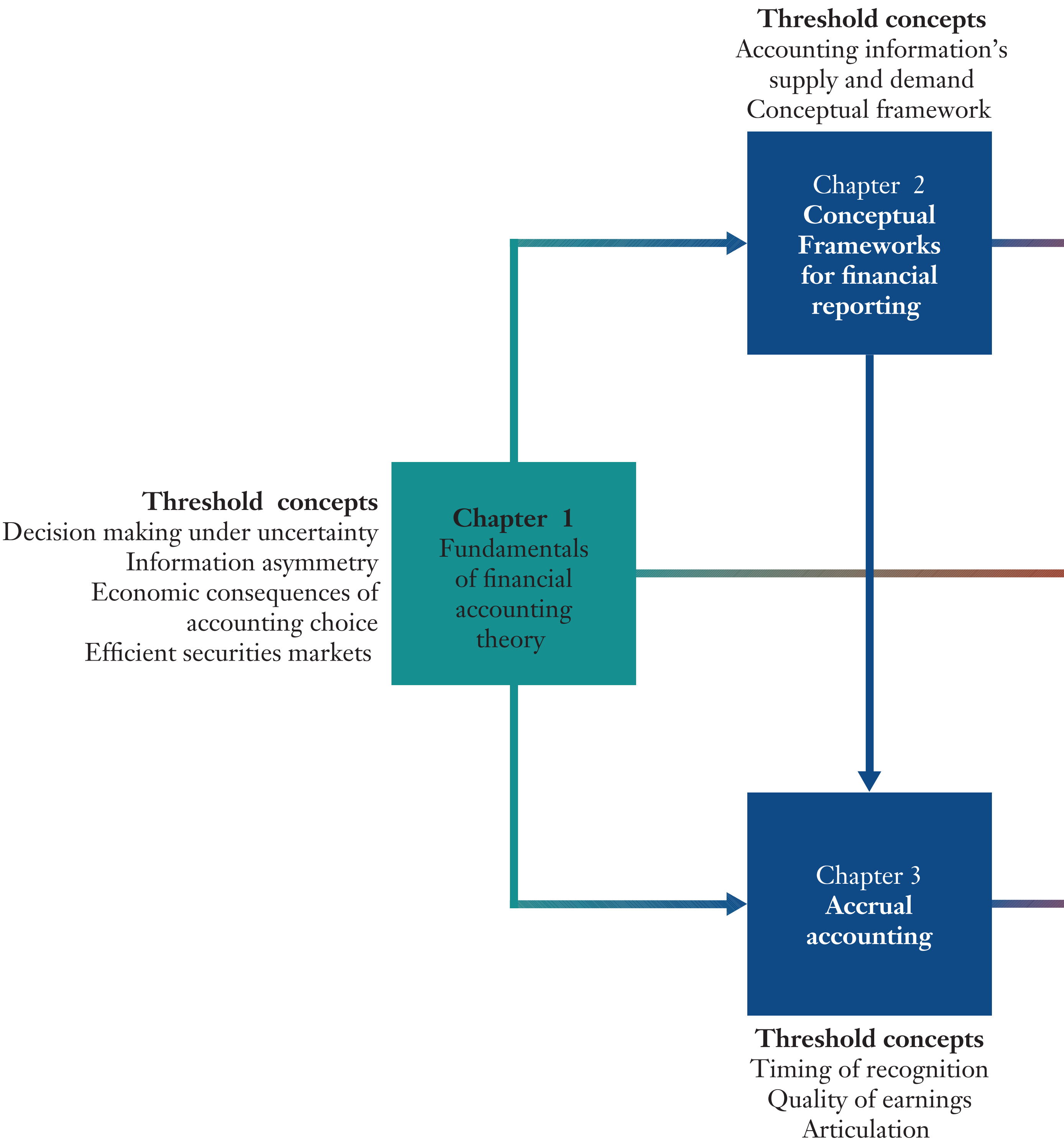
INTERMEDIATE ACCOUNTING

KIN LO GEORGE FISHER THIRD EDITION VOLUME ONE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INTERMEDIATE ACCOUNTING

THIRD EDITION VOLUME ONE

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Kin:

In memory of my mother, who did not have the benefit of schooling,
but gave me the freedom to question, unconditional support of my pursuits,
and the humility to know that there is always more to learn.

George:

My passion for teaching has been richly rewarded by many opportunities
including the privilege of co-authoring this text. I dedicate this
book to my wife, Gail, and my family, friends, colleagues,
and students who have encouraged me along the way.

About the Authors

Kin Lo, PhD, FCPA, FCA is the Senior Associate Dean—Students at the Sauder School of Business, University of British Columbia. He holds the CA Professorship in Accounting established by the Institute of Chartered Accountants of British Columbia (ICABC). After receiving a Bachelor of Commerce from the University of Calgary, he articled at PricewaterhouseCoopers and subsequently earned his doctorate from the Kellogg School of Management at Northwestern University in Chicago in 1999. His research has been published in the most important accounting journals, including *Journal of Accounting Research* and *Journal of Accounting and Economics*, and he has served as an Associate Editor at the latter journal from 2003 to 2011.

Since joining UBC in 1999, Professor Lo has taught extensively in intermediate-level financial accounting for undergraduates, as well as master and doctoral-level courses. He has coached numerous winning teams in regional, national, and global case competitions. His outstanding teaching has been recognized by the Killam Teaching Prize. Kin has also been a visiting professor at MIT Sloan School of Management and the University of California at Irvine's Merage School of Business.

Aside from research and teaching, Kin is also active in the professional accounting community, serving on provincial and national committees and contributing as a columnist to the ICABC's magazine *Beyond Numbers*. From 2008 to 2011, Professor Lo was a member of the Board of Evaluators for the Chartered Accountants' national Uniform Final Evaluation (UFE). He is a member of the Academic Advisory Council for the Accounting Standards Board of Canada. In recognition of his contributions to accounting education, he was awarded Fellowship by the ICABC in 2013. Kin is also an avid sailor.

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Mr. Fisher was previously associated with the Certified General Accountants for more than 15 years in several roles. His publications for CGA Canada include *Model Financial Statements*, and the domestic and international versions of *Corporate Finance Fundamentals* (*FN1*), *Financial Accounting: Assets* (*FA2*), and *Financial Accounting: Consolidations and Advanced Issues* (*FA4*).

Brief Contents

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Preface

"There is too much material to learn!" is a complaint commonly heard among both students and instructors of intermediate-level financial accounting. The current environment in Canada involving multiple accounting standards certainly adds to the problem. However, this sentiment was prevalent even before the splintering of Canadian generally accepted accounting principles (GAAP) in 2011. So what is the source of the problem, and how do we best resolve it?

Regardless of one's perspective—as an instructor of intermediate accounting, as a student, or as a researcher reading and writing papers—often *the problem of too much content is an illusion*. Instead, the issue is really one of *flow*, not just of words, but *of ideas*. Why does a class, research paper, or presentation appear to cover too much, and why is it difficult to understand? Most often, it is because the ideas being presented did not flow—they were not coherent internally within the class, paper, or presentation, or not well connected with the recipients' prior knowledge and experiences.

Connecting new ideas to a person's existing knowledge and efficiently structuring those new ideas are not just reasonable notions. Modern neuroscience tells us that for ideas to be retained they need to be logically structured to each other and presented in ways that connect with a person's prior knowledge and experiences.

OUR APPROACH

How can we better establish the flow of ideas in intermediate accounting? One way is to apply more accounting theory to help explain the "why" behind accounting standards and practices. Inherently, humans are inquisitive beings who want to know not just how things work, but also why things work a particular way. When students understand "why," they are better able to find connections between different ideas and internalize those ideas with the rest of their accumulated knowledge and experiences.

This approach contrasts with that found in other intermediate accounting textbooks, which present accounting topics in a fragmented way, not only between chapters but within chapters. For example, how is the conceptual framework for financial reporting connected with other ideas outside of accounting? How do the components such as qualitative characteristics relate to the elements of financial statements? Fragmented ideas are difficult to integrate into the brain, which forces students to rely on memorization tricks that work only for the short term. For example, a frequently used memory aid for the conceptual framework is a pyramid; this is a poor pedagogical tool because the concepts within the diagram are not logically connected and the pyramid shape itself has no basis in theory. In contrast, we anchor the conceptual framework on the fundamental notions of economic demand and supply.

Also different from other textbooks, we do not aim to be encyclopedic—who wants to read an encyclopedia? This textbook is designed as a learning tool for students at the intermediate level, rather than as a comprehensive reference source they might use many years in the future. Being comprehensive burdens students with details that are not meaningful to them. At the rate at which standards are changing, books become outdated rapidly, and students should learn to refer to official sources of accounting standards such as the *CPA Canada Handbook*.

ARE INTERMEDIATE ACCOUNTING STUDENTS READY FOR ACCOUNTING THEORY?

Most programs that offer an accounting theory course do so in the final year of their programs, with good reason—concepts in accounting theory are difficult. Thorough exploration of these concepts requires a solid grounding in accounting standards and practices and higher-level thinking skills. However, not exposing students to these concepts earlier is a mistake.

Other management (and non-management) disciplines are able to integrate theory with technical applications. For example, when finance students study investments and diversification, the capital asset pricing model is an integral component. Finance students also learn about firms' capital structure choices in the context of Modigliani and Miller's propositions, the pecking order theory, and so on. Students in operations management learn linear programming as an application of optimization theory. Relegating theory to the end of a program is an exception rather than the rule.

Accounting theory is too important to remain untouched until the end of an accounting program. This text exposes students to the fundamentals of accounting theory in the first chapter, which lays the foundation for a number of *threshold concepts* (see Meyer and Land, 2003[1]).

THRESHOLD CONCEPTS

While by no means perfect, this textbook aims to better establish the flow of ideas throughout the book by covering several threshold concepts in the first three chapters. Threshold concepts in this case are the portals that connect accounting standards and practices with students' prior knowledge and experiences. As Meyer and Land suggest, these threshold concepts will help to *transform* how students think about accounting, help students to *integrate* ideas within and between chapters, and *irreversibly improve* their understanding of accounting. Introducing these concepts is not without cost, because threshold concepts will often be troublesome due to their difficulty and the potential conflict between students' existing knowledge and these new concepts.

The inside front cover identifies the threshold concepts and the layout of the chapters in both volumes of this text. Crucially, the first chapter in Volume 1 begins with the threshold concepts of *uncertainty* and *information asymmetry*. The need to make decisions under uncertainty and the presence of information asymmetries results in *economic consequences of accounting choice*. Those consequences differ depending on whether the accounting information interacts with *efficient securities markets*. These concepts open up the notion of *supply and demand for accounting information*, which forms the basis of the conceptual frameworks for financial reporting (Chapter 2). Decision making under uncertainty leads to the issues surrounding the *timing of recognition* under accrual accounting (Chapter 3), which in turn lead to the concept of *articulation* between financial statements. Accounting choices having economic consequences leads to considerations of the *quality of earnings* and the potential for earnings management (Chapter 3).

These concepts then resurface at different points in the remaining 17 chapters. For example, the concept of information asymmetry is fundamental to understanding the reasons that companies issue complex financial instruments (Chapter 14). Another example is the important role of the moral hazard form of information asymmetry

[1] Meyer, J.H.F., and R. Land. 2003. "Threshold Concepts and Troublesome Knowledge 1: Linkages to Ways of Thinking and Practicing." In *Improving Student Learning: Ten Years On*, C. Rust (Ed.), Oxford, UK: Oxford Centre for Staff and Learning Development.

in explaining why accounting standards do not permit the recognition of gains and losses from equity transactions through net income. A third example is the influence of uncertainty and executives' risk aversion on the accounting standards for pension plans, which allow the gains and losses to flow through other comprehensive income rather than net income. A fourth example is the application of information asymmetry to the accounting for leases (Chapter 18).

As an aid for students, we have put threshold concepts icons in the margin to identify when these concepts appear in the various chapters. To further clarify these icons, in the third edition we have added the name of the specific concept next to the icon to ensure students understand which concepts are being referenced.

ACCOUNTING STANDARDS AND PRACTICES

Along with the unique approach of introducing and integrating theory through the use of threshold concepts, this text also provides thorough coverage of accounting standards and practices typically expected of an intermediate accounting course. This edition reflects recently issued standards, including IFRS 15 on revenue recognition and IFRS 9 on financial instruments.

Following an overview of the four financial statements in Chapter 3 in Volume 1, Chapter 4 explores revenue and expense recognition to highlight the connection financial reporting has to enterprises' value-creation activities. Chapters 5 to 10 in this book then examine, in detail, issues involving the asset side of the balance sheet.

The second volume begins with coverage of the right-hand side of the balance sheet in Chapters 11 to 13. Coverage in Chapters 14 to 18 then turns to special topics that cut across different parts of the balance sheet and income statement: complex financial instruments, earnings per share, pension costs, income taxes, and leases. Chapter 19 examines the statement of cash flows, which integrates the various topics covered in Chapters 4 through 18. Chapter 20 revisits the topic of accounting changes introduced in Chapter 3.

INTEGRATION OF IFRS

This is the first Canadian text written with International Financial Reporting Standards (IFRS) in mind throughout the development process, rather than as an afterthought. For example, we devote a separate chapter (Chapter 10) to explore issues surrounding asset revaluation and impairment because these issues cut across different asset categories under IFRS. The complete integration of standards in the development process adds to the smooth flow of ideas in and between chapters. Another example is Chapter 10's coverage of agriculture activities, a topic covered by IFRS but not by past Canadian standards.

COVERAGE OF ASPE

While this text puts emphasis on IFRS, we do not neglect Accounting Standards for Private Enterprises (ASPE). Near the end of each chapter is a table that identifies differences between IFRS and ASPE. In contrast to other textbooks, we identify only substantive differences rather than every detail. In addition to the summary table, we carefully choose to discuss certain important differences in the main body of the chapters to create opportunities for understanding the subjective nature of accounting standards and the advantages and disadvantages of different standards. For example, Chapter 8 discusses the different treatments of interest capitalization under IFRS and ASPE. In the end-of-chapter Problems, we have placed icons in the margin to identify questions that apply ASPE instead of IFRS.

REFERENCE TO ACCOUNTING STANDARDS

Consistent with the threshold concepts described above, this textbook avoids treating accounting standards as written in stone and with only one interpretation. Ultimately, it is people who make accounting standards and it is important to analyze and evaluate the choices that standard setters make to understand the rationale behind the standards. Where appropriate, the chapters provide specific quotations from authoritative standards so that students begin to develop their ability to interpret the standards themselves rather than rely on the interpretations of a third party.

INTEGRATION OF LEARNING OBJECTIVES

To enhance the flow of material, each chapter fully integrates learning objectives from beginning to end. Each chapter enumerates four to six learning objectives that the chapter covers. The end of each chapter summarizes the main points relating to each of these learning objectives. We have also organized the problems at the end of each chapter to match the order of these learning objectives as much as possible.

INTEGRATION OF CPA COMPETENCIES

To ensure students are building the knowledge and skills required for the CPA designation, the third edition has increased its focus on covering the competencies outlined in the CPA Competency Map and Knowledge Supplement. Each chapter now opens with a list of CPA Competencies, related Knowledge Items, and levels that are covered in that chapter; also, a master list of all the financial reporting Competencies and Knowledge Items is available on the back inside cover. As well, all the problems on MyAccountingLab for *Intermediate Accounting* 3e are mapped to the Competency, Knowledge Item, and level that is being assessed. These features will allow students and faculty interested in the CPA designation to become familiar with the Competency Map and the material covered in the book.

CHAPTER FEATURES

This text contains a number of features that augment the core text. We are mindful that too many "bells and whistles" only serve to distract students, so we have been selective and have included only features that reinforce student learning. The result is an uncluttered page layout in comparison to competing textbooks. We firmly believe that clean design supports clear thinking.

Opening Vignettes

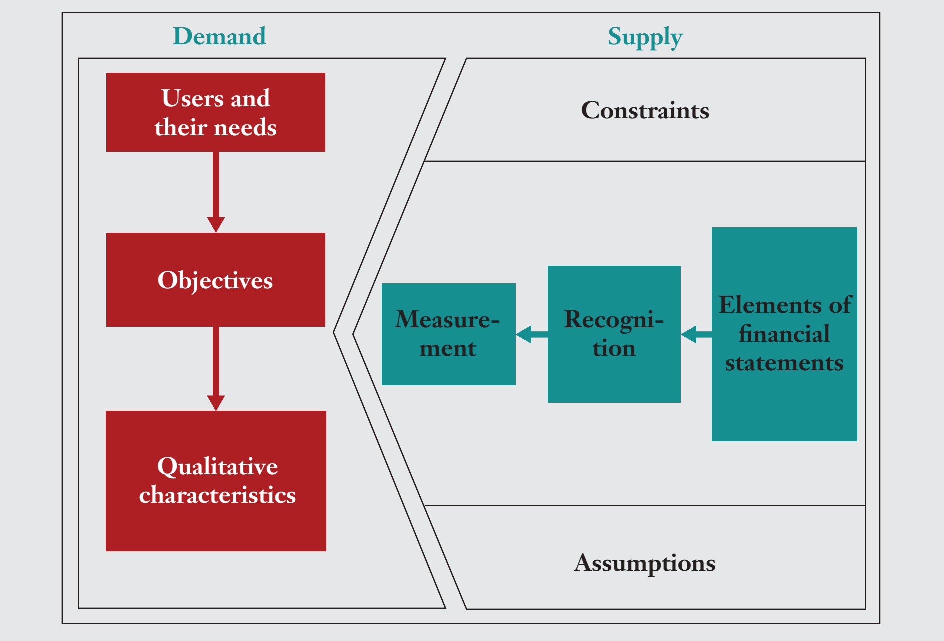
Each chapter opens with a short vignette of a real-world example that students will easily recognize and to which they will relate. These examples range from household names such as Bank of Montreal, Bombardier, and Telus, to car shopping and Christopher Columbus. As mentioned earlier, this connection to existing knowledge and experiences is crucial to learning new concepts. Each vignette serves to motivate interesting accounting questions that are later addressed in the chapter.

Charts and Diagrams

We have chosen to use graphics sparingly but deliberately. These graphics always serve to augment ideas in a logical way rather than to serve as memory "gimmicks" that lack meaning. For instance, it has been popular to use a triangle to organize the Conceptual Framework for financial reporting. We eschew the use of this triangle because that shape has no logical foundation or connection with the Conceptual Framework.

Instead, we develop the Conceptual Framework from fundamental forces of supply and demand, so we provide a diagram that illustrates the interaction of those forces:

Exhibit 2-2 Outline of a conceptual framework for financial reporting



Feature Boxes

When warranted, we provide more in-depth discussions to reinforce the core message in the main body of the chapters. These discussions often take the form of alternative viewpoints or surprising research results that serve to broaden students' perspectives on the issues. Compass icons identify these feature boxes to denote the different perspectives on various issues.

STILL WAITING...

In 1670, an incorporation under the British royal charter created "The Governor and Company of Adventurers of England trading into Hudson's Bay." The charter gave the company exclusive rights to the fur trade in the watershed flowing into Hudson Bay. The company continues to operate today as The Hudson's Bay Company. It was publicly traded until January 2006, when it was purchased by private equity firm NRDC Equity Partners. If investors had to wait until dissolution to find out what happened to their investments, they would have been waiting for almost three and a half centuries—and counting!

Checkpoint Questions

At important transitional points in each chapter, we pose "Checkpoint Questions" to engage students to reflect upon what they have just read, and to review, if necessary, before proceeding to the next portion of the chapter. These questions appear at the end of sections and there are five to ten such questions within each chapter. To encourage students to think about these questions before looking at the answers, we have placed the answers toward the end of each chapter, immediately after the chapter summary.

End-of-Chapter Problems

The end of each chapter contains many questions for students to hone their skills. Each chapter in the third edition features new questions, covering new chapter material and IFRS standards. We choose to use a single label—Problems—for all questions. This choice follows from our focus on learning objectives. We have organized the Problems in the order of the learning objectives, and within each learning objective according to the Problem's level of difficulty (easy, medium, or difficult). This approach allows students to work on each learning objective progressively, starting with easier questions and then mastering more difficult questions on the same learning objective. This approach is much preferable to having students jump around from "exercises" to "discussion questions" to "assignments," and so on. Problems in the textbook that are coloured red are also available on MyAccountingLab. Students have endless opportunities to practise many of these questions with new data and values every time they use MyAccountingLab.

MyAccountingLab

Make the grade with **MyAccountingLab**: The problems marked in red can be found on **MyAccountingLab**. You can practise them as often as you want, and most feature step-by-step guided instructions to help you find the right answer.

Cases

We have included Mini-Cases that are based on, or mimic, real business scenarios. The distinguishing feature of these cases is their focus on decision making. While they are technically no more challenging than Problems, cases bring in additional real-world subjective considerations that require students to apply professional judgment.

We have also included an appendix that provides case solving tips to students, as well as three comprehensive cases that cover topics across multiple chapters. An appendix in Volume 2 also contains two capstone cases that cover many of the topics in both volumes of the textbook. These cases simulate those on professional exams that require four to five hours of an entry-level professional accountant.

TECHNOLOGY RESOURCES

MyAccountingLab

MyAccountingLab delivers proven results in helping individual students succeed. It provides engaging experiences that personalize, stimulate, and measure learning for each student. MyAccountingLab is the portal to an array of learning tools for all learning styles—algorithmic practice questions with guided solutions are only the beginning. MyAccountingLab provides a rich suite of learning tools, including:

- Static and algorithmic problems from the textbook
- DemoDocs Examples—question-specific interactive coaching
- A personalized study plan
- An online, interactive Accounting Cycle Tutorial, reinforcing students' understanding of accounting foundations
- A dynamic eText with links to media assets
- A Case Solving Primer
- Sample Tests
- Questions to accompany the new Financial Statements
- Learning Catalytics—A "bring your own device" student engagement, assessment, and classroom intelligence system that allows instructors to engage students in class with a variety of question types designed to gauge student understanding

Pearson eText

Pearson eText gives students access to the text whenever and wherever they have online access to the Internet. eText pages look exactly like the printed text, offering powerful new functionality for students and instructors. Users can create notes, highlight text in different colours, create bookmarks, zoom, click hyperlinked words and phrases to view definitions, and view in single-page or two-page view.

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SUPPLEMENTS

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- **Instructor's Solutions Manual.** Created by Kin Lo and George Fisher, this resource provides complete, detailed, worked-out solutions for all the Problems in the textbook.
- **Instructor's Resource Manual.** The Instructor's Resource Manual features additional resources and recommendations to help you get the most out of this textbook for your course.
- **Computerized Test Bank.** Pearson's computerized test banks allow instructors to filter and select questions to create quizzes, tests or homework. Instructors can revise questions or add their own, and may be able to choose print or online options. These questions are also available in Microsoft Word format.
- **PowerPoint® Presentations.** Approximately 30–40 PowerPoint® slides, organized by learning objective, accompany each chapter of the textbook.
- **Image Library.** The Image Library provides access to many of the images, figures, and tables in the textbook.

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During the development of this book, we obtained many helpful and invaluable suggestions and comments from colleagues across the country. We sincerely thank the following instructors who took the time and effort to provide thoughtful and meaningful reviews during the development of this third edition:

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Kin Lo
George Fisher

CHAPTER 1
Fundamentals of Financial Accounting Theory

CPA competencies addressed in this chapter:

1.1.1 Evaluates financial reporting needs (Level B)
1.1.2 Evaluates the appropriateness of the basis of financial reporting (Level B)
1.1.3 Evaluates reporting processes to support reliable financial reporting (Level B)
1.2.1 Develops or evaluates appropriate accounting policies and procedures (Level B)

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

L.O. 1-1. Explain the sources of demand and supply of accounting information.

L.O. 1-2. Apply concepts of information asymmetry, adverse selection, and moral hazard to a variety of accounting, management, and related situations.

L.O. 1-3. Describe the qualitative characteristics of accounting information that help to alleviate adverse selection and moral hazard.

L.O. 1-4. Evaluate whether and what type of earnings management is more likely in a particular circumstance.

L.O. 1-5. Explain how accounting information interacts with securities markets.

A sailboat leaves port with its skipper and crew for a weekend cruise along the coast. During the trip, the sailors harness the wind, cope with waves, navigate around rocks and shallows, and avoid collisions with other vessels. However, *before departure,* they must familiarize themselves with how to operate all of the equipment onboard. *And even before that,* they must have a good understanding of the theory of sailing: the Bernoulli principle (lift from the airfoil effect that allows birds and planes to fly), drag, gravity, buoyancy, compass directions, theory of tides and tidal currents, ocean currents, and how all of these factors potentially affect the boat and its motion. These three stages, in chronological order, can be labelled as *theory*, *instrument*, and *application*.

Understanding accounting involves these same three stages. The actual practice of accounting is just the last step in the process—the *application* of accounting standards and the accounting framework to the situation at hand, in conjunction with the use of professional judgment. Before you can practise accounting, you need to thoroughly understand the *instrument* that you are using: the set of accounting standards and the framework that underlies those standards. But first of all, it is essential that you understand the *theory* behind why the accounting standards are the way they are so that you will be able to apply your judgment while using those standards to different circumstances that you face.

This chapter looks at the fundamental concepts in accounting theory, such as uncertainty, information asymmetry, and the demand and supply of information. This theory leads to Chapters 2 and 3, which discuss the conceptual framework and accrual accounting principles that underlie more specific accounting standards. The remainder of this book and Volume 2 (Chapters 11–20) cover the specific accounting standards and their application.

	Theory	Instrument		Application
Sailing	Lift, drag, gravity, buoyancy, compass directions, tides, and currents	General structure of sailboats	Components specific to the vessel	Sailing, navigating, avoiding collisions
Accounting	Uncertainty, information asymmetry, demand and supply	Conceptual framework, general principles	Specific accounting standards	Accounting for specific balances and transactions
Textbook structure	Chapter 1	Chapter 2 Chapter 3	Chapters 4 to 20	Introductory level accounting

1 CONTENTS

L.O. 1-1. Explain the sources of demand and supply of accounting information.

Accounting is the production of information about an enterprise and the transmission of that information from those who have it to those who need it.

Despite what else you may know about accounting, the above sentence succinctly encapsulates what accounting is. Yes, the debits and credits, double-entry bookkeeping system, journal entries, and financial statements are all components of how we do accounting but, fundamentally, accounting is about communicating information. *Financial* reporting is the process by which enterprises provide information to external parties. *Managerial* accounting, on the other hand, involves reporting within the enterprise. We can even include *tax* accounting, which is the reporting of taxable amounts to government revenue authorities. What ties all the branches of accounting together is the idea that some people have information that others need. In managerial accounting, for example, a production manager needs to obtain relevant information on variable and fixed production costs, or top management requires information from division managers for budgeting purposes. Financial reporting involves the issuance of financial statements, forecasts, commentary, press releases, and even conference calls and webcasts to interested parties external to the enterprise.

In your introductory-level financial accounting course, you learned the basic approach and techniques for preparing accounting entries, compiling financial statements, and understanding financial reports using **generally accepted accounting principles** (**GAAP**). Financial accounting at the intermediate level will not only raise your level of technical expertise in the "what" and "how" of accounting, but it will also help you to understand *why* we account for and report transactions in particular ways. That understanding will come from considering the range of possible methods of accounting and evaluating whether and how a particular method of accounting is consistent with the conceptual framework underlying GAAP, together with an appreciation for the underlying economic forces at work. This chapter on financial accounting theory exposes this important economic underpinning for accounting; Chapter 2 will delve into the conceptual framework.

generally accepted accounting principles (GAAP) Broad principles and conventions of general application as well as rules and procedures that determine accepted accounting practices.

The need for financial accounting theory is summed up in the common misunderstanding that the current financial reporting regime results from the proclamations issued by government or quasi-government regulatory agencies, such as the International Accounting Standards Board (IASB) located in London, England, or the Accounting Standards Board (AcSB) in Canada. Rather, financial reporting is an economic good and is therefore subject to the laws of supply and demand. Accounting standards reflect and respond to, although imperfectly, the demand for financial information and the ability of enterprises to supply that information. Financial accounting theory helps us to understand the complexities in the production and consumption (use) of accounting information. Viewed in this way, financial information can be, and is, a subject of rigorous economic analysis.

The following is a sample of questions that financial accounting theory will help to answer:

- Why does financial reporting exist?
- Why do companies and their managers report information to external parties?
- Why do some companies voluntarily disclose information and others do not?
- Why has a system of mandatory disclosures been put in place?
- What are the reasons behind the conceptual framework for financial reporting?
- How do capital (stock/bond) markets react to financial statement information?
- Why do capital markets react to financial statement information?
- How are financial statements used for contracting purposes (e.g., between shareholders and senior managers, between corporations and creditors)?
- Why are financial statements (instead of something else) used in contracting?
- How does the contracting role of accounting affect accounting practice?
- What are the considerations supporting the use of historical cost or current value reporting?

These are big and deep questions that require a separate book or course to address fully. This chapter serves as an introduction to the range of issues that affect the practice of accounting. Later chapters will apply some of these ideas in the context of specific accounting practices. To begin this journey, we start with the foundations of information economics.[1]

A. UNCERTAINTY AND INFORMATION ASYMMETRIES

L.O. 1-2. Apply concepts of information asymmetry, adverse selection, and moral hazard to a variety of accounting, management, and related situations.

Accounting involves the communication of information, so let us clearly define what we mean by "information."

Information: Evidence that can potentially affect an individual's decisions.

information Evidence that can potentially affect an individual's decisions.

It is important to notice that the evidence need only *potentially* affect decisions; it need not in fact alter any particular decision. For example, suppose Sally is planning a sailing trip. Before departure, she checks the weather forecast, which predicts that it will be sunny with winds of 10 to 15 knots from the northwest—great conditions, so Sally proceeds with her trip.[2] Did the weather forecast provide information to Sally? The fact that she did not change her mind is not important. What is crucial is that the

[1] Information economics is an important and, relative to other areas of economics, recent development. The 2001 Nobel Prize in economics was awarded to three economists who laid the foundations for information economics in the 1970s: George Akerlof, Michael Spence, and Joseph Stiglitz.

[2] A knot is a measurement of speed, meaning one nautical mile per hour. One nautical mile equals 1.852 km, or approximately 1.15 statute miles.

forecast *could have* indicated gale force winds, in which case it would have been prudent for Sally to stay home. The forecast is informative to Sally, whether she ends up going on her sailing trip or not.

In thinking about this definition, it is important to note that some evidence can be information to one person but not to another. It all depends on the decision context. For example, the weather forecast could have no information value to Sally if she were only deciding between going to see a movie and playing indoor volleyball.

THRESHOLD CONCEPT **DECISION MAKING UNDER UNCERTAINTY**

In the above examples, and indeed in most other contexts that we can think of, people make decisions under uncertainty. For the simple reason that decisions affect the future, even the very near future, outcomes will be uncertain to some extent. "The future is unpredictable," as is commonly said—or, more accurately, the future is not completely predictable. Only in hypothetical scenarios could uncertainty be entirely ruled out. For example, a managerial decision to sell a particular product involves uncertainties in demand, purchase costs, exchange rates, transportation costs, delivery times, product quality, and so on.

In financial reporting, the issue of uncertainty is particularly salient. Parties external to the reporting enterprise make decisions regarding whether they should lend to, invest in, sell product to, or work for an enterprise. The outcomes of these decisions depend on the firm's performance in the future (among other things), and past performance is a good source of information to help predict the future. *Thus, decision-making needs of external parties create the demand for financial reporting.*

THRESHOLD CONCEPT **INFORMATION ASYMMETRY**

information asymmetry A condition in which some people have more information than others.

Who supplies the information demanded by these external parties? Those who have more and better information, of course. Senior managers and members of a company's board of directors (i.e., insiders) most certainly have superior information about the company in comparison to the company's creditors, investors, suppliers, and employees (outsiders). *Thus, the supply and demand for financial reporting is due to the presence of* **information asymmetry**, whereby some people have more information than others.

The idea that some people have more or better information than other people is easy to comprehend. What is more important is to appreciate the pervasiveness of information asymmetry and the ramifications it has on what we do in (and outside of) financial reporting. To obtain a deeper understanding, we need to distinguish between two types of information asymmetry in the context of markets: adverse selection and moral hazard. As these are fairly abstract concepts, let's look at two examples to illustrate these ideas before formally defining these concepts.

CHECKPOINT **CP1-1**

Describe how uncertainty and information asymmetry create the demand and supply of accounting information.

1. Adverse selection example

In this example, think about buying a car. As a student with meagre resources, you cannot afford a new car, so you consider buying a used one. What information problem do you face? Clearly, the seller has more information about the condition of the car than you do. Sure, you can see the exterior condition of the car, the amount of mileage from the odometer, and perhaps a few other details. However, if you are buying from an individual, that person knows how well the car runs, any problems including annoying squeaks, history of maintenance and collisions, and how hard the car has been driven in the past (e.g., running over speed bumps at 50 km/h). If you are buying from a car dealership, it still has a significant advantage over you even though the dealer's knowledge about the car's history is not as intimate as that of the previous owner. The dealership is in the business of buying and selling cars, so it employs experienced mechanics with the expertise to evaluate the quality of used cars much better than you can.

Suppose that as a potential buyer you believe a reasonable price range for a 10-year-old Honda Civic with 150,000 km is $2,000 to $4,000. You find a number of cars on the market that match these criteria, each identified by a letter in Exhibit 1-1. Based on what you know about these cars, they are nearly identical. All of the cars are advertised as selling for the best offer. How much should you pay? Would the midpoint of your range ($3,000) be a good start? As you would have an equal chance of over- and underpaying, this price would appear to be fair.

Exhibit 1-1 Hypothetical prices for 10-year-old Honda Civics

Car ID:	A	B	C	D	E	F	G	H	I
$ value of car to seller:	2,000		2,500		3,000		3,500		4,000

This intuition is incorrect—the midpoint would *not* be a fair price. The problem is that the seller has better information than you do. Those sellers who know their cars to be higher than average quality (cars F, G, H, I) will not accept your offer of $3,000 (assuming they are not desperate to sell). Only those sellers who have below average quality cars (A, B, C, D, E) will like your offer. This means that you will always overpay if you offer $3,000. So you revise your strategy to reflect the new range of values to be between $2,000 and $3,000. Should you offer $2,500? If you did, you would still overpay, since owners of cars D and E will not accept this offer because they value their cars above $2,500. Repeat the process and you should see that the smart and rational strategy is to pay only the lowest price in the range: $2,000.

Given your price limit, a transaction will occur only if one or more sellers value their car at or below this value. In other words, you will be successful buying this car only if it is the worst possible car in the group that you are considering. This is why we call this *adverse* selection.

As it happens, there is one car owner who will accept an offer of $2,000 in this example. So what happens to the cars that the sellers feel are worth more than $2,000? The owners do not sell them because other potential buyers are just like you and are willing to pay only $2,000, less than the amount at which the owners are willing to sell. If the sellers think through this process beforehand, they do not put their cars on the market at all since it would be futile. As a result, the used cars that are available on the market tend to be the bad ones, or "lemons."[3]

Now, the actual used car market is somewhat better than that portrayed above. Motivated sellers, such as car dealerships, can use a number of different ways to help assure you of the quality of their cars so that you will be willing to pay a price higher than the price for lemons. In other words, sellers who truly believe that their cars are worth more than $2,000 will voluntarily provide information that demonstrates the quality of the car so that you will be willing to pay that price. However, only information that is verifiable is useful for this purpose. A claim such as, "It runs beautifully" is not verifiable; you cannot take the seller to court for misrepresentation should the car not meet such a vague claim about quality. In contrast, if the seller provides you with detailed documentation of the routine maintenance that has been carried out, the seller would be liable for fraud should that documentation be fake. As another example, a used car seller can provide an assessment of the car's quality from an independent mechanic.

3. Akerlof, George A. "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism." *Quarterly Journal of Economics* 84 no. 3 (1970): 488–500.

costly signalling (or just signalling) Communication of information that is otherwise unverifiable, by means of an action that is costly to the sender; contrast with **cheap talk**.

cheap talk Communication of unverifiable information, by means that are virtually costless; contrast with **costly signalling**.

In many instances, the seller cannot credibly communicate the quality of the vehicle to you because the factors that contribute to that quality are not readily observable or verifiable. To overcome this problem, the seller can resort to using a **costly signal**.

The need for costly signalling arises because unverifiable disclosures are **cheap talk** and cannot be believed. A claim by the car seller that his or her car is a bargain is an example of cheap talk, because anyone can make such a claim and they cannot be sued for making such a claim. Instead, the seller needs to use costly signalling if he or she believes that the car is indeed more valuable than a lemon. For example, a used car dealer can provide a guarantee against defects for a year; cars that are not truly high quality will result in significant future costs for the dealer. It is important that the signal be costly; *a costless signal is not credible* because anyone can send such a signal.

2. Moral hazard example

Suppose you were successful in purchasing a car. Now you need to buy insurance. Whether you are legally required to have insurance or not, it is likely that your behaviour would differ from what it would be had you been *un*insured. With insurance, you will not be liable to pay damages if you unintentionally injure someone while driving, nor will you have to pay for repairs in a collision. (We will discuss insurance deductibles later.) Knowing this, you are likely to drive a bit faster and in a less careful, more reckless manner, since you do not bear the full consequences of accidents. We call this *moral hazard* because the provision of insurance encourages less care and effort, and therefore higher risk (i.e., it creates a hazard to our morals), but the higher risk is expected by both sides of the insurance contract.

The insurance company must anticipate the higher risk and increase insurance premiums accordingly. Thus, moral hazard is costly. In practice, this cost cannot be eliminated because the insurance company cannot monitor the insured to make certain that they drive carefully, and neither can the insured credibly commit to drive carefully. However, there are ways to mitigate the cost. For example, the insured can agree to pay for part of the damages incurred in the form of a deductible or percentage co-payment. When the insured bears some of the cost of damages, he or she is expected to take more care than when he or she is fully insured. Nevertheless, the insured is still expected to be less careful than when uninsured.

Thus, there is an inverse relationship between risk and the extent of moral hazard. When the insured has full insurance he or she faces low risk, and therefore provides little effort to prevent accidents; the moral hazard is accordingly high, and the cost of insurance must also be high. As we increase the risk faced by the insured, he or she will become more careful, which reduces the amount of moral hazard and the cost of insurance.

3. Adverse selection and moral hazard defined

Having discussed the background behind adverse selection and moral hazard by way of examples, we are now ready to consider these information asymmetries formally.

adverse selection A type of information asymmetry whereby one party to a contract has an information advantage over another party.

moral hazard A type of information asymmetry whereby one party to a contract cannot observe some actions relating to the fulfillment of the contractual terms by the other party.

Adverse selection: A type of information asymmetry whereby one party to a contract has an information advantage over another party.

Moral hazard: A type of information asymmetry whereby one party to a contract cannot observe some actions relating to the fulfillment of the contractual terms by the other party.

These definitions look similar but there is a crucial difference: moral hazard involves information about one party's actions that is not available to the other party. For this reason, moral hazard is succinctly summed up as *hidden actions*. Because actions are involved, moral hazard involves information about what happens in the *future*. In contrast, adverse selection concerns no actions other than whether the parties choose to reveal information that they possess. Consequently, adverse selection involves *hidden information* from the *past and present* (although such information could have ramifications for the future).

THRESHOLD CONCEPT INFORMATION ASYMMETRY

In the used car sale/purchase example, the information asymmetry involves the past history of how the car has been operated and its present condition. The buyer is not interested in what the seller does after the transaction, and the seller has no interest in how the buyer drives the car or what happens to it after it is sold. Thus, this is a case of adverse selection.

In the insurance example, the insurance provider is concerned about how much care the insured takes to prevent accidents in the future, but is unable to monitor the actions of the insured. Therefore, this is a case of moral hazard.[4]

CHECKPOINT **CP1-2**

Identify two features that distinguish adverse selection from moral hazard.

4. Application of adverse selection and moral hazard to accounting

The astute reader will already see how the above discussion relates to accounting information. For example, buying and selling a used car is not all that different from buying and selling shares. Investors are at an information disadvantage relative to a firm's insiders (i.e., management and the board of directors). Consequently, a firm's management needs to provide credible evidence to investors so that its shares are not priced as "lemons." A claim by the CEO that the firm is underpriced is just cheap talk, since any CEO could make such a claim. Instead, useful evidence must be credible and verifiable. Such evidence can come in the form of financial statements that help summarize the financial condition and operations of the enterprise. To add credibility, the firm can hire independent auditors to attest to the financial statements' compliance with accounting standards, just as a car seller can obtain an independent assessment of the car's condition.

To overcome the adverse selection problem relating to a company's share price, the company can also use costly signalling, such as the payment of dividends. To be able to pay dividends on a regular basis, a firm needs to be profitable enough to generate sufficient cash flows in the future to fund those dividends. Thus, the commitment to pay dividends reveals management's beliefs about the firm's future prospects. For this reason, investors react quite strongly to announcements of new dividend increases and decreases. Paying dividends is management's way of "putting money where its mouth is."

The issue of moral hazard is a little less straightforward. Who has the hidden actions? In relation to accounting, we are concerned with the actions of management. When there is a separation of ownership and management, we have an **agency problem** (also called a **principal–agent problem**): the owners (principals) are not able to monitor management personnel (the agents) to ensure that management makes decisions in the best interests of the owners. Because of the separation of ownership and management, managers neither obtain the full benefit of maximizing firm value nor do they bear the cost of not doing so. If executives are paid on a fixed salary basis, short of being fired they would be largely insured against bad performance, so they would not be motivated to strive for good performance. To mitigate this moral hazard problem, accounting reports can be used to provide information to owners about the firm's performance as an indirect

agency problem Arises from the inability of the principals to monitor the agents to ensure that the agents make decisions in the best interest of the principals.

principal–agent problem See **agency problem**.

[4] The provision of insurance often involves adverse selection as well, but the example given would need to be expanded to see that effect.

indicator of management performance. Furthermore, incentive pay (bonuses) can be used to link compensation to performance measures such as net income or earnings per share. Another way to mitigate moral hazard is for management to take partial ownership of the company through stock purchase and stock option programs. These various tools ensure that managers share in the rewards of their efforts and will thus be motivated to create value for the company's owners.

A somewhat different moral hazard problem arises between the company and its creditors. Again, the company has the use of someone else's money. The lender faces the risk that the company will not repay the loan's principal and interest. To protect the lender's interest, loans will specify covenants that the company must satisfy during the term of the loan. For example, covenants may require that a firm maintain a current ratio higher than 2, a debt-to-assets ratio of less than 0.5, or an interest coverage ratio greater than 3.

5. Moral hazard in action: The financial crisis of 2008

The financial crisis of 2008 is the most significant event affecting financial markets since the Great Depression in the 1930s and the market crash of 1929 that preceded it. The crisis resulted in, among other casualties, the bankruptcy of Lehman Brothers, the buyout of Merrill Lynch by Bank of America, and the bailout of American International Group (AIG) and Citigroup by the US government through equity stakes of 80% and 36%, respectively. *Each* of these four companies had between US$700 billion and US$2 trillion in assets. The colossal scale of these companies and the ramifications of their failure are immense.

It is now clear that moral hazard played a critical role in creating this crisis. Traditionally, commercial banking relies on earning a "spread" between interest rates paid on deposits from individuals and the interest rates received from money-lending activities, such as issuing mortgages.[5] Since banks bear the cost of borrowers defaulting on their loans, it is in the banks' interest to carefully assess the creditworthiness of borrowers. However, through financial innovation, it became possible to package thousands of mortgages together and sell them to other investors as *mortgage-backed securities,* or MBS. Furthermore, it was possible for investors to ensure that the MBS would be able to pay according to schedule by buying insurance through a financial instrument called a *credit default swap,* or CDS. For instance, Citigroup would package 10,000 mortgages with an average value of $200,000 into $2 billion worth of MBS. Investment banks like Merrill Lynch would buy these MBS; sometimes they would buy a CDS from AIG to insure against borrowers defaulting on their loans.

Both mortgage-backed securities and credit default swaps contributed to the spread of moral hazard. Since banks like Citigroup could offload the risk of default to investors who buy the MBS, banks were no longer concerned about mortgage defaults. As a result, banks became more and more careless screening borrowers, lending to customers that were less and less creditworthy. Lending in the "subprime" mortgage market surged as a result. Banks even made "ninja loans" to people with no income, no job, and no assets. Investors who purchased the MBS should have been concerned, because they would bear the cost of default. However, investors could insure against that risk by purchasing CDSs, thus offloading the risk to the insurance providers, such as AIG. Thus, the ability to offload risk allowed lenders and investors to be careless. The problems did not become apparent right away because defaults remained low as housing prices in the United States continued to increase through 2006. However, as house prices began dropping in 2007 and accelerated in 2008, mortgage default rates

[5] Commercial banking is the type of banking you experience day to day: making deposits and withdrawals, writing cheques, and borrowing funds. It is distinguished from investment banking, which involves activities in the capital markets such as underwriting share and bond offerings.

skyrocketed, exposing the low credit quality of the loans. Ultimately, it is moral hazard that caused banks to make such questionable loans in the first place.

B. DESIRABLE CHARACTERISTICS OF ACCOUNTING INFORMATION AND TRADE-OFFS

L.O. 1-3. Describe the qualitative characteristics of accounting information that help to alleviate adverse selection and moral hazard.

Depending on the type of information asymmetry that users face, they demand information with different characteristics. In the case of investors deciding whether to buy a company's shares and how much the price should be, the presence of adverse selection means that investors are wary of overpaying, which leads the company to provide as much credible information as possible so that the company obtains the highest price for its shares.[6] Thus, investors demand information that is relevant to investment decisions, such as information that helps them forecast future cash flows and assess the risks of those cash flows. Appendix B introduces some simple ways in which accounting information can be used for estimating the value of shares.

In the case of moral hazard, the demand for information is different. Investors need to ensure that management is properly using the company's assets, making the company profitable, growing sales, and so on. Lenders need to ensure that the company complies with the terms of loan agreements. However, since management is also the producer of information, investors and creditors need to be assured that the information provided is reliable. Since managers have the incentive to exaggerate so as to improve investors' and lenders' perception of their performance, investors and lenders demand information that is verifiable and not prone to manipulation by management.

Given the multiple user groups and conflicting demands placed on accounting information described above, trade-offs must necessarily be made. Not everyone can be satisfied with the same accounting information. For example, forward-looking information is useful for investment decisions, but predictions about future events are not verifiable and therefore not useful for evaluating management performance. On the other hand, an income measure based on the historical cost model is verifiable and less prone to management manipulation, but historical costs are not as useful as current values for estimating the value of the company and for pricing its shares.

Chapter 2 will further explore how accounting standards deal with the conflicting demands placed on accounting information.

CHECKPOINT **CP1-3**

Explain how adverse selection and moral hazard lead to different demands on accounting information.

C. ECONOMIC CONSEQUENCES OF ACCOUNTING CHOICE AND EARNINGS MANAGEMENT

L.O. 1-4. Evaluate whether and what type of earnings management is more likely in a particular circumstance.

The end of the previous section alluded to the idea that management is prone to exaggerate financial reports. We explore this idea in more detail here.

Management is responsible for both operating the enterprise and preparing financial reports that help depict the company's performance. While financial reports are

[6] Even if the company is not currently issuing shares in an offering, firms generally want to maintain as high a share price as possible in the secondary market (i.e., shares traded on stock exchanges).