payments starting next year.
- The company acquired a new truck for cash plus the trade-in of an old truck.
- An employee was discovered to have stolen a large amount of cash.
- The company received a bill from the supplier for the shop supplies in item (d).
- A customer who fell down in the parking lot sued the company for a large amount.

PROBLEM 1.10 Identify whether or not events are accounting transactions

The following events happened at the Guzzle Beer Corporation. For each, indicate whether or not it is an accounting transaction for Guzzle Beer Corp. and state, in five or ten words, why.

- A large tank containing beer mixture broke and all of the mixture spilled.
- A major shareholder sold 50,000 shares on the stock exchange.
- The corporation paid \$60,000,000 for a Mexican brewery.
- An invoice for next week's TV advertising arrived.
- A pub took delivery of its weekly shipment of Guzzle Beer.

Identifying Events that Constitute a Transaction

*** PROBLEM 1.11** What part of the event constitutes an accounting transaction?

The following events took place on February 1, 2004. For each event, state what part(s) of the event are accounting transaction(s), and why.

- Smith Ltd. purchased supplies to be used immediately. The purchase price of the supplies was \$5,000. Only \$2,000 was paid in cash on delivery. The balance is due in 30 days.
- The company decided to rent a service vehicle for \$4,800 per year. A rental contract was signed February 1, 2004, to take effect March 1, 2004. Smith Ltd. paid \$400 cash to the rental company on February 1, 2004, which represented the rent for March 2004.
- Some of Smith's repairmen were not busy on February 1. The manager had them paint the inside of a storage room. The repairmen's salaries of \$300 were paid in cash at the end of the day.
- A shareholder sold her car to the company. The vehicle cost her \$15,000 two years ago. An equivalent used vehicle would have been worth about \$8,000 on February 1, 2004. No cash changed hands, but the shareholder expects the company to pay her for the car eventually.
- An invoice for \$5,000 was received relating to repairs and maintenance work done in December 2003. The company's year-end is December 31. This expense was not recorded in the 2003 financial statements.

PROBLEM 1.12 Identify parts of events that are transactions

Southward Stores Ltd. is a general merchandise retailer operating in the suburbs. During a recent month, the events listed below happened. For each event, decide if all or part of it is an accounting transaction and state briefly why or why not.

- Southward borrowed \$500,000 from the Great Pacific Bank (Canada). Payment is due in three years, but the loan can be called on ten days' notice if Southward fails to make any of the monthly interest payments, which begin next month.
- Southward ordered goods for resale costing \$300,000, to be delivered in 40 days, and sent a deposit of \$10,000 with the order.
- Southward renewed its lease on the store premises, signing an agreement that provides for a monthly rent increase from \$21,000 to \$23,000 beginning in three months.
- Southward was charged with unfair pricing of its main line of merchandise. News of this sent the company's shares (listed on a stock exchange) down in price from \$10 to \$8.50 each. The company has 1,000,000 shares outstanding, all publicly traded.
- The company paid a dividend of \$0.50 per share, on each of its 1,000,000 issued shares. This news sent the company's shares up by \$0.40 each on the stock exchange.

PROBLEM 1.13 Find accounting transactions

Bill Matthews is the vice-president of finance for FlyAway Corp., an upstart charter airline. Since the company has few employees, he must handle a large amount of the day-to-day accounting activities. Help Bill decide whether the following events from his

day should be recorded as accounting transactions. For each event, explain why it is or is not a transaction.

Bill arrives for work in the morning on February 15, 2004, to hear that the company's president will not be coming to work today because she sprained her knee in the company softball match last night. Sitting at his desk in the morning, he notices the company's stock price is up \$0.21 on the day. (The company has 15,000,000 outstanding shares.) Bill begins to work through the pile of paper in his inbox. The first paper is an invoice (a bill) from a supplier for \$2,872 and the date for FlyAway's receipt of the goods is February 6, 2004. The next is a report from the chief mechanic requesting the approval of an order for a part costing \$15,329. A new part was needed for the company's turboprop plane and it would be delivered next week. The part supplier would extend FlyAway credit for one month. A knock at the door, and Mary from the maintenance department drops by to tell Bill that she phoned a plumber to come tomorrow to fix a problem with the sink in the lunchroom. The plumber would charge \$65/hour for labour and she wanted to make sure Bill approved. Finally, Bill signs the cheque for the payment of this month's lease on the company building. He must mail the cheque by the end of today.

CHALLENGING

PROBLEM 1.14 Explain the transactional basis of financial accounting

Your boss has just returned from a breakfast meeting of her small business association. The meeting had had as speaker an accountant who explained quite a few things about how accounting worked, but made a comment your boss is unclear about. As best your boss can remember the comment, the accountant said, "Every information system has to start somewhere in getting its data. Accounting starts with business transactions, and as a result financial accounting is really a careful history of the business, not a measure of the business's current value."

Explain the accountant's comment to your boss.

Accrual Accounting • Sections 1.9, 1.10, 1.11

Calculating Accrual Income

* **PROBLEM 1.15** Cash balance and accrual accounting income

Calculate (1) the cash in bank as at the end of 2007, and (2) the 2007 accrual accounting income for Dawn's Diving Trips according to the following information:

Cash in bank as at the end of 2006	\$16,390
Owing from customers as at the end of 2006 (collected in 2007)	2,000
Cash collected from customers during 2007 for 2007 trips	78,480
Owing from customers as at the end of 2007 (collected in 2008)	960
Payable to suppliers as at the end of 2006 (paid in 2007)	1,620
Cash paid to suppliers during 2007 for 2007 expenses	41,830
Payable to suppliers as at the end of 2007 (paid in 2008)	3,230
Amortization on diving equipment during 2007	2,610
Cash used by Dawn for personal purposes during 2007	26,000

PROBLEM 1.16 Calculate accrual income and change in cash

"I just don't understand it!" Dwight Benat had received his accountant's calculation of Dwight's business income, showing an accrual income for his first year in business of \$50,280. "If I made so much money, why don't I have that much in the bank? My bank account shows only \$8,205 on hand!"

Dwight operates Benat Supply, which provides stationery and office supplies to business customers. He has no store, just a small rented warehouse, and only one employee. Here are the data he and his accountant used. Explain clearly to Dwight (1) how the accountant calculated the \$50,280 income and (2) why there is only \$8,205 on hand.

Collected from customers during the year	\$159,680
Still owing from customers at the end of the year (collected next year)	16,900
Paid for products to resell and for other expenses, including wages, during the year	142,975
Owing for products and other expenses at the end of the year (paid next year)	10,050
Cost of unsold products on hand at the end of the year (all sold next year)	28,975
Amortization (depreciation) on equipment during the year	2,250
Personal withdrawals by Dwight during the year	8,500

PROBLEM 1.17 Effect of more items on Simone's cash and accrual incomes

Suppose the following were discovered about Simone's business (Section 1.10). For *each* item, show the dollar effect (if any) and the direction (up or down) that *correcting* the item would have on (1) Simone's cash income for her *first year in business*, and (2) Simone's accrual income for that year. Explain each of your answers briefly.

- It was discovered that another \$100 of unsold goods were on hand at the end of 2006.
- It turned out that Simone had paid \$45 more in expenses in 2006 than she thought.
- Amortization should have been \$135 for 2006, not \$120.
- Simone determined that a \$30 sale, not yet collected, had accidentally been recorded twice.
- Included in the cash receipts was a \$75 customer deposit on a future sale.

PROBLEM 1.18 More effects of additional items of information on Simone's cash and accrual incomes

This problem is like Problem 1.17 but involves items this chapter has not illustrated. Use your common sense to compare the items below to Simone's results in Section 1.10 and, for *each* item, show the dollar effect (if any) and the direction (up or down) that *correcting* the item would have on (1) Simone's cash income for her first year in business, and (2) Simone's accrual income for that year. Explain each of your answers briefly.

- Simone agreed to give a customer a refund of \$110 for faulty jewellery sold in 2006. The refund will be paid in 2007. The jewellery had cost Simone \$67 in material, but she will not recover any of that cost because the jewellery has to be thrown away.
- One of the amounts Simone paid out in 2006 was \$160 for some more equipment. That should not have been recorded as an expense. On the other hand, there should have been amortization of 10% on that equipment, the same as for the other equipment.
- Simone decided she should charge her business rent for the basement studio space, but to avoid reducing the business cash, Simone would delay paying the rent to her personal bank account for a few years. She decided the rent for 2006 should be set at \$500.

*** PROBLEM 1.19** Reconciliation of cash income and accrual income

Turku Services Company had cash income for its first year in business of \$67,450 and accrual income of \$53,270. Show how the two amounts reconcile using the following information:

- Uncollected revenue at the end of the year was \$18,730.
- Unpaid bills for expenses at the end of the year totalled \$24,880.
- Unsold supplies on hand at the end of the year totalled \$3,410.
- Expenses for the next year, paid already, totalled \$2,300.
- Amortization on the company's equipment was \$13,740 for the year.

E XTENDED TIME**PROBLEM 1.20** Find the company's cash position

IlluminateU Industries manufactures specialty light bulbs. Some financial information follows.

- Calculate the company's accrual and cash income for 2006.
- Reconcile its cash and accrual income for the year.
- How much cash does the company have at the end of 2006?

Cash in the bank at the end of 2005	\$ 59,798
Cash collections from customers in 2006	178,690
Payments to suppliers during 2006 for 2006 expenses	86,700
Owing to suppliers at the end of 2006 (paid in 2007)	5,000
Rent paid for 2006 during 2006	7,598
Rent paid during 2006 for the first 3 months of 2007	1,850
Amount owing from customers at the end of 2005 (collected in 2006)	17,610
Amount owing from customers at the end of 2006 (collected in 2007)	27,345
Amortization on the company's equipment	11,022

E XTENDED TIME**PROBLEM 1.21** Calculate and reconcile cash and accrual income

Leslie has a part-time business, Quick Crack-Fix, repairing small cracks and stars in car windshields using a special polymer filler that makes the damage almost invisible and stops the cracks from spreading. The repair takes only a few minutes using equipment and supplies stored in the trunk of Leslie's car. The main customers are used car lots, car rental companies, service stations, and insurance companies, but some business is done with individual customers in the driveways of their homes.

For the current year, Leslie's business records show the following:

Collections from customers during the year	\$38,562
Payments to suppliers during the year	6,538
Royalty payments to owner of Crack-Fix trademark during the year	3,265
Money taken out of the business by Leslie during the year	25,000
Amortization on business equipment and car for the year	4,800
Amounts owing by customers at the end of the previous year	2,680
Amounts owing by customers at the end of the current year	910
Amounts owing to suppliers at the end of the previous year	615
Amounts owing to suppliers at the end of the current year	927
Supplies on hand at the end of the previous year	0
Cost of supplies on hand at the end of the current year	465

Leslie's business bank account showed a balance of \$1,654 at the end of the previous year.

- Calculate the business's cash income for the current year, explaining whether you have treated the money Leslie took out of the business as a business expense (deducting it in calculating cash income for the business) or a personal withdrawal (not deducting it in calculating cash income for the business).
- Calculate the bank account balance at the end of the current year, using your answer from part (a).

- c. Calculate the business's accrual income for the current year.
- d. Reconcile your answers to parts (a) and (b).

 **CHALLENGING**
PROBLEM 1.22 Why is accrual accounting valued?

An executive of an international economic consulting firm recently said, "I find it interesting that as companies, or even countries, grow in sophistication, they tend to move from simple cash-based financial reports to accrual accounting reports." If this observation is valid, why would you suppose this movement to accrual accounting is happening?

Accounting Analysis • Section 1.12

Bank Reconciliation

*** PROBLEM 1.23** Reconcile a bank balance

Wayne has been facing some cash flow problems. Specifically, he has been having trouble keeping his bank account straight. He went to the bank to find out his balance and was told that it was \$365 as of September 15. As far as he could remember, he had made a deposit of \$73 that had not yet been credited by the bank and had written cheques of \$145, \$37, \$86, and \$92 that had not yet been deducted from his account by the bank.

At the same time, a good, but impatient, friend is demanding repayment of a loan of \$70. Does Wayne have enough money in his bank account to repay it?

PROBLEM 1.24 Reconcile a bank statement to personal records

Reconcile Henry's month-end bank account balance and indicate what corrections you would make to Henry's records based on your analysis.

Month-end bank balance according to the bank's statement, \$9,682.
 Month-end bank balance according to Henry's records, \$8,347.
 Outstanding cheques (not processed by the bank yet), \$1,937.
 Outstanding deposit (not processed by the bank yet), \$375.
 Bank charges Henry had not known about, \$58.
 Someone else's cheque put through Henry's account by the bank, \$205.
 Interest on the bank balance credited by the bank but not known to Henry, \$36.

PROBLEM 1.25 Perform a bank reconciliation to make a decision

David is considering whether or not to buy a used car for \$9,500 on May 1, 2006. The only problem is that he does not know if he has enough cash to pay for the car in full or whether he needs to take out a bank loan. According to his records, he has \$9,710 in his account but his bank balance according to the bank is \$8,870. Using the following information, (1) reconcile David's bank account balance and (2) decide whether or not he will need a bank loan to pay for the car.

David's cash records for April:

1. Loan given to his brother by cheque, which had not been deposited yet	\$1,500
2. Paycheque from his employer for April; it was deposited yesterday but had not cleared through the bank yet.	2,330
3. Rent paid by cheque for the month of April. David knew the landlord did not deposit the cheque until May 1.	850
4. Food purchased with a debit card (instant account withdrawal)	285
5. Purchases on his credit card for the month of April (to be paid in May)	840
6. Bank charges that David had not known about	25
7. Proceeds from the sale of a government bond that the bank had not credited to his account yet	835

Credit Card Reconciliation*** PROBLEM 1.26** Credit card bills reconciliation

Dave was in an awful tangle over his Vista credit card. He had just received a bill from Vista that was much larger than he'd expected and thought the company must have made a mistake. After he calmed down, he got out all his credit card slips and other documents. This is what he found:

Amount owing according to Vista, \$1,285.
 Total unpaid credit card slips in Dave's pile, \$954.
 Two slips that, as far as Dave could tell, Vista had not yet billed him for, \$118.
 A cash advance that Dave had taken against the card but had forgotten about, \$200.
 One charge on the Vista bill that Dave did not have a slip for and did not remember, \$249.

Does Dave have it all sorted out now? What do you think would be the right amount to pay Vista?

PROBLEM 1.27 Reconcile a credit card statement to a cardholder's records

Sue has just received her monthly credit card statement from MonsterCard. It says she owes \$2,730. She is horrified, not having anticipated such a large amount, though she does have an envelope full of credit card slips that total a net of \$1,830 (adding up all the charges and deducting some credits for goods returned to stores). Using the following information, reconcile the statement to Sue's envelope of slips and determine how much you think Sue should pay MonsterCard this month.

- Three of Sue's slips, totalling \$217, have not yet been included in the MonsterCard statement because she charged the amounts after the statement date.
- One of the items on the statement was \$628 for a major car repair that Sue remembers having done, though she can't find the credit card slip.
- MonsterCard charged Sue \$85 to renew the card for another year and added that amount to her other charges for the month.
- One of the items on the statement was for a \$225 meal in a city Sue has never even been to.
- Sue had returned an item costing \$179 to Retail Emporium Co. three months ago, but has not yet been credited for the return on MonsterCard's statement.

PROBLEM 1.28 Reconcile a credit card statement with the cardholder's records

The Christmas season was a hectic, busy, and expensive one for Ted. He just received his American Expression Credit Card bill for the month of December with a total due of \$3,964. Ted cannot believe that he managed to spend such a large amount on Christmas presents over the holidays since he had only budgeted \$3,000 for presents in all of December. Using the following information, reconcile the credit card statement with Ted's set of credit card slips and figure out whether he actually exceeded his budget for presents or not.

- Ted had slips totalling \$2,638 for his December present purchases.
- Ted had taken a cash advance for \$530 out on his card to pay for emergency repairs on his car. He forgot that American Expression charged him interest from the time the cash advance was taken. The charge was \$7.
- Due to the Christmas rush, Ted had not paid his November bill in full, thus charges of \$328 plus \$11 in interest carried over to his December bill.
- Ted realized he had accidentally thrown out the slip for a present purchased in December that came to \$365.

- e. American Expression had billed him \$85 for the renewal of his Member Super Plus Gold Card for the next year and the charge appeared on his December statement.

Change Effects and Net-of-Tax Analysis

* PROBLEM 1.29 Calculate the change in net income

Mountain Crest Enterprises Inc. has revenue this year of \$5,645,231, expenses other than income tax of \$4,889,811, and an income tax rate of 30%. The president is considering a new marketing plan that is expected to add \$342,500 to expenses and \$645,000 to revenue.

- Calculate the plan's expected effect on net income.
- Show that your answer to part (a) is correct by (i) calculating the expected total revenue, total expenses other than income tax, income before tax, income tax expense, and net income, and (ii) subtracting the present net income from the expected net income to show that the result is your answer in part (a).

PROBLEM 1.30 Find the effects of various events on net income

Grandiloquent Gestures Inc. is a major supplier of costumes and party supplies and will plan any affair for a customer, such as a romantic evening for popping the question, or a celebration of many years of marriage, or a congratulations party for finding employment. The company's income tax rate is 35%. The company is considering some changes in its operations. Calculate separately the effect on the company's net income of each of the following proposals.

- The company might spend more on advertising, adding \$140,000 to its advertising expenses.
- The company might raise some selling prices, adding \$52,000 to revenue.
- The company might fire the chief accountant, and use a cheap computer program instead. The chief accountant is paid \$75,000 per year, and the cheap computer program will cost \$4,450 a year.
- If the company fires the chief accountant, it will incur additional losses due to shoplifting and employee theft of \$15,000 per year.
- The company might make a \$75 donation to the Poor Accountants' League.

PROBLEM 1.31 Effects and net-of-tax analysis

Authors Agency Inc. manages many best-selling authors in their relations with publishers, movie companies, TV producers, and so on. In the current year, its revenues total \$15,452,200 and its expenses (not including 40% income tax) total \$13,222,500. The company is negotiating with famous author Stephen Queen to take on Queen's account. This is a big deal: if Authors Agency manages Queen's account, its revenues will increase by \$5,300,000 and its expenses (Queen likes limos and 5-star hotels) will increase by \$4,800,000.

- What is Authors Agency's net income for the current year?
- What would the company's net income be if it took Queen's account on?
- Show that your answer to part (b) is right. If you did part (b) the long way, do it the short way here. If you did it the short way, do it the long way here.

PROBLEM 1.32 Effects of losing a contract on net income

Economy Chicken Inc. sells poultry to discount grocery stores, restaurants, the army, and other customers. The company's income statement for 2006 follows:

Economy Chicken Inc.
Income Statement for the Year 2006

Revenues		\$67,455,892
Expenses:		
Cost of poultry sold	\$ 32,555,678	
Operating, selling, and administrative expenses	21,223,590	
Interest and other financial expenses	3,210,443	
Amortization	<u>6,789,420</u>	<u>63,779,131</u>
Income before income tax		\$ 3,676,761
Income tax expense		<u>1,323,634</u>
Net income for the year		<u><u>\$ 2,353,127</u></u>

The army wants to renegotiate its contract with Economy Chicken, and proposes that if the company spends \$2,500,000 per year more on quality control, the army will buy \$2,100,000 more in chicken from the company. If the company does not agree to this, the army will likely take its considerable business elsewhere. Calculate the company's revised net income if the army's proposal is accepted.

Integrated Problems

* PROBLEM 1.33 Review of some basic ideas

Answer the following questions:

1. What is the difference between an accountant and an auditor?
2. What is the difference between accrual income and cash income?
3. Are users of financial accounting information all the same in their information needs? Why or why not?

C CHALLENGING AND
E XTENDED TIME

PROBLEM 1.34 Factors in comparing companies' performance

The president of Gobble Gobble Foods Inc., which makes everything from soup to nuts out of turkey meat, is comparing Gobble Gobble's performance to that of Curdled Products Inc., which does much the same using tofu and other bean curds. The president has the following data for Curdled Products, which she saw in the *Glower and Flail* newspaper yesterday (note that figures inside brackets indicate a loss):

Income for 2000	\$1,565,000
Income for 2001	2,432,000
Income for 2002	(985,000)
Income for 2003	123,000
Income for 2004	1,249,000
Income for 2005	2,915,000
Income for first half of 2006	873,000

Without knowing much about accounting except the introductory ideas of this chapter, use your intelligence and experience in comparing things to make a list of the factors you think the president of Gobble Gobble should take into account in comparing her company's performance to that of Curdled.

PROBLEM 1.35 Objectives and risks in investment

Suppose you had a few thousand dollars on hand and were offered a chance to invest in a small local business. What would be the objectives you would like to see such an investment meet? What risks would you want reassurance about before committing your funds? (You can get some hints about this from the Continuing Demonstration Case.)

C CHALLENGING

CASE 1A**ACCRUAL AND CASH INCOME IN MEASURING PERFORMANCE**

Manitoba Wings is an airline services company with a plant near the Winnipeg airport and service centres in several provinces. It provides meals, napkins and other food-related items, airplane cleaning, interior maintenance, and several other services to various airlines. The company has been fairly successful, though recessions and deregulation of air services have put significant pressure on its operations. When the company began in the late 1970s, it had a relatively weak financial position (mainly because of borrowing to get set up) and its financial performance, while satisfactory, has not enabled it to reduce its debt load very much. It seems that every time the company gets a little ahead, new equipment must be purchased or new product lines developed, and the company finds itself borrowing again.

A recent year provides a good example. The company's accrual income was \$188,000 and its cash income was \$241,000. (The difference was due to amortization expense of \$96,000 and uncollected revenue being \$43,000 higher at the end of the year than at the beginning. In the company's financial statements, the phrase "net income for the year" was used to describe the accrual income and "cash generated by operations" described the cash income.) The president had looked forward to using some of the cash to pay down debts, but late in the year the company had to buy new food-handling and food-

wrapping equipment for \$206,000 to meet revised standards announced by its airline customers. Therefore, the company ended up only a few thousand dollars ahead in cash, not enough to make much of a dent in its debts.

The president has a regular half-yearly meeting with the company's external auditor to discuss accounting and auditing issues. After the above results were known, the president phoned the auditor and made the following comments: "I thought I'd ask you to think about a few things before our meeting next week. When it comes to our accounting, I think the company has too many masters and too many measures. What I mean is, first, too many people are concerned with what our financial statements say. Why can't we just prepare financial statements that meet my needs as president—why do we have to worry about all the other people outside the company? Sometimes I'm not even sure who all those other people are, since you accountants and auditors often just talk about 'users' without being too clear about what you mean. Also, I'm confused by the existence of both a 'net income' figure and a 'cash generated by operations' figure in our financial statements. Why can't we just have one or the other to measure our performance?"

The president raised issues that will be addressed frequently as this book develops your understanding. But for now, what would you say to the president?

CASE 1 B

PEOPLE INVOLVED IN FINANCIAL ACCOUNTING

Bedford Road Productions Inc. (BRP) is a Nova Scotia media company that has begun to be noticed nationwide, in Europe, and the United States. BRP buys media space, especially on TV and in magazines, for various customers, and has its own design and production staff so that it can suggest ads to customers and media outlets and then go on to produce some ads itself. The company is recognized for its irreverent humour and zany approach to advertising, as well as for its ability to create ad placements that have a strong impact on customers' sales and reputation.

Here are some of the people involved in BRP:

- Kathy Barsnoble, one of the two original founders of BRP and now the company's president as well as a main shareholder, is very ambitious for the company and wants to see it become a real international player, with expanded production facilities that would allow it to begin producing TV shows, special events, and even small movies. She is insistent that the company show growth and success in all its ventures.
- Greg Thom is the other original founder and is now the company's chief financial officer. Using some family money, Greg provided the company's initial financing, and he is still the company's largest shareholder, though he owns less than half the shares and so does not control the company. He also is a creditor, having provided some of the financing in loans as well as in shares. Greg is in favour of slow, careful growth, and often disagrees with Kathy's grander plans, but he and Kathy have a lot of respect for each other and work well together most of the time. Greg would be happy if others largely ran BRP, so that he could focus more on family investments and some other ventures he would like to start.
- Brent Siddhu is the company's production head. Brent, who owns some shares of the company but less than Kathy or Greg, has been pushing for expansion into TV production. He is very bright and good with people, but is bored with the media placement business that is still the foundation of BRP's success. Brent likes to travel to Los Angeles, and rumour has it that he would leave if a more creative opportunity arose.
- Hendrick Argot owns one of BRP's major customers, a much bigger company than BRP. Hendrick has been very supportive of BRP's efforts and, in addition to being a good customer, has often suggested to Kathy and Greg that he would like to buy into BRP, maybe even buy control and wrap BRP into his own media operations. Kathy used to work for Hendrick, leaving to start BRP with Greg, and although she gets along very well with Hendrick, she wants to run her own business.
- Susan Dohn is a partner in the public accounting firm that is BRP's external auditor. In addition to doing the auditing, Susan provides tax and financial advice to Kathy and Greg. BRP is one of her main clients, which she has seen grow from its small beginnings, and she was promoted to partner partly because of her success in serving BRP. There have been some controversies over some of BRP's accounting methods, which have tended to show higher income than Susan was comfortable with, but she has managed to smooth out the problems, convincing Kathy to agree to some less optimistic accounting. Kathy has agreed but still, were Greg not there to add his more cautious views, Susan might have had more difficulty retaining BRP as a client.
- Clarice Xiao is the Nova Scotia loans manager for a big Canadian bank. Clarice has also been involved with BRP for several years, approving steadily increasing bank financing as the company grew. She is rewarded by the bank for growth in her loans portfolio, but also is penalized if loans go bad, so she is interested in helping to further the company's ambitions as long as they are supported by solid business plans, including strong cash flow from which loans' interest can be met and principal repaid on schedule. Clarice, following standard bank procedure, has required that, as long as the bank has significant loans to BRP, the main shareholders must agree not to sell their shares to each other or anyone else without the bank's permission.

Discuss the different points of view these people have of BRP and their likely different interests in what the company's financial statements show about its position and performance.

NOTES

1. "Patrick O'Brian," *The Economist* (January 15, 2000): 88.
2. Eric Auchard, "IBM Financial Reporting Criticized, Shares Drop," Reuters, 24 November 1999. "Tyco: Aggressive or Out of Line?" *Business Week* (November 1, 1999): 160–65. David Henry, "Still Spooked by the Market," *Business Week* (April 29, 2002): 88. Monica Roman (ed.), "Taking Aim at Tyco—Again," *Business Week* (January 28, 2002): 50. Michael Fleeman, "Opening the Book on the Weird World of Movie Math," *The Edmonton Journal* (September 13, 1999): C4.
3. Joseph Weber et al., "The CFOs Weigh in on Reform," *Business Week* (March 11, 2002): 30–31.
4. CICA Media Release December 4, 2003, as reported on December 6, 2005, at www.cica.ca/index.cfm.ci_id/18853/la_id/1.htm.
5. Thanks to Robert H. Crandall, "Information Economics and Accounting Theory," *The Accounting Review* (July 1969): 457–66 for the original ideas used in this section. Since the 1960s, much work has been done in the fields of management information systems, accounting information systems, decision analysis, and the Internet to develop accounting and other systems that are properly responsive to decision-making needs.

