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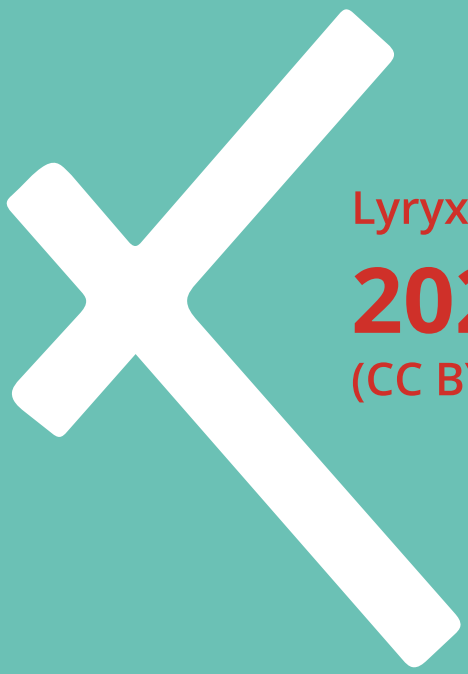
Intermediate Financial Accounting

Volume 1

G. Arnold & S. Kyle



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an Open Text by Glenn Arnold & Suzanne Kyle

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Intermediate Financial Accounting

an Open Text by Glenn Arnold & Suzanne Kyle

Base Text Revision History

Current Revision: Version 2021 — Revision A

2021 A	• Front matter has been updated including cover, Lyryx with Open Texts, copyright, and revision pages. Attribution page has been added.
2020 A	• Base year for examples and calculations has been updated from 2015 to 2020, and other dates have been updated to match. • Minor content fixes throughout.
2019 A	• Text updated throughout to reflect new IFRS rules in 2019. • Links to videos have been added throughout the chapters.
2018 A	• Several chapters rewritten to include new IFRS rules effective January 1, 2018.

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Review of Intro Financial Accounting

Chapter 1 Learning Objectives

LO 1: Complete Review Lab 1.1 to review adjusting entries.

LO 2: Complete Review Lab 1.2 to review merchandising transactions.

LO 3: Complete Review Lab 1.3 to review inventory costing methods.

LO 4: Complete Review Lab 1.4 to review bank reconciliations.

LO 5: Complete Review Lab 1.5 to review receivables transactions.

LO 6: Complete Review Lab 1.6 to review transactions related to long-lived assets.

LO 7: Complete Review Lab 1.7 to review current and long-term liabilities.

LO 8: Complete Review Lab 1.8 to review the statement of cash flows.

Introduction

To be successful in Intermediate Financial Accounting, it is imperative for a student to have a strong foundational knowledge of all Introductory Financial Accounting concepts. The purpose of Lesson 1 is to help a student identify any weaknesses in their Intro Accounting knowledge. Lesson 1 consists of a series of labs intended to help a student identify any knowledge gaps. If a weakness comes to light, the student is encouraged to go back to that concept in Intro Accounting and review in detail. It is the student's responsibility to ensure they come into Intermediate Financial Accounting with the appropriate pre-requisite knowledge.

Each section will provide a link to the open *Introduction to Financial Accounting* textbook by Dauderis and Annand. You may also access the textbook by visiting http://lifa1.lyryx.com/open_introfa/?LESSONS . You can either view the lessons online, or you will find a Download link on the left side that will let you download a PDF or order a printed copy of that textbook. If you used this textbook in your Introductory Financial Accounting course then you may already have a copy of the textbook.

1.1 Adjusting and Closing Entries

In this section, you will complete the review labs to evaluate your pre-requisite knowledge related to adjusting and closing entries. If you require a 'refresher' on adjusting and/or closing entries, refer to Chapter 3 of Introductory Financial Accounting.

Link to lessons: http://lifa1.lyryx.com/open_introfa/?LESSONS#ch3

1.2 Merchandising Transactions

In this section, you will complete the review labs to evaluate your pre-requisite knowledge related to merchandising transactions. If you require a 'refresher' on merchandising transactions, refer to Chapter 5 of Introductory Financial Accounting.

Link to lessons: http://lifa1.lyryx.com/open_introfa/?LESSONS#ch5

1.3 Inventory Costing Methods

In this section, you will complete the review labs to evaluate your pre-requisite knowledge related to inventory costing methods. If you require a 'refresher' on inventory costing methods, refer to Chapter 6 of Introductory Financial Accounting.

Link to lessons: http://lifa1.lyryx.com/open_introfa/?LESSONS#ch6

1.4 Bank Reconciliations

In this section, you will complete the review labs to evaluate your pre-requisite knowledge related to bank reconciliations. If you require a 'refresher' on bank reconciliations, refer to Chapter 7 of Introductory Financial Accounting.

Link to lessons: http://lifa1.lyryx.com/open_introfa/?LESSONS#ch7

1.5 Receivables Transactions

In this section, you will complete the review labs to evaluate your pre-requisite knowledge related to receivables transactions. If you require a 'refresher' on receivables transactions, refer to Chapter 7 of Introductory Financial Accounting.

Link to lessons: http://lifa1.lyryx.com/open_introfa/?LESSONS#ch7

1.6 Long-Lived Assets

In this section, you will complete the review labs to evaluate your pre-requisite knowledge related to long-lived assets. If you require a 'refresher' on long-lived assets, refer to Chapter 8 of Introductory Financial Accounting.

Link to lessons: http://lifa1.lyryx.com/open_introfa/?LESSONS#ch8

1.7 Current and Long-Term Liabilities

In this section, you will complete the review labs to evaluate your pre-requisite knowledge related to current and long-term liabilities. If you require a 'refresher' on current and long-term liabilities, refer to Chapter 9 of Introductory Financial Accounting.

Link to lessons: http://lifa1.lyryx.com/open_introfa/?LESSONS#ch9

1.8 Statement of Cash Flows

In this section, you will complete the review labs to evaluate your pre-requisite knowledge related to the statement of cash flows. If you require a 'refresher' on the statement of cash flows, refer to Chapter 11 of Introductory Financial Accounting.

Link to lessons: http://lifa1.lyryx.com/open_introfa/?LESSONS#ch11

Chapter 2

Why Accounting?

It Was No Joke

Perhaps the timing was intentional. On April 2, 2009, the Financial Accounting Standards Board (FASB) in the United States voted to amend the accounting rules for financial instruments. In particular, the changes in the rules allowed banks and their auditors to apply “significant judgment” in the valuation of certain illiquid mortgage assets.

The issue arose directly as a result of the 2008 financial crisis. After the housing bubble of the early- to mid-2000s burst, resulting in the failure of several prominent financial institutions, many of the remaining banks were left with mortgage-backed securities that could not be sold. Existing accounting rules for financial instruments required those instruments be valued at the fair value, sometimes referred to as *mark-to-market accounting*. Unfortunately, many of these assets no longer had a market, and accountants were forced to report these assets at their "distressed" values.

The banking industry did not like this accounting treatment. Many industry lobbyists complained that a security that was backed by identifiable cash flows still had a value, even if it were currently unmarketable. They were concerned that reporting these distressed values in the financial statements would lower reported profits and further damage the already-weakened confidence in the banking sector. The banking industry lobbied lawmakers aggressively to put pressure on the FASB to change the rules. In the end, they succeeded, and the FASB made changes that allowed for alternative valuation techniques. The application of these techniques would result in higher profits than would have been reported under the old rules.

Although the banking industry was somewhat satisfied with this result, critics noted that the new rules gave the banks more latitude to report results that were less transparent and possibly less representative of economic reality. There is much at stake when financial results are reported, and accountants face pressures from parties both inside and outside the business to manipulate those results to achieve certain goals. Accountants need a solid foundation of rules and principles to rely on in making the judgments necessary when preparing financial statements. However, accounting standard setting can, at times, be a political process, and the practicing accountant needs to be aware that the profession’s thoughtful principles may not always provide all the solutions.

(Source: Orol, 2009)

Chapter 2 Learning Objectives

After completing this chapter, you should be able to:

LO 1: Identify the purpose of financial reporting.

LO 2: Describe the problem of information asymmetry, and discuss how this problem can affect the production of financial information.

LO 3: Describe how accounting standards are set in Canada and identify the key entities that are responsible for setting standards.

LO 4: Discuss the purpose of the conceptual framework, and identify the key components of the framework.

LO 5: Describe the qualitative characteristics of accounting information.

LO 6: Identify the elements of financial statements.

LO 7: Discuss the criteria required for recognizing an element in financial statements.

LO 8: Identify different measurement bases that could be used, and discuss the strengths and weaknesses of each base.

LO 9: Identify the alternative models of capital maintenance that could be applied.

LO 10: Discuss the relative strengths and weaknesses of rules-based and principles-based accounting systems.

LO 11: Discuss the possible motivations for management bias of financial information.

LO 12: Discuss the need for ethical behaviour by accountants, and identify the key elements of the codes of conduct of the accounting profession.

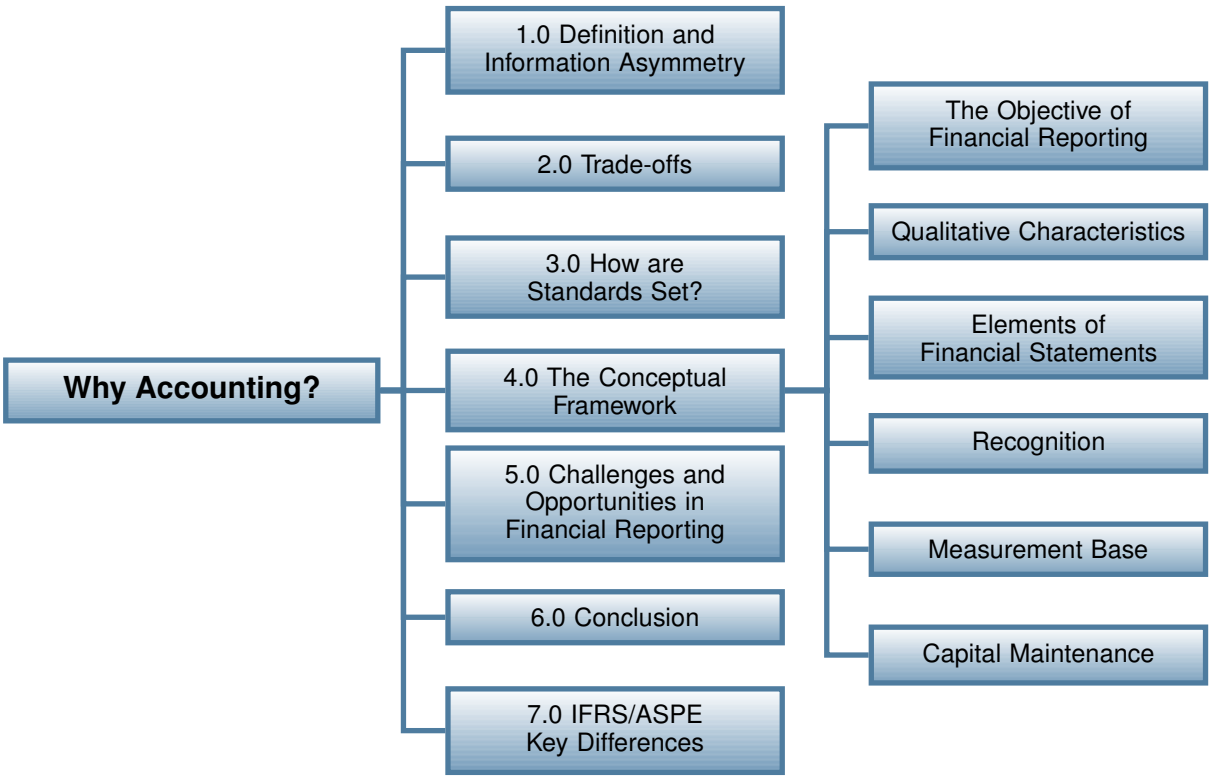
LO 13: Explain the effects on the accounting profession of changes in information technology.

Introduction

The profession and practice of accounting has seen tremendous changes since the turn of the new millennium. A series of accounting scandals in the early 2000s, followed by the tremendous upheaval in capital markets and the world economy that resulted from the 2008 meltdown of the financial services industry, has led many to question the purpose and value of accounting information. In this chapter, we will examine the nature and purpose of accounting information and the key challenges faced by those who create accounting standards. We

will also examine the accounting profession's response to those challenges, including the conceptual framework that currently shapes the development of accounting standards. We will also discuss the role of ethical behaviour in the accounting profession and the issues faced by practicing accountants.

Chapter Organization



2.1 Definition and Information Asymmetry

The International Accounting Standards Board (IASB) has stated that the purpose of financial reporting is "to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity. Those decisions involve buying, selling or holding equity and debt instruments, providing or settling loans and other forms of credit, or exercising rights to vote on, or otherwise influence, management's actions that affect the use of the entity's economic resources." (International Accounting Standards Board, 2019). The key elements of this definition are that information must be useful and that it must assist in the decision-making function. Although this primary definition identifies investors, lenders, and creditors as the

user groups, the IASB does acknowledge that other users may also find financial statements useful. The IASB also acknowledges two key characteristics of the financial-reporting environment. First, most users, such as shareholders or lenders, do not have the ability to access information directly from the reporting entity. Thus, those users must rely on general-purpose financial statements as well as other sources to obtain the information. Second, management of the company has access to more information than the external users, as they can access internal, nonpublic sources from the company's records. These two conditions result in *information asymmetry*, which is a key concept in understanding the purpose and development of accounting standards.

Information asymmetry simply means that one individual has more information than another individual. This concept is very easy to understand and is obviously true in all kinds of interactions that occur in your life on a daily basis. When you enter the room to write an exam, you know how much sleep you had the night before and what you ate for breakfast, but your professor does not. This type of information advantage is not very useful to you, however, as your professor is interested only in what you write on your exam paper, not the conditions that led up to those responses. In other cases, however, it is possible that you could gain an information advantage that could be useful to your performance on the exam. In the broader perspective of financial accounting, we are concerned the implications and problems that may be caused by information asymmetry. To explore this concept further, we need to consider two different forms of information asymmetry: *adverse selection* and *moral hazard*.

Adverse selection occurs because employees and managers of a company have more knowledge of the company's operations than the general public and, more specifically, investors. Because these individuals know more about the company and its potential future profitability, they may be tempted to take advantage of this knowledge. For example, if a manager of a company knew that a contract had just been signed with a new customer that was going to significantly increase revenues in the following year, the manager may be tempted to purchase shares of the company on the open market before the contract is announced to the public. By doing so, the manager may benefit when the news of the contract is released and the price of the share rises. In this case, the manager has unfairly used his or her information advantage to gain a personal benefit, which can be considered adverse to the interests of other investors. Because investors are aware of this potential problem, they may lose confidence in the securities market. This could result in investors generally paying less for shares than may be warranted by the fundamental factors of the business. The investors would do this because they wouldn't completely trust the information they were receiving. If this lack of confidence became serious or widespread, it is possible that securities markets wouldn't function at all.

The field of financial accounting clearly has a role in trying to solve the adverse selection problem. By making sufficient, high-quality information available to investors in a timely manner, accountants can reduce the adverse effects of this form of information asymmetry. However, it is impossible to eliminate the problem completely, as insiders of a company will always receive the information first. The accounting profession must thus work toward cost-effective and reasonable (but imperfect) solutions to convey useful information to investors.

Moral hazard is a different type of problem caused by an information imbalance. Except for very small businesses, most companies operate under the principle of separation of ownership and management. Shareholders can be numerous and geographically diverse; it is impossible for them to be directly involved in the running of the business. To solve this problem, shareholders hire managers to act as **stewards** of their investment. One feature of corporate law is the presumption that managers will always work toward the best interests of the company. Shareholders assume this to be true, but they do not have a very effective method of directly observing manager behaviour. Managers know this; thus, there may be an incentive – or at least an opportunity – not to work as hard or as effectively as the shareholders would like. If the company's performance suffers because of poor manager effort, the manager can always blame outside factors or other economic conditions. In extreme cases, the manager may even be tempted to manipulate financial reports to cover up poor performance.

To give shareholders the ability to monitor manager performance, financial accounting must seek ways to provide financial performance measures. Many analytical techniques use financial accounting as a basis for the calculations. However, shareholders must have confidence not only in the accuracy of the information but also in the usefulness of the information for evaluation of management stewardship. Again, there is no perfect solution here, as the complexities and qualitative features of management activity can never be perfectly captured by numbers alone. Still, financial accounting information can help investors assess the quality of the managers they hire, which can potentially reduce the moral hazard problem.

2.2 Trade-Offs

As suggested in the previous section, accounting can play a role in reducing both adverse selection and moral hazard. However, because these two problems relate to two different user needs (i.e., the need to predict future investment performance and the need to evaluate management stewardship), it is unlikely that accounting information will always be perfectly and simultaneously useful in alleviating these problems. For example, information about the current values of assets may help an investor better predict the future economic prospects of the company, particularly in the short term. However, current values may not reveal much about management stewardship, as managers have very little control over market conditions. Similarly, the depreciated historical cost of property, plant, and equipment assets can reveal something about management's decision-making processes regarding the purchase and use of these assets, but historical costs provide very little value in estimating future returns. Accounting standard setters recognize that any specific disclosure may not meet all users' needs, and as such, **trade-offs** are necessary in setting standards. Sometimes trade-offs between different user purposes are required, and sometimes the trade-off is simply a matter of evaluating the cost of producing the information compared with the benefit received. Because of these trade-offs, accounting information must be viewed as an imperfect solution to the problem of information asymmetry. Still, those who set accounting standards attempt to create the framework for the production of information that will be useful to all readers, in particular to

the primary user groups of investors, lenders, and creditors.

2.3 How Are Standards Set?

In Canada, the Accounting Standards Board (AcSB) sets accounting standards. The AcSB is an independent body whose members are appointed by the Accounting Standards Oversight Council (AcSOC). The AcSOC was established in 2000 by the Canadian Institute of Chartered Accountants (CICA) to oversee the standard setting process. Currently the AcSB receives funding, staff, and other resources from the Chartered Professional Accountants of Canada (CPA Canada).

Two distinct sets of accounting standards for profit-oriented enterprises exist in Canada: International Financial Reporting Standards (IFRS) for those entities that have public accountability and Accounting Standards for Private Enterprises (ASPE) for those entities that do not have public accountability.

The *CPA Canada Handbook* defines a publicly accountable enterprise as follows:

> An entity, other than a not-for-profit organization, that:
>
> I. has issued, or is in the process of issuing, debt or equity instruments that are, or will be, outstanding and traded in a public market (a domestic or foreign stock exchange or an over-the-counter market, including local and regional markets); or
>
> II. holds assets in a fiduciary capacity for a broad group of outsiders as one of its primary businesses. (CPA Canada, 2016)

Entities included in the second category can include banks, credit unions, investment dealers, insurance companies, and other businesses that hold assets for clients. For most of the illustrative examples in this text, we will assume that publicly traded companies use IFRS and that private companies use ASPE. Note that companies that do not have public accountability may still elect to use IFRS if they like. They may choose to do this if they intend to become publicly traded in the future or have some other reporting relationship with a public company.

ASPE are formulated solely by the AcSB and are designed specifically for the needs of Canadian private companies. IFRS, on the other hand, are created by the IASB and are adopted by the AcSB. The AcSB is actively involved with the IASB in the development of IFRS, and most IFRS are adopted directly into the *CPA Canada Handbook – Accounting*. In some rare circumstances, however, the AcSB may determine that a particular IFRS does not adequately meet the reporting needs of Canadian businesses and may thus choose to "carve out" this particular section before including the standard in the *CPA Canada Handbook*.

The IASB was formed for the purpose of harmonizing international accounting standards. This concept makes sense, as the past few decades have seen increased international trade, improvement of technologies, and other factors that have made capital more mobile. Investors who want to make choices between companies in different countries need to have some confidence that they will be able to compare reported financial results. The IASB has attempted to provide this assurance, and the use of IFRS around the world continues to grow, with partial or full convergence now in more than 140 countries.

For Canadian accountants, it is important to note that the United States still has not converged its standards with IFRS. Canada has a significant amount of cross-border trade with the United States, and many Canadian companies are also listed on American stock exchanges. In the United States, accounting standards are set by the Financial Accounting Standards Board (FASB), although the actual legal authority for standard setting rests with the Securities and Exchange Commission (SEC). The FASB has indicated in the past that it wishes to work with IASB to find a way to converge its standards with the international model. However, the FASB's standards are quite detailed and prescriptive, which makes convergence difficult. As well, a number of political factors have prevented convergence from occurring. As this point, it is difficult to predict when or if the FASB will converge its standards with the IASB.

2.4 The Conceptual Framework

According the *CPA Canada Handbook*, "the purpose of the Conceptual Framework is to:

a) assist the International Accounting Standards Board to develop IFRS Standards that are based on consistent concepts;

b) assist preparers to develop consistent accounting policies when no Standard applies to a particular transaction or other event, or when a Standard allows a choice of accounting policy; and

c) assist all parties to understand and interpret the Standards." (CPA Canada, 2019).

A solid, coherent framework of principles is important not only to standard setters who need to develop new principles in response to changes in the business environment but also to practicing accountants who may encounter unusual or unique types of business transactions on a daily basis.

The IASB and the FASB had been working on a joint conceptual framework for several years, but this project was replaced by an IASB-only project, which was completed in 2018. This framework is currently used in Canada for publicly accountable enterprises. The conceptual

framework used for private enterprises is very similar in content, although the structure, terminology, and emphasis differ slightly. We will focus on the IASB framework, which is located in Part 1 of the *CPA Canada Handbook*.

2.4.1 The Objective of Financial Reporting

The conceptual framework opens with a statement of the purpose of financial reporting, which was discussed previously in this chapter. Recall that the key components of this definition are that financial information must be useful for making decisions, primarily about investment or lending of resources to a business entity, or evaluation of management stewardship. The conceptual framework then proceeds to discuss the qualitative characteristics of useful accounting information.

2.4.2 Qualitative Characteristics of Useful Information

The conceptual framework identifies fundamental and enhancing qualitative characteristics of useful information.

The **fundamental characteristics** are

- relevance and
- faithful representation.

The **enhancing characteristics** are

- comparability,
- verifiability,
- timeliness, and
- understandability.

Fundamental Characteristics

Relevance means that information is "capable of making a difference in the decisions made by users" (CPA Canada, 2019, QC2.6). The definition is further refined to state that information is

capable of influencing decisions if it has predictive value, confirmatory value, or both. *Predictive value* means that the information can be used to assist in the process of making predictions about future events, such as potential investment returns, credit defaults, and other decisions that financial-statement users need to make. Note that although the information may assist in these decisions, the information is not in itself a prediction or forecast. Rather, the information is the raw material used by the decision maker to make the prediction. *Confirmatory value* means that the information provides some feedback about previous decisions that were made. Quite often, the same information may be useful for prediction and feedback purposes, but in different time periods. An income statement may help an investor decide to invest in a company this year, and next year's income statement, when released, will provide feedback as to whether the investment decision was correct. The framework also mentions the concept of *materiality*. A piece of information is considered material if its omission would affect a user's decision. Materiality is a concept used frequently by both internal accountants and auditors in determining the need to make adjustments for errors identified. Clearly, an item that is not deemed to be material is not relevant, as it would not affect a user's decision.

Faithful representation means that the financial information presented represents the true economic substance or state of the item being reported. This does not mean, however, that the representation must be 100 percent accurate, as perfection is rarely attainable. The *CPA Handbook* indicates that for information to faithfully represent an economic phenomenon, it must be *complete, neutral, and free from error*.

Information is complete if there is sufficient disclosure for the reader to understand the underlying phenomenon or event. This means that many financial disclosures will require additional explanations that go beyond a mere reporting of the quantitative values. Completeness is the motivation behind many of the note disclosures contained in financial statements. Because financial-statement users are trying to make predictions about future events, more detail is often needed than simply the balance sheet or income-statement amount. For example, if an investor wanted to understand a manufacturing company's requirements for future replacement of property, plant, and equipment assets, detailed information about the remaining useful lives of the assets and related depreciation periods and methods would be needed. Similarly, if a creditor wanted to assess the possible future effect on cash flows of a lease agreement, detailed information about the term of the lease, the required payments, and possible renewal options would be needed.

The neutrality concept suggests that the information is not biased and does not favour one particular outcome or prediction over another. This can often be difficult to assess, as many judgments are required in some accounting measures. There are many motivations for managers and preparers of financial statements to bias or influence the reporting of certain results. These motivations will be discussed later in this chapter. The professional accountant's role is to ensure that these biases are understood and controlled so that the reported financial results are not misleading to readers. Neutrality can also be supported by the use of prudent judgment. "Prudence is the exercise of caution when making judgments under conditions of uncertainty" (CPA Canada, 2019, QC2.16). Prudence has historically been described as a cautious attitude that does not allow for the overstatement of assets or income, or an

understatement of liabilities or expenses. However, the definition in the Conceptual Framework equally suggests that assets or income should not be understated and that liabilities or expenses should not be overstated. The Framework makes this explicit statement to suggest that asymmetry in standards is not necessary. However, there are examples of specific standards in IFRS that do have unbalanced requirements (i.e. have a requirement for more persuasive evidence when recognizing an income compared to an expense). These types of unbalanced standards are considered acceptable if they result in more relevant and faithfully representative information. The application of prudence obviously takes a high degree of skill and professional judgment. Prudence is not considered a qualitative characteristic on its own, but is rather, sound advice to the practicing accountant.

As noted previously, information that is free from errors is not a guarantee of certainty or 100 percent accuracy. Rather, this criterion suggests that the economic phenomenon is accurately described and the process at arriving at the reported amount has properly applied. There is still the possibility that a reported amount could be incorrect. For example, at the end of the fiscal year, many companies will make an allowance for doubtful accounts to reflect the possibility that some accounts receivable will not be collected. At the balance sheet date, there is no way to be 100 percent certain that the reported allowance is correct. Only the passage of time will reveal the truth about this estimate. However, we can still say that the allowance is free from error if we can determine that a logical and consistent process has been applied to determine the amount and that this process is adequately described in the financial statements. This way, readers are able to make their own assessments of the risks involved in collecting these future cash flows.

It should be noted that the presence of both of the fundamental characteristics is required for information to be useful. An error-free representation of an irrelevant phenomenon is not much use to financial-statement readers. Similarly, if a relevant measure cannot be described with any degree of accuracy, then users will not find this information very useful for predicting future cash flows.

Enhancing Characteristics

The conceptual framework describes four additional qualitative characteristics that should enhance the usefulness of information that is already determined to be relevant and faithfully represented. These characteristics are comparability, verifiability, timeliness, and understandability.

Comparability is the quality that allows readers to compare either results from one entity with another entity or results from the same entity from one year with another year. This quality is important because readers such as investors are interested in making decisions whether to purchase one company's shares over another's or to simply divest a share already held. One key component of the comparability quality is consistency. Consistency refers to the use of the same method to account for the same items, either within the same entity from one period to the next or across different entities for the same accounting period. Consistency in application of accounting principles can lead to comparability, *but comparability is a broader*

concept than consistency. Also, comparability must not be confused with uniformity. Items that are fundamentally different in nature should be accounted for differently.

The **verifiability** quality suggests that two or more independent and knowledgeable observers could come to the same conclusion about the reported amount of a particular financial-statement item. This does not mean that the observers have to be in complete agreement with each other. In the case of an estimated amount on the financial statements, such as an allowance for doubtful accounts, it is possible that two auditors may agree that the amount should fall within a certain range, but each may have different opinion of which end of the range is more probable. If they agree on the range, however, we can still say the amount is verifiable. Verification may be performed by either directly observing the item, such as examining a purchase invoice issued by a vendor, or indirectly verifying the inputs and calculations of a model to determine the output, such as reviewing the assumptions and recalculating the amount of an allowance for doubtful accounts by using data from an aged trial balance of accounts receivable.

Timeliness is one of the simplest but most important concepts in accounting. Generally, information needs to be current to be useful. Investors and other users need to know the economic condition of the business at the present moment, not at some previous period. However, past information can still be useful for tracking trends and may be especially useful for evaluating management stewardship.

Understandability is the one characteristic that the accounting profession has often been accused of disregarding. It is generally assumed that readers of financial statements should have a reasonable understanding of business issues and basic accounting terminology. However, many business transactions are inherently complex, and the accountant faces a challenge in crafting the disclosures in such a way that they completely and concisely describe the economic nature of the item while still being comprehensible. Financial disclosures should be reviewed by non-specialist, knowledgeable readers to ensure the accountant has achieved the quality of understandability.

As mentioned previously, accountants are often faced with trade-offs in preparing financial disclosures. This is especially true when considering the application of the various qualitative characteristics. Sometimes, the need for timeliness may result less-than-optimal verifiability, as verification of some items may require the passage of time. As a result, the accountant is forced to make estimations in order to ensure the information is available within a reasonable time. As well, all information has a cost, and companies will carefully consider the cost of producing the information compared with the benefits that can be obtained from the information, such as improving relevance or faithful representation. These challenges point to the conclusion that accounting is an imperfect measurement system that requires judgment in both the preparation and interpretation of the information.

2.4.3 Elements of Financial Statements

The *CPA Canada Handbook* includes a section describing a number of essential financial-statement elements. This section is not intended to be an exhaustive list of each item that could appear on the financial statements. Rather, it describes broad categories of financial-statement elements and defines them using key concepts that identify the essential elements of each category. These broadly based definitions will require the accountant to use judgment in the determination of the nature and the specific treatment and disclosure of business transactions. However, the accountant's judgment can also help ensure that financial statements properly reflect the underlying economic nature of the transaction, not just the legal form that may have been designed to circumvent more specific rules.

An Underlying Assumption

Before commencing a detailed examination of elements of financial statements, it is important to understand the key assumption underlying the reporting process. It is normally assumed that companies are operating as a *going concern*. This means that the company is expected to continue operating into the foreseeable future and that there will be no need to liquidate significant portions of the business or otherwise materially scale back operations. This assumption is important, because a company that is not a going concern would likely need to apply a different method of accounting in order not to be misleading. If a company needed to liquidate equipment at a substantial discount due to bankruptcy or other financial distress, it would not be appropriate to carry those assets at depreciated cost. In situations of financial distress, the accountant needs to carefully consider the going-concern assumption in determining the correct accounting treatment.

Assets

An asset is the first financial-statement element that needs to be considered. In the simplest sense, an asset is something that a business owns. The *CPA Canada Handbook* defines an asset as "a present economic resource controlled by the entity as a result of past events" (CPA Canada, 2019, 4.3). The definition further states that an economic resource is a right that can produce economic benefits. The key point in this definition is that economic benefits are expected to be received at some point in the future as a result of holding the resource. The most obvious benefit is the future inflow of cash. This can be seen very clearly with an item such as inventory held by a retail store, as the store expects to sell the items in a short period of time to generate cash. However, an asset could also be a piece of equipment installed in a factory that reduces the consumption of electricity by production processes. Although this equipment will not directly generate a future cash inflow, it does reduce a future cash outflow. This is also considered an economic benefit. The use of the term "right" in the definition also suggests other types of relationships, such as the right to use a patented process or the right to receive a favourable amount under a derivative contract. Rights are often established by a legal contract or enacted legislation, but there are other ways that rights can be considered assets, even without legal form. It is also important to note that the right must be capable

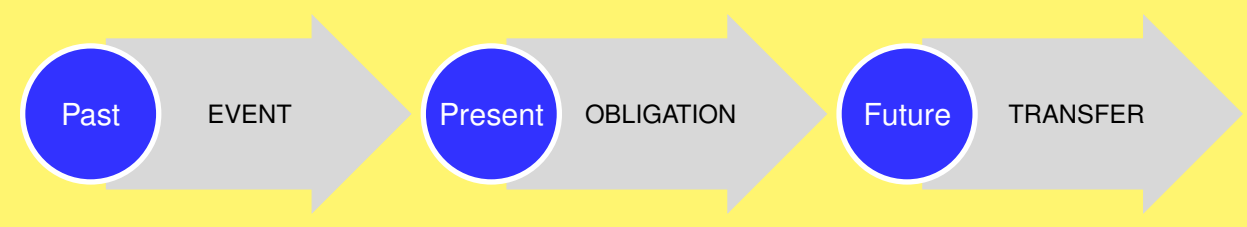
of producing benefits beyond those available to other parties. An artistic work that is legally available in the public domain cannot be considered an asset to an entity, since other parties can also equally access the work.

Many assets have a tangible, or physical, form. However, some assets, such as accounts receivable or a patent, have no physical form. In the case of an account receivable from a customer, the future benefit results from the legal right the company holds to enforce payment. For a patent, the future benefit results from the company's ability to sell its product while maintaining some protection from competitors. Cash in a bank account does not have physical form, but it can be used as a medium of exchange.

It should also be noted that, although we can generally think of assets as something we own, the actual legal title to the resource does not necessarily need to belong to the company for it to be considered an asset. A contract, such as a long-term lease that conveys benefits to the leasing party over a significant portion of the asset's useful life may be considered an asset in certain circumstances.

Liabilities

A liability is defined as "a present obligation of the entity to transfer an economic resource as a result of past events." (CPA Canada, 2019, 4.26). This definition can be visualized through a time-continuum graphic:



When we prepare a balance sheet, it represents the present moment, so the obligation gets reported as a liability. This obligation is often a legal obligation, as in the case when goods are purchased on account, resulting in an accounts payable entry, or when money is borrowed from a bank, resulting in a loan payable. As well, this legal obligation can exist even in the absence of a formal contract. A company still has to report wages payable for any work performed by an employee but not yet paid, even if that work was performed under the terms of an informal, casual labour agreement.

Liabilities can also result from common business practice or custom, even if there is no legally enforceable amount. If a retailer of mobile telephones agrees to replace one broken screen per customer, then the expected cost of these replacements should be reported as a liability, even if the damage resulted from the customer's neglect and there is no legal obligation to pay. This type of liability is referred to as a constructive obligation. As well, companies may record

liabilities based on equitable principles. If a company significantly reduces its workforce, it may feel a moral obligation to provide career transition counselling to its laid-off employees, even though there is no legal obligation to do so. In general, an obligation is considered a duty or responsibility that an entity has no practical ability to avoid.

The settlement of the liability usually involves the future transfer of cash, but it can also be settled by transferring other assets. As well, liabilities are sometimes settled through the provision of services in the future. A health club that requires its members to pay for one year's fees in advance has an obligation to make the facilities available to its members for that time. Less common ways to settle liabilities include replacing the liability with a new liability and converting the liability into equity of the business. It should be noted that the determination of the value of the liability to be recorded sometimes requires significant judgment. An example of this would be the obligation under a pension plan to make future payments to retirees. We will discuss this estimation problem in more detail in later chapters dealing with liabilities.

Equity

Equity is the owners' residual interest in the business, representing the remaining amount of assets available after all liabilities have been settled. Although equity can be thought of as a balancing figure, it is usually subdivided into various categories when presented on the balance sheet. Many of these classifications are related to legal requirements regarding the ownership interest. The usual categories of equity include share capital, which can include common and preferred shares, retained earnings, and accumulated other comprehensive income (IFRS only). However, other types of equity can arise on certain types of transactions, such as contributed surplus, appropriated retained earnings, and other reserves that may be allowed under local law. The purpose of all these subcategories of equity is to give readers enough information to understand how and when the owners may be able to receive a distribution of their interests. For example, restrictions on retained earnings or levels of preferences on shares issued may constrain the future payment of dividends to common shareholders. A potential investor would want to know this before investing in the company.

It should also be noted that the company's reported equity does not represent its value, either in a real sense or in the market. The prices that shares trade at in the stock market represent the cumulative decisions of investors, based on all information that is available. Although financial statements form part of this total pool of information, there are so many other factors used by investors to value a company that it is unlikely that the market value of a company would equal the reported amount of equity on the balance sheet.

Income

Income is defined as "increases in assets, or decreases in liabilities, that result in increases in equity, other than those relating to contributions from holders of equity claims." (CPA Canada, 2019, 4.68). Notice that the definition is based on presence of changes in assets or liabilities, rather than on the concept of something being earned. This represents the *balance sheet approach* used in the conceptual framework, which considers any measure

of performance, such as profit, to simply be a representation of the change in balance sheet amounts. This perspective is quite different from some historical views adopted previously in various jurisdictions, which viewed the primary purpose of accounting to be the measurement of profit (an income-statement approach).

Income can include both *revenues* and *gains*. Revenues arise in the course of the normal activities of the business; gains arise from either the disposal of noncurrent assets (realized gains) or the revaluation of noncurrent assets (unrealized gains). Unrealized gains on certain types of assets are usually included in *other comprehensive income*, a concept that will be discussed in later chapters.

Expenses

Expenses are defined as "decreases in assets, or increases in liabilities, that result in decreases in equity, other than those relating to distributions to holders of equity claims." (CPA Canada, 2019, 4.69). Note that this definition is really just the inverse of the definition of income. Similarly, expenses can include those that are incurred in the regular operation of the business and those that result from *losses*. Again, losses can be either realized or unrealized, and the definition is the same it was for gains.

2.4.4 Recognition

Items are recognized in financial statements when they meet the definition of a financial statement element. (CPA Canada, 2019, 5.6). However, the Conceptual Framework acknowledges that there may be circumstances when an item that meets the definition of an element is still not recognized, because doing so would not provide useful information. In referencing usefulness, the Framework is acknowledging the fundamental qualitative characteristics of relevance and faithful representation. If it is uncertain whether an asset or liability exists, or if the probability of an inflow or outflow of economic benefits is low, it is possible that recognition is not warranted, since the relevance of the information is questionable. Similarly, if the measurement uncertainty present in estimated amounts were too great, the element would not be faithfully represented, and accordingly, should not be recognized. It is also possible that if the costs of recognition outweigh the benefits to users of the financial statements, the item will not be recognized.

Recognition means the item is included directly in one of the financial statements and not simply disclosed in the notes. However, if an item does not meet the criteria for recognition, it may still be necessary to disclose details in the notes to the financial statements. A pending lawsuit judgment at the reporting date may not meet the criterion of measurement certainty, but the possible future impact of the event could still be of interest to readers.

2.4.5 Measurement Base

The Conceptual Framework also notes that once recognition is affirmed, the appropriate **measurement base** needs to be considered. The following measurement bases are identified in the conceptual framework:

- Historical cost
- Current value, which includes
  - Fair value
  - Value in use/fulfilment value, and
- Current cost

Historical cost is perhaps the most well-entrenched concept in accounting. This simply means that items are recorded at the actual amount of cash paid or received at the time of the original transaction. This concept has persisted in accounting thought for so long because of its relative reliability and verifiability. However, the concept is often criticized because historical cost information tends to lose relevance as time passes. This can be particularly true for long-lived assets, such as real estate.

The **current value** concept results in elements being reported at amounts that reflect current conditions at the measurement date. This measurement base tries to achieve greater relevance by using current information, but it may not always be possible to represent this information faithfully when active markets for the item do not exist. It may be very difficult to find the current cost of a unique or specialized asset that was purpose built for a company.

Fair value is the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date (CPA Canada, 2019, 6.12). This amount can be easily determined when active markets exist. However, if there is no active market for the item in question, the fair value may still be estimated using a discounted cash flow technique. Obviously, the more assumptions required in deriving the fair value, the more measurement uncertainty will exist.

Value in use is also a discounted cash flow technique. It differs from fair value in that it uses entity specific assumptions, rather than market assumptions. In other words, the entity projects future cash flows based on the specific way it uses the asset in question, rather than cash flows based on market assumptions about the use of the asset. In many cases, fair value and value in use may result in the same valuation, but this is not necessarily true in all cases.

Current cost is the cost to acquire an equivalent asset at the measurement date. This cost will include any transaction costs to acquire the asset, and will take into consideration the age

and condition of the asset, along with other factors. Current cost represents an entry value, while fair value and value in use represent exit values.

All of the measurement bases identified have both strengths and weaknesses in terms of their overall decision usefulness for readers. Thus, there are always trade-offs and compromises evident when accounting standards are set. It is not surprising, then, to see that current accounting standards are a hybrid, or conglomeration, of these different bases. Historical cost is still the most common base used, but many accounting standards for specific items will allow or require other bases as well.

It should be noted that the *Conceptual Framework's* discussion of measurement bases should be read in conjunction with *IFRS 13 – Fair Value Measurement*. While the *Conceptual Framework* provides a broad overview of possible measurement bases, IFRS 13 provides more specific guidance on how to determine fair value. Fair value is a concept that is applied to a number of different accounting transactions under IFRS. IFRS 13 suggests that valuation techniques should maximize the use of observable inputs and minimize the use of unobservable inputs. The standard further applies a hierarchy to those inputs to assist the accountant in assessing the quality of the data used for valuation. Level 1 of the hierarchy represents unadjusted, quoted prices in active markets for identical assets or liabilities. Level 2 inputs are those that are directly or indirectly observable but do not meet the definition of Level 1. This could include quoted prices from inactive markets or quoted prices for similar (but not identical) assets. Level 3 inputs are those that are unobservable. In this case, valuation techniques that require the use of assumptions and calculations of future cash flows may be required. IFRS 13 recommends that Level 1 inputs should always be used where possible. Unfortunately, Level 1 inputs are often unavailable for many assets. The application of fair-value accounting as described in IFRS 13 will be discussed in more detail in subsequent chapters.

2.4.6 Capital Maintenance

The last section of the conceptual framework deals with the concept of *capital maintenance*. This is a broader economic concept that attempts to define the level of capital or operating capability that investors would want to maintain in a business. This is important for investors because they ultimately want to earn a return on their invested capital in order to achieve growth in their overall wealth. However, measuring this growth will depend on how capital is defined.

The conceptual framework identifies two broad approaches to this question. The measurement of the owners' wealth can be defined in terms of **financial capital** or in terms of **physical capital**.

Financial capital maintenance is measured simply by the changes in equity reported on the company's balance sheet. These changes can be measured either in terms of money invested or in terms of purchasing power. The *monetary interpretation* is consistent with the approach

used in historical cost accounting, where wealth is measured in nominal units (dollars, euros, etc.). This is a simple and reasonable approach in the short term, but over longer periods, monetary values are less relevant due to inflation. A dollar in 1950 could purchase much more than it could in 2020, so comparisons of capital over longer periods become meaningless. One way to get around this problem is to apply a *constant purchasing power* model to capital maintenance. This attempts to apply a broad-based index, such as the Consumer Price Index, to equity in order to adjust for the effects of inflation. This should make financial results more comparable over time. However, it is very difficult to conclude that a broad-based index is representative of the actual level of inflation experienced by the company, as the company would be selling and purchasing goods that are different from those included in the index.

The concept of *physical capital maintenance* attempts to get around this problem by measuring productive capacity. If a company can maintain the same level of outputs year after year, then it can be said that capital is maintained, even if the nominal monetary amounts change. This approach essentially represents the rationale behind the current cost-measurement base. The difficulty in using this approach is that current cost information about each specific asset in the business would be prohibitively expensive to obtain. If, instead, the company tried to apply a general index of prices for its specific industry, it is unlikely that this index would accurately match the specific asset composition of the company.

The conceptual framework concludes that the framework will not prescribe or require a specific model because there are so many trade-offs required in determining the appropriate capital maintenance model. Rather, the framework suggests that needs of financial-statement users should be considered in determining the appropriate model.

2.5 Challenges and Opportunities in Financial Reporting

As noted in the introduction to this chapter, confidence in financial markets and the accounting profession were shaken in the early 2000s. A series of accounting scandals, perhaps most notably Enron Corporation's, resulted in questioning the role of the information providers and the need for further regulation. One response, indeed, to these problems was the introduction of further regulation. In the United States, the Sarbanes-Oxley Act (SOX) was introduced in 2002 to restore the confidence in financial markets that had been so badly shaken after the accounting scandals. This legislation tightened up auditor independence rules, introduced new levels of oversight, created additional penalties for company executives engaged in fraudulent reporting, and improved other disclosure requirements. There have been improvements observed in disclosure practices since the introduction of SOX, but these improvements have come with a cost. Some estimates have put the cost of SOX compliance at $6 billion per year. This is significant, but in assessing this cost, it is also important to consider the benefits. The major benefit that results from legislation like SOX is the potential reduction of market failures. When scandals such as the one at Enron occur, the loss is borne not only by shareholders but also by employees, other companies, and the general public, who will feel the effect of

any recession or economic slowing that results from reduced confidence in the markets. But although the nature of the benefit is clear, the quantification of it is not. It is very difficult to measure the reduction of market failures that has occurred due to legislation, because if the legislation worked, there would be nothing to measure.

It would be unrealistic to suggest that regulation could completely eliminate any problem as complex as information asymmetry. Although SOX did appear to be effective in improving financial practices and disclosures, it did not prevent the 2008 financial crisis and subsequent market meltdown. This is likely because the causes of this crisis were not primarily matters of accounting and reporting – rather, they were related to the regulation and practices of the investment-banking industry. So the argument can be made that further regulations are required. But the regulator faces the challenge to determine the appropriate amount of regulation. Too little regulation can allow fraudulent practices to continue, but too much can stifle business initiative and growth.

One response by the accounting profession to the need for the further regulation has been the development of IFRS. These standards were introduced at the time that financial crises were shaking the financial world in the early 2000s. IFRS are viewed as being more **principles based** relative to other standards, such as the United States' Generally Accepted Accounting Principles (GAAP), which has historically been more **rules based**. Principles-based standards present a series of basic concepts that can be used by professional accountants to make decisions about the appropriate accounting treatment of individual transactions. These concepts are often intentionally broad and often do not provide specific, detailed guidance to the accountant. Rules-based standards, on the other hand, are more prescriptive and detailed. These standards attempt to create a rule for any situation that may be encountered by the accountant. Accordingly, the body of knowledge is much larger, with much more specific detail regarding accounting treatments.

Principles-based standards are usually considered to have the advantage of being more flexible, as they allow for more interpretation and judgment by the accountant. This can be particularly useful when unusual or unique business transactions are presented to the accountant. However, this flexibility is one of the weaknesses of this approach. Some fear that giving too much freedom to the accountant to interpret the accounting standards may result in financial statements that are less comparable to those of other entities or that could be subject to increased earnings management or other manipulations.

Because rules-based systems have far greater detailed guidance, some have argued that this is better for the accountant, as the accountant can defend the treatment of a particular transaction by simply pointing to compliance with the rule. As well, it is thought that rules-based systems can also lead to greater comparability, as much of the format and content of disclosure are tightly prescribed. Unfortunately, overly detailed rules can still allow for a different type of misrepresentation called *financial engineering*. When an accounting treatment relies on specific and detailed rules, creative managers can simply invent a new type of transaction that works around the existing rules. They will argue that the rule does not specifically prohibit them from doing what they are doing, but the engineered transaction may, in fact, be violating

the spirit of the rule. Interpretations that focus more on the form of the transaction than on the substance can lead to inappropriate and ultimately misleading accounting. As a practical matter, all systems of accounting regulation contain both broadly based principles and detailed rules. The challenge for accounting standard setters is to find the right balance of rules and principles.

It should be apparent that many of the problems faced by the accounting profession stem from the questionable application of ethical principles. As noted before, the broad purpose of accounting information is to reduce information asymmetry. Information asymmetry can never be eliminated, but if accountants can communicate sufficient, useful information, then the asymmetry can be mitigated. Although it is a normal business practice to try to take advantage of an information imbalance, if this is done in a misleading or deceitful way that unfairly disadvantages certain parties, confidence in capital markets will be damaged. The accountant, in trying to provide as much information as possible to clients, will face pressure from those vested interests that stand to gain from the information imbalance. The accountant may be asked to withhold or distort the information to achieve certain results. Often, these pressures are subtle and not presented as a clear-cut violation of accounting standards. Business transactions can be complex, and the application of accounting standards to those transactions can involve significant judgment, estimation, and uncertainty. The answer to an accounting question may not be clear, and certain interested parties may view this state as an opportunity to try to influence the accountant.

The management of a company often has a particular interest in trying to influence financial reports. Managers are given the task by the shareholders of managing the business in the most efficient and profitable way possible. Managers face great pressures in the task and will at times look at the financial reporting as one tool to be used to deal with these pressures. Managers may be motivated to influence or bias the reported financial results for a number of reasons, including the following:

- *The presence of performance-based compensation*: Managers may be rewarded in bonuses or stock options that are directly or indirectly influenced by financial results. The manager clearly has an incentive to make the results look positive.
- *Evaluation of management stewardship*: Even if the manager is not directly compensated based on results, the manager's value to the company will still be evaluated relative to the business's performance.
- *Meeting market expectations*: Financial markets expect results and can be very punitive when expected results are not achieved. In order to meet the market's expectations with respect to performance, the manager may feel pressure to "work the numbers."
- *Conditions of contracts*: Some contracts, such as a loan agreement with a bank, may stipulate that certain financial ratios be maintained. If the ratios are not maintained, then some punitive consequence will likely be applied, such as a penalty or additional interest charges. As the financial ratio is based on reported results, the manager has an incentive to ensure the results keep the company onside.

- *Political pressures*: Sometimes a company may face pressures that are not directly related to the interests of the investors or lenders. A large, profitable company that enjoys a certain level of oligopolistic power may face additional public scrutiny if profits are too high. Public-interest groups may feel that the company is taking advantage of its position of power, and they may demand political action, such as increased taxes or other sanctions against the company. In order to avoid this type of political heat, the managers may have an incentive to deliberately reduce or smooth income.

In these examples, it should be apparent that the accountant could play a key role in the achievement of management's objectives. The accountant must therefore always be aware of these motivations and apply sound judgment and ethical principles. But the application of ethics is not simply a matter of consulting an ethics handbook. An ethical sense is a personal characteristic that is inherent in each individual. It is very difficult to teach, as our personal ethics are formed long before we choose to become professional accountants. **Ethical awareness and practice**, however, is something for which the accounting profession has developed a significant framework.

All professional bodies contain **codes of conduct** for their members. In these codes, basic principles of ethical behaviour and discussions of how to deal with ethical conflicts are included. Some of the common principles that are included in these codes include the following:

- *Integrity*: The accountant should always act in an honest fashion and not be associated with any information that is false or misleading.
- *Objectivity*: The accountant should always be unbiased when applying judgment.
- *Professional competence*: The accountant should always maintain a level of professional knowledge that is current and sufficient for performing professional duties and should not engage in any work that is outside the scope of that accountant's knowledge.
- *Confidentiality*: The accountant must not share privileged client information with other parties and must not use that information for his or her own personal gain.
- *Professional behaviour*: The accountant should not engage in any activity that discredits the profession.

Dealing with ethical conflicts and external pressures from stakeholders can be difficult at times, and accountants are often advised to seek advice from other professionals or their own professional association when the need arises. Accountants play a key role in the operation of capital markets and are essential to the financing of a business. The external stakeholders of the business expect ethical and professional conduct from the accountants, and it is important the profession continues to earn and maintain this trust.

Another area which provides both challenges and opportunities to professional accountants is the increasing use of information technology to perform accounting and reporting functions. Technology has allowed for the automation of routine bookkeeping tasks, as well as the development more advanced functions such as data mining and strategic analysis. The increased use of cloud computing and mobile devices has provided platforms for instant access to information, which could enhance the qualitative characteristic of timeliness. Sophisticated big data applications could improve the relevance of accounting information by targeting the specific needs of the user. Technologies such as eXtensible Business Reporting Language (XBRL) have been designed to improve the comparability of information by providing a standardized platform for financial statement delivery. Computer assisted audit tools and techniques allow auditors to more precisely identify key areas of audit risk and to analyze larger sample sizes, which could lead to improvements in the reliability of information and the efficiency of the process. The emergence of blockchain technology may provide the biggest challenge and opportunity to the auditing profession. This type of decentralized, public ledger has the potential to allow for instant access and verification of transactions. Smart contract technology could use blockchain to automate and control many accounting and business processes. As blockchain has the potential to create unalterable, transparent accounting records, auditors will need to rethink the traditional, annual financial statement audit. Continuous auditing and verification of the structure of smart contracts may become the new role for audit professionals.

Recently, the growth of data analytics has begun to change the job of the accountant, and will likely continue to promote a profound alteration of the accounting and finance fields. The automation of routine and tedious tasks is only the beginning of the transformation of the role of financial professionals. Data analytics can be used to add value to an organization through descriptive, diagnostic, predictive, or prescriptive functions. The accountant of the future will need to be able to understand how to use both structured and unstructured data to solve business problems. Although accountants may not be experts in data analysis, they can provide valuable input and interpretation of the information created by data scientists. The accountant will need to work collaboratively with data scientists to ensure that the right questions are being asked, and the results are being deciphered in a meaningful way. Taking the results of data analysis and communicating them through data visualization techniques will provide value to the users of financial information.

Although technology provides professional accountants with opportunities to improve the value of the information provided, it also poses challenges. XBRL has experienced problems with data-tagging errors, which has reduced its effectiveness. Cloud computing and mobile devices have increased concerns about data security and economic disruption. Data mining strategies have led to ethical questions about the privacy of personal information. Real-time reporting of financial results faces concerns about data reliability, and more significantly, the alteration of manager behaviour (i.e., earnings management). Professional accountants need to be aware of these challenges as they adapt to rapidly changing technologies that have the potential to both benefit and damage the reputation of the profession.

2.6 Conclusion

The accounting profession has seen tremendous transformation over the last forty years, brought about by changes in technology, the sophistication of capital markets, the business environment, and business practices. The profession has responded well to many of these changes, but it needs to continue to seek ways to maintain and improve its own relevance. At no time in history has so much information been so easily available to so many people. But how can people be assured that the information is both true and relevant? The accounting profession – if it is forward looking and responsive – has the ability to provide this assurance to information users, which will enhance the perceived value of accountants. There are many challenges to be faced by the profession, and some of these challenges will require solid research and reasoning and delicate political and negotiation skills. Because accounting is not a natural science, there are no "right" or "wrong" answers, but as long as the profession can come up with the "best" answers, it will continue to demonstrate its value.

2.7 IFRS/ASPE Key Differences

Part II of the *CPA Canada Handbook* does not specifically refer to a conceptual framework. However, Section 1000–Financial Statement Concepts contains many of the same principles as identified in the IASB *Conceptual Framework*. Some of the key differences are identified below:

IFRS	ASPE
Two fundamental, qualitative characteristics are relevance and faithful representation. Comparability and understandability are considered enhancing qualitative characteristics.	Four principal qualitative characteristics are relevance, reliability, comparability, and understandability.
Timeliness is considered an enhancing qualitative characteristic.	Timeliness is included as a sub-element of relevance.
Verifiability is considered an enhancing qualitative characteristic.	Verifiability is a sub-element of reliability.
Faithful representation includes completeness, neutrality, and freedom from error.	Reliability includes representational faithfulness, verifiability, neutrality, and conservatism. Prudence is a concept that supports neutrality.
Gains are included in the element "income," and losses are included in the element "expenses."	Gains and losses are identified as separate elements of financial statements.
Three types of capital maintenance concepts are identified, but no prescribed or preferred approach is indicated.	Only a monetary measure of capital maintenance should be used, with no adjustment for changes in purchasing power.

Chapter Summary

LO 1: Identify the purpose of financial reporting.

The purpose of financial reporting is to provide information that is useful for making decisions about providing resources to the business. The primary user groups are identified as present and potential investors, lenders, and other creditors, although other users will also find financial information useful for their purposes.

LO 2: Describe the problem of information asymmetry, and discuss how this problem can affect the production of financial information.

Information asymmetry simply means there is an imbalance of information between two parties in a business transaction. This imbalance can create problems in two forms: adverse selection and moral hazard. Adverse selection means that one party may try to gain a benefit over the other party by exploiting the information advantage. An example of this behaviour is insider trading. If insider trading is perceived by the market as being a pervasive problem, investors may lose confidence in the market, and security prices will drop. The accounting profession can alleviate this problem by increasing the amount of relevant and reliable information disclosed to the market, thus reducing the information advantage of insiders. Moral hazard occurs when managers shirk their duties because they know their efforts cannot be directly observed. In order to cover up shirking, managers may bias the presentation of financial results. The accounting profession can help alleviate this problem by ensuring financial-reporting standards create disclosures that are useful in evaluating management performance and are not easily manipulated by management.

LO 3: Describe how accounting standards are set in Canada, and identify the key entities that are responsible for setting standards.

Currently, accounting standards are set by the Accounting Standards Board (AcSB). This board applies two sets of standards: International Financial Reporting Standards (IFRS) and Accounting Standards for Private Enterprise (ASPE). IFRS are required for all publicly accountable entities, while private entities have the choice to use ASPE or IFRS. IFRS are developed by the International Accounting Standards Board (IASB) and then adopted by the AcSB. However, the AcSB can remove or alter certain sections of IFRS if it is believed that the accounting treatment does not reflect Canadian practice.

LO 4: Discuss the purpose of the conceptual framework, and identify the key components of the framework.

The conceptual framework provides a solid, theoretical foundation for standard setters when they have to develop new standards to respond to changes in the business environment. It also gives practicing accountants a basis and reference point to use when encountering new or unique business transactions. The key components of the framework describe the purpose of financial reporting, identify the qualitative characteristics of good accounting information and the elements of financial statements, and discuss the criteria for recognizing an item in financial statements, different possible measurement bases, and the framework's approach to capital maintenance.

LO 5: Describe the qualitative characteristics of accounting information.

The fundamental characteristics of accounting information are relevance (which is composed of both predictive and confirmatory characteristics) and faithful representation (which is composed of freedom from error, neutrality, and completeness). Relevance will also be affected by the concepts of materiality and the nature of the item. Enhancing qualitative characteristics are understandability, comparability, verifiability, and timeliness. Trying to meet the requirements of all the characteristics can sometimes result in trade-offs, and this must always be evaluated in the context of costs compared with potential benefits.

LO 6: Identify the elements of financial statements.

The elements of financial statements are assets, liabilities, equity, income, and expenses. The definition of each element contains references to the relationships between events and their time of occurrence, and each definition broadly describes the nature of the element. An underlying assumption in the preparation of financial statements is that the entity will continue as a going concern.

LO 7: Discuss the criteria required for recognizing an element in financial statements.

An element will be recognized in financial statements when it meets the definition of that element and can be measured reliably, and when it is probable that the future economic benefits attached to the element will flow to or from the entity.

LO 8: Identify different measurement bases that could be used, and discuss the strengths and weaknesses of each base.

The conceptual framework identifies four possible measurement bases: historical cost, current cost, realizable value, and present value. Historical cost forms the basis of much of current accounting practice, but other bases are used in circumstances where it is deemed appropriate. Each measurement base has certain advantages and disadvantages, and the choice of measurement base will often result in a trade-off in decision usefulness.

LO 9: Identify the alternative models of capital maintenance that could be applied.

The conceptual framework identifies three possible capital-maintenance models: monetary interpretation, constant purchasing power, and physical capital maintenance. Each model has certain advantages and disadvantages. Current accounting practice is built around the concept of monetary capital maintenance, but the conceptual framework does not identify one model as being preferred over the others.

LO 10: Discuss the relative strengths and weaknesses of rules-based and principles-based accounting systems.

Rules-based systems are seen as providing more detailed guidance to accountants, which could help accountants defend their work if challenged. As well, rules-based systems are thought to provide better comparability, as more consistent presentations will result. However, rules-based systems can also result in financial engineering, where transactions are designed specifically to circumvent the rules. Principles-based systems are seen as more flexible and more adaptive to new or unique circumstances. As well, principles-based systems can result in presentations that better reflect local or industry practices. Principles-based systems are criticized for being too flexible and allowing for too much judgment by the accountant. This could create the potential for management influence on the accountant's work.

LO 11: Discuss the possible motivations for management bias of financial information.

Management may be tempted to bias or otherwise influence the presentation of financial information because of compensation contracts that are based on financial results. As well, the manager will be concerned about meeting investor or analyst targets, meeting the conditions of loan covenants or other external agreements, achieving certain political or strategic objectives,

and demonstrating sound stewardship over the company's assets. All of these motivations provide a temptation to the manager to influence the results reported in the financial statements.

LO 12: Discuss the need for ethical behaviour by accountants, and identify the key elements of the codes of conduct of the accounting profession.

As accountants control the preparation and presentation of financial information, they play a key role in determining the integrity of the information. Accountants will face pressures from management and other parties who may have an interest in the content and form of financial disclosures. Thus, accountants, need to practice their craft with an ethical mindset, but they must also have training in how to deal with ethical issues. All accounting bodies have codes of professional conduct that provide guidance to suggest that accountants always act with integrity, objectivity, and competence. As well, these codes usually specify that accountants should always maintain confidentiality and act in a professional manner. Accountants will often have to apply significant good judgment when dealing with ethical conflicts.

LO 13: Identify the effects on the accounting profession of changes in information technology.

Information technology has the potential to improve the relevance, reliability, timeliness, and comparability of information presented. It can allow accountants and auditors to provide more useful information and to more accurately identify risks. However, accountants also need to be aware that these technologies need to be managed carefully to minimize problems that could negatively affect the quality of information provided.

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Exercises

EXERCISE 2–1

Describe the problem of information asymmetry and discuss the impact this problem has on the work of accountants.

EXERCISE 2–2

Discuss the reasons why Canada applies two different sets of accounting standards to profit-oriented companies. What are the benefits of having two sets of standards? What are the problems of maintaining two sets of standards?

EXERCISE 2–3

What is the conceptual framework? Why does the accounting profession need this framework?

EXERCISE 2–4

Describe the two fundamental qualitative characteristics of good accounting information. What problems do accountants face in trying to maximize these characteristics when producing accounting information?

EXERCISE 2–5

Describe the four enhancing qualitative characteristics and identify conflicts where possible trade-offs may occur in trying to maximize these characteristics.

EXERCISE 2–6

Identify which of the five financial statement elements applies to each item described below:

a. A cash dividend is declared and paid to the shareholders.

b. Cash is used to purchase a machine that will be used in the production process over the next five years.

c. Products are sold to customers on 30-days' credit

d. Income taxes are calculated based on a company's profit. The taxes will be paid next year.

e. A customer makes a deposit on a special order that will not be manufactured until next year.

f. A bill for electricity used in the current month is received but not payable until the following month.

g. A shareholder invests money in a business in exchange for issued shares.

h. A shareholder invests money in a business by making a loan with commercial terms to the business.

i. An insurance settlement is received for a fully depreciated asset that was destroyed in a fire.

j. An allowance for doubtful accounts is established based on estimates of future uncollectible accounts.

EXERCISE 2–7

Consider the following independent situations. For each of the situations described, discuss how the recognition criteria should be applied and suggest the appropriate accounting treatment.

a. A publisher sells magazines on a two-year subscription. Customers are required to pay the full amount at the commencement of the subscription.

b. A company is being sued by a customer group for losses sustained due to a faulty product design. The company's lawyers feel the suit will likely succeed, but they cannot estimate the potential amount of damages that will be awarded.

c. A company has completed a large infrastructure construction project as part of an economic development partnership with a foreign government. The invoice for the work has been issued, but due to a recent change in government, there is some doubt about whether payment will actually be received.

d. A social media company has recorded an asset described as "Goodwill" and an offsetting amount in its equity section. The amount was determined by comparing the current trading value of the company's shares to the recorded value of the company's shares on the balance sheet.

e. A resource company is obligated by municipal regulations to clean up the site of an active drilling operation in 10 years' time when the resource has been fully extracted. The company is in its first year of operations and has no previous experience in cleaning up drilling sites.

EXERCISE 2–8

Describe the four different measurement bases and discuss the relative strengths and weaknesses of each base.

EXERCISE 2–9

What are some of the difficulties in trying to determine the best concept of capital maintenance to apply to the development of accounting standards?

EXERCISE 2–10

Discuss the relative merits and weaknesses of principles-based and rules-based accounting systems.

EXERCISE 2–11

What are some of the motivations that managers may have for attempting to influence or bias reported financial results? What should the accountant do to deal with these possible attempts to affect the perceptions of the company's results?

EXERCISE 2–12

You have just been appointed financial controller at Dril-Tex Inc., a manufacturer of specialized equipment used by various manufacturers of consumer products on their own production lines. Your immediate supervisor, the vice-president finance, has indicated that he will be retiring in six months and that you could be in line for his position if you do a good job managing the preparation of the year-end financial statements. He has provided you with the following comments for your consideration during the preparation of these statements:

a. The company is currently being sued for breach-of-contract by one of our largest customers. This case has been ongoing for two years and will likely reach a conclusion next year. Our lawyers have now estimated that it is likely we will lose, and that the award will probably be in the range of $250,000 to $300,000. We have disclosed this previously in our notes, but have not accrued anything. Use the same treatment this year, as the case is not yet completed.

b. We have changed our inventory costing method this year from weighted-average to

FIFO. This has resulted in an increase in net income of $115,000. The new method should be identified in the accounting policy note.

c. There are $50,000 worth of customer prepayments included in the Accounts Receivable sub-ledger. The customers have paid these amounts to guarantee their priority in our production cycle, but no work has yet been done on their special orders. We will just net these prepayments against the Accounts Receivable balance and report a single amount on the balance sheet.

d. This year we hired a director of research and development. He has not yet produced any viable products or processes, but he was a top performer at his previous company. We have capitalized the cost of his salary and benefits, as we are confident he will soon be producing a breakthrough product for us.

e. Our bank has put us on warning that our current ratio and debt-to-equity ratio are close to violation of the covenant conditions in our loan agreement. Violations will likely result in an increase in the interest rate the bank charges us. Keep this in mind as you prepare the year-end adjustments.

Comment on the accounting treatments proposed by the vice-president finance, supporting your discussion with any relevant components from the conceptual framework. Discuss the impact of item (e) on your work in preparing the year-end financial statements.

Chapter 3

Financial Reports: Statement of Income, Comprehensive Income and Changes in Equity

Material Weaknesses Found in Financial Reporting Oversight

In 2014, Penn West Petroleum Ltd., a Calgary-based oil company, was tasked with restating more than two years of financial statements in response to an internal investigation that uncovered material weaknesses in its internal controls over financial reporting. The impact of the restatement was a reduction in cash flow by $145 million and an increase in its operating costs by $367 million–no small sums, to be sure!

The investigation was undertaken after the discovery of misclassifications in its accounting records regarding its capital spending, operating costs, and royalty payments. The investigation found that operating expenses were recorded to property, plant, and equipment, and significant amounts of operational expenses were reclassified to royalties' assets. The company claimed that these errors originated with some former employees who were no longer with the company. When news of the scandal reached investors' ears, fears escalated, resulting in large numbers of shares being sold off in the stock market. In the aftermath, investors launched $400 million in class-action lawsuits in Canada and the U.S., alleging that the company and some of its former top executives were negligent in not ensuring that adequate internal controls regarding financial reporting were in place.

It is unknown whether the misclassifications were due to management bias, intended to deceive, or if they were due to human error and poor judgment. Either way, the financials prior to restatement were making the company look better than it was.

Penn West implemented new internal controls to ensure that this never happens again. A key component of the change relates to its journal entries, to ensure any transactions that are to be capitalized (versus being expensed) are done so only after passing a strict oversight process.

(Source: Jones, 2014)

Chapter 3 Learning Objectives

After completing this chapter, you should be able to:

LO 1: Describe the statement of income, the statement of comprehensive income, and the statement of changes in equity and their roles in accounting and business.

LO 2: Identify the factors that influence what is reported in the statement of income, statement of comprehensive income, and the statement of changes in equity.

LO 2.1: Explain the factors that influence the choice of accounting year-end.

LO 2.2: Explain how changes in accounting estimates, changes due to correction of accounting errors, and changes in accounting policy affect the income and equity statements.

LO 3: Identify the core financial statements and explain how they interconnect together.

LO 3.1: Explain the differences between IFRS and ASPE regarding the income and equity statements.

LO 4: Describe the various formats used for the statement of income and the statement of comprehensive income, and identify the various reporting requirements for companies following IFRS and ASPE.

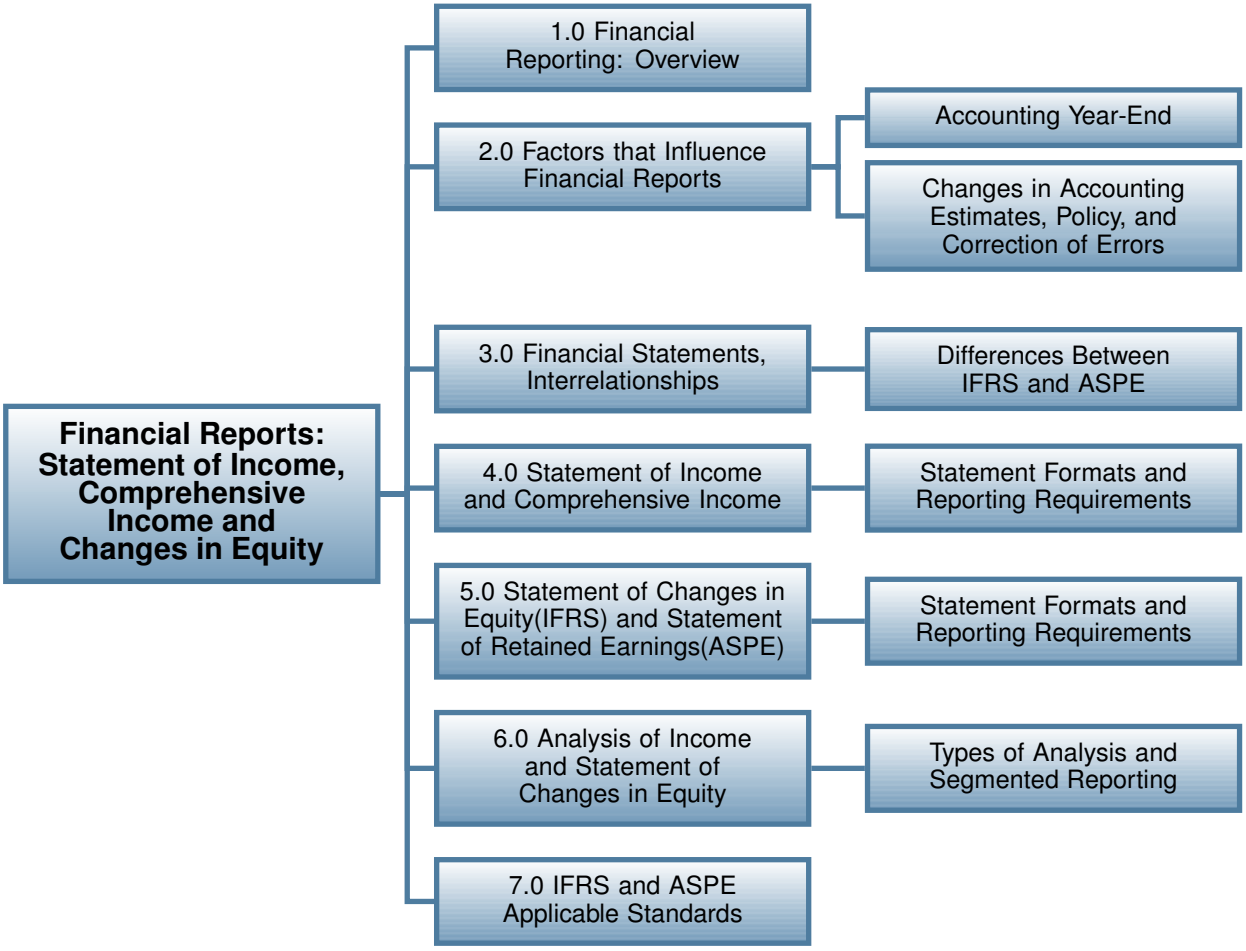
LO 5: Describe the various formats used to report the changes in equity for IFRS and ASPE companies, and identify the reporting requirements.

LO 6: Identify and describe the techniques used to analyze income and equity statements.

Introduction

Financial reports are the final product of a company's accounting processes. These reports, combined with thoughtful analysis, are intended to "tell the story" about the company's operations, its financial performance for the reporting period, and its current financial state (resources and obligations) including its cash position for that period. Is it good news or bad news for management, investors, and creditors who are the company's stakeholders? Did the company meet its financial goals and objectives for the fiscal year? The answers depend not only on the outcome of the actual operations reported in the financial statements, but also on their accuracy and reliability, as the opening story about Penn West explained. As discussed in Chapter 2, financial statements consist of a set of core reports that identify the company's resources (assets), claims to those resources (liabilities and investor's equity), and information about the changes in these resources and claims (performance). A key activity after the financial statements are prepared is to accurately analyze and evaluate the company's performance and determine if it met its objectives for the reporting period. This chapter will discuss financial statements that report net income, comprehensive income, and changes in equity and their ability to tell the story about the company's performance for the reporting period.

Chapter Organization



3.1 Financial Reporting: Overview

The accounting system is a data repository that tracks all the economic events that have occurred during an accounting cycle (period) and reports them in some meaningful way to the company stakeholders. For example, the statement of income is a report required by both IFRS and ASPE that measures the return on capital (assets) – it is the "how well did we do" statement. This statement shows how the company performed during its operations for a specific period of time (typically annually, monthly, or quarterly). Key elements of the income statement include various revenue, expenses, gains, and losses for continuing and discontinued operations. Combined, these numbers represent the company's net income or loss (profit or loss) for the reporting period. Comprehensive income (an IFRS-only requirement) begins with net income and reports certain gains and losses not reported in net income such as those arising from fair value re-measurements for certain investments. The statement of changes in

equity identifies details about the changes in equity due to transactions affecting shareholders as owners and investors of the company.

The IFRS and ASPE accounting standards describe which financial data is to be specifically identified and reported, out of the many thousands of transactions making up the accounting records. To comply with these standards, separate reporting of certain information either within the body of the financial statements or within the notes to the financial statements is required. That said, there is some flexibility regarding the information to be reported. For example, the terminology and the style used to present the data within the financial statements are often left to management's discretion.

This chapter will discuss preparation of these core financial statements, identify the mandatory reporting requirements, and look at how these statements can be analyzed to assist in decision making by management, investors, and other stakeholders.

3.2 Factors that Influence Financial Reports

3.2.1 Accounting Year-end

Choosing the fiscal year-end date is a strategic activity that requires careful consideration because the decision made can result in operational and tax advantages. The year-end will likely be influenced most by the company's business cycle. For example, a retailer will likely choose a year-end at the end of its busiest season, when inventory is at its lowest levels. This makes the physical count easier and less costly, because there will be more staff available and fewer adjustments to make before the books are closed. Planning a fiscal year-end based on advantageous tax consequences can be tricky, but essentially it means choosing a year-end that results in some temporary differences between certain transactions accounted for in one fiscal year but not taxed until a subsequent fiscal year. Alternatively, businesses that are not incorporated (e.g., proprietorships and partnerships) may choose the calendar year-end to coincide with Canada Revenue Agency, for simplicity from a tax perspective. Whatever fiscal year-end is chosen, accounting standards require that the financial statements be accrual based. This relates back to the accounting principles of **revenue recognition**, in terms of when to record revenue, and the **matching principle**, to ensure that all expenses related to that revenue recorded are included. The statements are also the results of operations for a specified period of time (the **periodicity principle**), called the **reporting period**. This raises the issues of what, when, and how much detail to record for any transactions that occur near, at, or subsequent to the reporting period year-end date.

Financial statements are often done on an interim basis each year. Interim reports can be monthly, quarterly, or some other reporting period. For example, public companies in Canada are required to produce quarterly financial statements. The accounting cycle has

not yet been completed, so the temporary revenue, expense, gains, and loss accounts are not closed, and several end-of-period adjusting entries are recorded in order to ensure that the accounting records are as complete as possible for the interim period being reported. The annual published financial statements usually cover a fiscal or calendar year (on rare occasions, an operating cycle, if longer than one year). After the release of the year-end financial statement, the temporary accounts are closed to retained earnings, and an updated post-closing trial balance for all the (permanent) balance sheet accounts is completed to commence the new fiscal year.

There is also a period of time after the year-end date when certain events or transactions detected in the new fiscal year may need to either be recorded and reported in the financial statements or disclosed in the notes to the financial statements. For this reason, the accounting records from the previous fiscal year are kept open to accrue any significant entries and adjustments found in the new year that pertain to the fiscal year just ended. This time period may be anywhere from a few days to several weeks or months, depending on the size of the company. The end of this time marks the point at which the temporary accounts for the old fiscal year are closed and the financial statements are completed and officially published.

The following are examples of these types of transactions.

- Inventory – the physical inventory count that takes place as soon after the year-end date as possible. The total amount from the physical count is compared to the ending balance in the inventory subledgers, and an adjusting entry recorded for the difference. Since the accounting standards state that inventory is to be valuated each reporting date at the **lower of cost and net realizable value (LCNRV)**, a write-down of inventory due to **shrinkage** may be required.
- Invoices Received after Year-end – this relates to goods and services received from suppliers before the year-end date, but not yet recorded. For example, companies purchasing **goods** from a supplier close to the year-end date usually receive the goods with a packing slip that details the types and quantities of goods received as well as the total cost. Once the goods are received and verified, the entry to record the goods and recognize the accounts payable will occur with the packing slip and the company's own purchase order being the **source documents** for the accounting entry. Recording entries relating to purchasing **services**, on the other hand, can be tricky since there is no packing slip involved when purchasing services. If the supplier providing the services does not leave an invoice with the purchaser as soon as the services have been completed, it will be sent at some later date, usually sometime during the following month of the new fiscal year. Keeping the books open for a time after the year-end date allows the company extra time to catch and record any significant transactions that are discovered during the next fiscal year that might otherwise be missed.

Any significant **subsequent event** that occurs *after* the fiscal year-end should be disclosed in the notes to the financial statements for the year just ended. An example might be where early

in 2021 vandals damage some buildings and equipment. If the repair or replacement costs are material, these costs, though correctly paid and recorded in 2021, should be disclosed in the financial statements of 2020 if not yet published. This will ensure that the company stakeholders have access to all the relevant information.

3.2.2 Changes in Accounting Estimates, Changes in Accounting Policy, and Correction of Errors

Financial statements can be impacted by changes in accounting policies, changes in estimates, and correction of errors. These were first introduced in the introductory accounting course and will also be discussed in detail in the next intermediate accounting course. However, it is worth including a review at this time because they can significantly affect the financial statements.

Changes in Accounting Estimates

Accounting is full of estimates that are based on the best information available at the time. As new information becomes available, estimates may need to be changed. Examples of changing estimates would be changing the useful life, residual value, or the depreciation method used to match use of the assets with revenues earned. Other estimates involve uncollectible receivables, revenue recognition for long-term contracts, asset impairment losses, and pension expense assumptions. Changes in accounting estimates are applied **prospectively**, meaning they are applied to the current fiscal year if the accounting records have not yet been closed and for all future years going forward.

Changes in Accounting Policy

The accounting treatment for a change in accounting policy is **retrospective adjustment with restatement**. Retrospective application means that the company deals with the error or omission as though it had always been corrected.

Examples of changes in accounting policies are:

- changes in valuation methods for inventory such as changing from FIFO to weighted average cost
- changes in classification, presentation, and measurement of financial assets and liabilities under categories specified in the accounting standards such as investments classified as fair value reported through net income (FVNI), amortized cost (AC), or fair value reported through OCI (FVOCI) (IFRS only). Details of these are discussed in the chapter on intercorporate investments, later in this text.

- changes in the basis of measurement of non-current assets such as historical cost and revaluation basis
- changes in the basis used for accruals in the preparation of financial statements

Management must consistently review its accounting policies to ensure they comply with the latest pronouncements by IFRS or ASPE and to ensure the most relevant and reliable financial information for the stakeholders. Accounting policies must also be applied consistently to promote comparability between financial statements for different accounting periods. For this reason, a change in accounting policy is only allowed under two conditions:

1. due to changes in a primary source of GAAP
2. applied voluntarily by management to enhance the relevance and reliability of information contained in the financial statements for IFRS. ASPE has some exceptions to this "relevance and reliability" rule to provide flexibility for changes from one existing accounting standard to another.

As a rule, changes in accounting policies must be applied **retrospectively with restatement** to the financial statements. Retrospective application means that the company implements the change in accounting policy as though it had always been applied. Consequently, the company will adjust all comparative amounts presented in the financial statements affected by the change in accounting policy for each prior period reported. Retrospective application reduces the risk of changing policies to manage earnings aggressively because the restatement is made to all prior years as well as to the current year. If this were not the case, the change made to a single year could materially affect the statement of income for the current fiscal year. A cumulative amount for the restatement is estimated and adjusted to the opening retained earnings balance of the current year, net of taxes, in the statement of changes in equity (IFRS) or the statement of retained earnings (ASPE). This will be discussed and illustrated later in this chapter.

Retrospective application of a change in accounting policy may be exempted in the following circumstances.

- A transitional provision of the changed standard allows the prospective application of a new accounting policy. Specific transitional guidance of IFRS or ASPE must be followed in such circumstances.
- The application of a new accounting policy regarding events, transactions, and circumstances that are substantially different from those that occurred in the past.
- The effect of the retrospective application of a change in accounting policy is immaterial.

- The retrospective application of a change in accounting policy is impracticable. This may be the case where a company has not collected sufficient data to enable an objective assessment of the effect of a change in accounting estimates and it would be unfeasible or impractical to reconstruct the data. Where impracticability impairs a company's ability to apply a change in accounting policy retrospectively from the earliest prior period presented, the new accounting policy must be applied prospectively from the beginning of the earliest period feasible, which may be the current period.

The following are the required disclosures in the notes to the financial statements when a change in accounting policy is implemented:

- Title of IFRS or ASPE standard
- Nature of change in accounting policy
- Reasons for change in accounting policy
- Amount of adjustments in current and prior periods presented
- Where retrospective application is impracticable, the conditions that caused the impracticality (CPA Canada, 2011).

Changes Due to Accounting Errors or Omissions

The accounting treatment for an error or omission is a **retrospective adjustment with restatement**. For example, an accounting error in inventory originating in the current fiscal year is detected within the current fiscal year while the accounting records are still open. The inventory error correction is recorded as soon as possible to the applicable accounts. However, if the accounting records are already closed when the inventory error is discovered, the error is treated retrospectively. This means that the cumulative amount due to the inventory error would be calculated and recorded, *net of taxes*, to the current year's opening retained earnings balance. If the financial statements are comparative and include previous year's data, this data is also **restated** to include the error correction. This will be discussed and illustrated later in this chapter.

3.3 Financial Statements and Their Interrelationships

The core financial statements connect to complete an overall picture of the company's operations and its current financial state. It is important to understand how these reports connect; therefore, a review of some simplified financial statements for Wellbourn Services Ltd., a large,

privately-held company is presented below (assume Wellbourn applies IFRS; for simplicity, comparative year data and reporting disclosures are not shown).

Wellbourn Services Ltd.
Statement of Income
for the year ended December 31, 2020

Revenues:		
Sales	$ 250,000	
Services revenue	53,000	
Total revenue		$ 303,000
Operating expenses:		
Cost of good sold	100,000	
Rent expense	23,000	
Salaries expense	65,000	
Total operating expense		188,000
Income from continuing operations before tax		115,000
Income tax		34,500
Net income		$ 80,500
Earnings per share		$ 24

Wellbourn Services Ltd.
Statement of Comprehensive Income
for the year ended December 31, 2020

Net income	$80,500	to R/E
Other comprehensive income:		
Items that may be reclassified subsequently to net income or loss:		
Unrealized gains from FVOCI investments (net of tax of $1,500)	3,500	to AOCI
Total comprehensive income	$84,000	

Wellbourn Services Ltd.
Statement of Changes in Equity
for the year ended December 31, 2020

	Common Shares	Contributed Surplus	Retained Earnings	Accumulated Other Comprehensive Income	Total
Balance, January 1	$200,000	$25,000	$75,000	$45,000	$345,000
Total comprehensive income:					
Net income			80,500		80,500
Other Comprehensive Income				3,500	3,500
Total comprehensive income			80,500	3,500	84,000
Issuance of common shares	10,000				10,000
Dividends declared			(50,000)		(50,000)
Balance, December 31	$210,000	$25,000	$105,500	$48,500	$389,000

Wellbourn Services Ltd.
Statement of Financial Position
December 31, 2020

Assets		Liabilities	
Current assets		Current liabilities	
Cash	$135,500	Accounts payable	$ 77,500
Accounts receivable (net)	225,000	Accrued liabilities	225,000
Inventory	130,000	Total current liabilities	302,500
Total current assets	490,500	Bonds payable	160,000
Investments	100,000	Total liabilities	462,500
Property, plant, and equipment (net)	246,000	Equity	
Intangible assets	15,000	Common shares	210,000
Total assets	$851,500	Contributed surplus	25,000
		Retained earnings	105,500
		AOCI	48,500
		Total equity	389,000
		Liabilities and equity	$851,500

Wellbourn Services Ltd.
Statement of Cash Flows
for the year ended December 31, 2020

Cash flows from operating activities		
Cash received from clients	$ 50,000	
Cash paid for supplies	(25,000)	
Cash paid to employees	(51,200)	
Net cash used by operating activities		(26,200)
Cash flows from investing activities		
Purchase of equipment	(25,000)	
Net cash used by investing activities		(25,000)
Cash flows from financing activities		
Dividends paid	(50,000)	
Issued bonds	160,000	
Net cash received by financing activities		110,000
Net increase in cash		58,800
Cash balance, January 1		76,700
Cash balance, December 31		$135,500

As can be seen from the flow of the numbers above, the net income from the statement of income becomes the opening amount for the statement of comprehensive income (a statement required for all IFRS reporting companies).

Comprehensive income starts with net income/loss and includes certain gains or losses called **other comprehensive income** (OCI) that are *not already reported in net income*. The most notable examples for purposes of this course are:

- unrealized gains or losses for investments classified as fair value through OCI (FVOCI),

resulting from changes in their fair value *while the investment is being held* (Chapter 8)

- gains/losses resulting from the application of the revaluation method for property, plant and equipment, and intangibles (Chapter 9)

In the next intermediate accounting course, another OCI item is the remeasurement gains and losses regarding defined benefit pension plans.

To summarize:

IFRS companies must report:

- Other comprehensive income (OCI) = certain gains or losses not already included in net income, net of tax, with tax amount disclosed
- Total comprehensive income = net income/loss +/- other comprehensive income (OCI)

Returning to the Wellbourn financial statements, looking at the statement of comprehensive income, net income closes to retained earnings, while any other comprehensive income (OCI) gain or loss closes to **accumulated other comprehensive income** (AOCI) in the statement of changes in equity. The AOCI account is similar to a retained earnings account, except that AOCI only accumulates items from OCI.

To summarize:

- Retained earnings accumulate net income/loss over time. (ASPE and IFRS)
- AOCI accumulates other comprehensive income (OCI)/losses over time. (IFRS only)

It should also be noted that IFRS companies can choose to keep the statement of income separate from the statement of comprehensive income, or they can combine the two statements into one report called the **statement of income and comprehensive income**, which will be discussed in more detail in the next section.

Looking at the Wellbourn statement of changes in equity, note that the total column balances to the equity section of the statement of financial position/balance sheet (SFP/BS). The final link between all the financial statements is regarding the **statement of cash flows** (SCF), where the ending cash balance must be equal to the cash balance reported in the SFP/BS. This completes the loop of interconnecting accounts and amounts.

3.3.1 Financial Statement Differences Between IFRS and ASPE

The core financial statements shown above illustrate the types of statements required for IFRS companies. They are the following:

- a statement of income
- a statement of comprehensive income
- a worksheet-style statement of changes in equity with all the equity accounts included
- a statement of financial position
- a statement of cash flows
- notes to the financial statements

IFRS requires the comparative previous year amounts be reported as well as disclosure of the earnings per share. ASPE does not require these disclosures. IFRS requires the statement of comprehensive income (or a combined statement of income and comprehensive income), whereas ASPE only requires a statement of income because comprehensive income does not exist. The statement of changes in equity required by IFRS shown in the Wellbourn example above now becomes a more simplified statement of retained earnings for ASPE, where only the details for retained earnings are reported (though any changes in shareholder equity accounts must be disclosed in the notes to the financial statements). The remaining equity accounts such as common shares and contributed surplus are reported as ending balances directly in the balance sheet for ASPE (called the statement of financial position for IFRS companies).

3.4 Statement of Income and Comprehensive Income

As previously stated, net income is a measure of return on capital and, hence, of performance. This means that investors and creditors can often estimate the company's future earnings and profitability based on an evaluation of its past performance as reported in net income. Comparing a company's current performance with its past performance creates trends that can have a predictive, though not guaranteed, value about future earnings performance. Additionally, comparing a company's performance with industry standards helps to assess the risks of not achieving goals compared to competitor companies in the same industry sector.

As previously mentioned, all the core financial statements are based on accrual accounting. Accrual accounting, in turn, is based on a series of standards-based processes and estimates.

Some of these estimates have more measurement uncertainty than others, and some estimates are inherently more conservative than others. This in turn affects the quality of earnings reported in an income statement.

Quality of earnings – the amount of earnings attributable to sustainable ongoing core business activities rather than to "artificial profits" arising from:

- differences in earnings due to applying the various accounting policy choices such as FIFO or weighted average cost for inventory valuation or straight-line, declining-balance, or units-of-production depreciation methods
- the use of estimates such as those for estimating bad debt or warranty provisions
- the presence of significant amounts of non-operating gains and losses compared to income from continuing operations
- the inclusion of unreliable items such as inappropriate contingent gains
- management bias and reported amounts not objectively determined
- differences due to IFRS or ASPE application of standards
- information that is not concise or clearly presented and is poorly understood, resulting in potential misstatement

Lower quality earnings will include significant amounts of the items listed. If the quality of earnings is low, more risk is associated with the financial statements, and investors and creditors will place less reliance on them.

Single-step and Multiple-step Statement of Income

Single-step, multiple-step, or any condensed formats used in a statement of income are not specified GAAP requirements. Companies can choose whichever format best suits their reporting needs. Smaller privately held companies tend to use the simpler single-step format, while publicly traded companies tend to use the multiple-step format. When condensed formats are used, they are supplemented by extensive disclosures in the notes to the financial statements and cross-referenced to the respective line items in the statement of income.

The Wellbourn Services Ltd. statement of income, shown earlier, is an example of a typical **single-step** income statement. For this type of statement, revenue and expenses are each reported in the two sections for continuing operations. Discontinued operations are separately reported below the continuing operations. The separate disclosure and format for the discontinued operations section is a reporting requirement and is discussed and illustrated below. The condensed or single-step formats make the statement simple to complete and keeps

sensitive information out of the hands of competitive companies, but provides little in the way of analytical detail.

The **multiple-step** income statement format provides much more detail. Below is an example of a multiple-step statement of income for Toulon Ltd., an IFRS company, for the year ended December 31, 2020.

Multiple-step format - typical sections and subtotals:

Heading

Toulon Ltd.
Consolidated Statement of Income and Comprehensive Income
for the year ended December 31, 2020

Minimum Line Item Disclosures:

Heading

In $000's except per share amounts	2020	2019	Comparative years (IFRS)
Sales	$6,260	$5,008	Revenue – separated into major categories (IFRS & ASPE)
Cost of goods sold	2,500	1,750	Inventory charged to expense (IFRS & ASPE)
Gross profit	3,760	3,258	
Operating expenses			
Salaries and benefits expense	650	520	Employee benefits expense including salaries and wages, payroll taxes, health care costs, and post-retirement benefits (IFRS)
Depreciation expense	35	20	Depreciation and amortization (IFRS & ASPE)
Travel and entertainment expense	150	120	The remaining expenses by nature (IFRS)
Advertising expense	55	45	
Freight-out expenses	10	8	
Supplies and postage expense	5	4	
Telephone and internet expense	15	12	
Legal and professional expenses	8	6	
Insurance expense	6	5	
	934	740	
Income from operations	2,826	2,518	
Other revenue and expense			This section is for non-operating items. Finance costs such as interest income & expense, foreign exchange, gain/loss from sale or impairment of assets and interest (IFRS & ASPE)
Dividend revenue	3	3	
Interest income from investments	2	2	
Gain from sale of trade investments	4	0	
Interest expense	(2)	(3)	
	7	2	
Income from continuing operations before income tax	2,833	2,520	
Income tax expense	850	680	Income tax expense on continuing operations (IFRS & ASPE)
Income from continuing operations	1,983	1,840	Same as Income before discontinued operations (ASPE)
Discontinued operations			
Loss from operation of discontinued division (net of tax of $45,000)	(105)	0	Discontinued operations, net-of-tax with tax amounts disclosed (IFRS & ASPE)
Loss from disposal of division (net of tax of $18,000)	(42)	0	
	(147)	0	
Net income (note 1)	1,836	1,840	Net income (profit or loss)
Other comprehensive income:			
Items that may be reclassified subsequently to net income or loss:			
Unrealized gain from FVOCI investments (net of tax of $6,000 for 2020 and $3,000 for 2019 respectively)	14	9	Other comprehensive income by nature (IFRS)
Total comprehensive income	1,850	1,849	Total comprehensive income separated into attributable to parent and non-controlling interests (IFRS)
Non-controlling interests (minority interests)	(11)	(12)	
Attributable to the equity holders of Toulon	$1,839	$1,837	

Gross profit section with subtotal

Operating expenses with subtotal

Non-operating section with subtotal

Income tax expense

Subtotal from continuing operations

Discontinued operations

Net income (profit or loss)

Comprehensive income (IFRS)

Earnings per share
Basic and diluted EPS (IFRS)

Earnings per share, attributable to the equity holders of Toulon:			Basic EPS from continuing and discontinued operations (IFRS)
Basic earnings per share			
Continuing operations	$16.32	$13.25	
Discontinued operations	(1.23)	0	
Diluted earnings per share			
Continuing operations	12.86	13.75	Diluted EPS from continuing and discontinued operations (IFRS)
Discontinued operations	(1.03)	0	

Note 1:

Net income	1,836	1,840	Net income (profit or loss) separated into attributable to the parent and non-controlling interests (IFRS & ASPE)
Non-controlling interests (minority interests)	(10)	(11)	
Attributable to the equity holders of Toulon	$ 1,826	$ 1,829	

Other revenue and expenses section is to report non-operating transactions not due to typical daily business activities. For example, if a company sells retail goods, any interest expense incurred is a finance cost, and is not due to being in the retail business.

Toulon reported four non-operating items:

- Dividend revenue would be for dividends received from an investment in shares of another company
- Interest income from investments would likely be from an investment in bonds of another company
- Gain from the sale of trading investments would be for the profit made when the investment was sold. In this case, the investment is classified as fair value through net income (FVNI), which means any changes in the investment's fair value at each reporting date, or profit upon sale, are reported as a gain/loss in net income
- Interest expense would be any interest paid on amounts owed to various creditors. This is considered to be a financing expense and not an operating expense, unless the company is a finance company.

Other examples of non-operating items are listed below:

- write-down of inventory
- impairment losses and reversals of impairment losses on PPE, intangible assets, and goodwill
- foreign currency exchange gains or losses
- gain or loss from asset disposal or from long-lived assets reclassified as held for sale
- interest expense by current liabilities, long-term liabilities, and capital lease obligations

- unusual items (not typical and infrequent)

The multiple-step format with its section subtotals makes performance analysis and ratio calculations such as gross profit margins easier to complete and makes it easier to assess the company's future earnings potential. The multiple-step format also enables investors and creditors to evaluate company performance results from continuing and ongoing operations having a high predictive value compared to non-operating or unusual items having little predictive value.

Operating Expenses

Expenses from operations must be reported by their nature and, optionally, by function (IFRS). **Expenses by nature** relate to the type of expense or the source of expense such as salaries, insurance, advertising, travel and entertainment, supplies expense, depreciation and amortization, and utilities expense, to name a few. The statement for Toulon Ltd. is an example of reporting expenses by nature. Reporting expenses by nature is mandatory for IFRS companies; therefore, if the statement of income reports expenses by function, expenses by nature would also have to be reported either as a breakdown within each function in the statement of income itself or in the notes to the financial statements.

Expenses by function relate to how various expenses are incurred within the various departments and activities of a company. Expenses by function include activities such as the following:

- sales and marketing
- production
- office and administration
- research and development

Common costs such as utilities, supplies, insurance, and property tax expenses would have to be allocated between the various functions using a reasonable basis such as square footage or each department's proportional share of overall expenses. This allocation process can be cumbersome and will require more time, effort, and professional judgement.

The sum of all the revenues, expenses, gains, and losses to this point represents the **income or loss from continuing operations**. This is a key component used in performance analysis and will be discussed later in this chapter.

Income Tax Allocations

Intra-period tax allocation is the process of allocating income tax expense to various categories within the statement of income, comprehensive income, and retained earnings.

For example, income taxes are to be allocated to the following four categories:

1. Income from continuing operations before taxes
2. Discontinued operations, net of tax
3. Each item reported as other comprehensive income, net of tax
4. Each item regarding retrospective restatement for changes in accounting policy or correction of prior period errors reported in retained earnings, net of tax, which is also discussed later in this chapter

The purpose of these allocations is to make the information within the statements more informative and complete. For example, Toulon's statement of income for the year ending December 31, 2020, allocates 30% income tax as follows:

- Income from continuing operations of $850,000 ($2,833,000 $\times$ 30%)
- Loss from discontinued operations of $45,000 ($150,000 $\times$ 30%)
- Loss from disposal of discontinued operations of $18,000 ($60,000 $\times$ 30%)
- Comprehensive income gain from FVOCI investments of $6,000 ($20,000 $\times$ 30%)

All companies are required to report each of the categories above net of their tax effects. This makes analyses of operating results within the company itself and of its competitors more comparable and meaningful.

Note: if there is a net loss, the income tax reported on the income statement will be "income tax recovery" and shown as a negative (bracketed) amount.

Discontinued operations

Sometimes companies will sell or shut down certain business components or operations because the operating segment or component is no longer profitable, or they may wish to focus their resources on other business components. To be separately reportable as a discontinued operation in the statement of income, the business component being discontinued must have its own clearly distinguishable operations and cash flows, referred to as a **cash-generating unit (CGU)** for IFRS companies. Examples are a major business line or geographical area. If the discontinued operation has not yet been sold, *there must be a formal plan in place to dispose of the component within one year and to report it as a discontinued operation*.

The items reported in this section of the statement of income are to be separated into two reporting lines:

- Gains or losses in operations *prior to disposal* of the CGU, net of tax, with tax amount disclosed
- Gains or losses in operations *on disposal* of the CGU, net of tax, with the tax amounts disclosed

 A video is available on the Lyryx site. Click here to watch the video.

Net Income and Comprehensive Income

Note that the statement for Toulon Ltd. combines net income and total comprehensive income. Two statements would be prepared for IFRS companies that prefer to separate net income from comprehensive income. The **statement of income**, ends at net income (highlighted in yellow). A second statement, called the **statement of comprehensive income**, would start with net income and include any other comprehensive income (OCI) items. The Wellbourn financial statement (shown in section 3.3 of this chapter) is an example of separating net income and total comprehensive income into two statements.

Another item that is important to disclose in the financial statements is the **non-controlling interest** (NCI) reported for net income and total comprehensive income. This is the portion of equity ownership in an associate (subsidiary) that is not attributable to the parent company (Toulon, in our example) that has a **controlling interest** (greater than 50% but less than 100% ownership) in the acquired company's net assets. Toulon must consolidate the associate's financial data with its own and report as a single entity to comply with IFRS standards. Consider that if a company purchases 80% of the net assets of another company, the remaining 20% must therefore be owned by outside investors. This 20% amount must be reported as the non-controlling interest to ensure that investors and creditors of the company holding 80% (parent) are adequately informed about the true value of the net assets owned by the parent company versus outside investors.

For ASPE companies using a multiple-step format, the statement of income would look virtually the same as the example for Toulon above and would include all the line items up to the net income amount (highlighted in yellow). As previously stated, comprehensive income is an IFRS concept only; it is not applicable to ASPE.

 A video is available on the Lyryx site. Click here to watch the video.

Earnings per Share

Basic earnings per share represent the amount of income attributable to each outstanding common share, as shown in the calculation below:

$$\text{Basic earnings per share (EPS)} = \frac{\text{Net income} - \text{preferred dividends}}{\text{Weighted average number of common shares outstanding}}$$

The earnings per share amounts are not required for ASPE companies. This is because ownership of privately owned companies is often held by only a few investors, compared to publicly-traded IFRS companies where shares are held by many investors.

For IFRS companies, basic earnings per share excludes OCI and any non-controlling interests. EPS is to be reported on the face of the statement of income as follows:

- Basic and diluted EPS from continuing operations
- Basic and diluted EPS from discontinued operations, if any

The term *basic earnings per share* refers to IFRS companies with a simple capital structure consisting of common shares and perhaps non-convertible preferred shares or non-convertible bonds. Reporting diluted earnings per share is required when companies hold financial instruments such as options or warrants, convertible bonds, or convertible preferred shares, where the holders of these instruments can convert them into common shares at a future date. The impact of these types of financial instruments is the potential future dilution of common shares and the effect this could have on earnings per share to the common shareholders. Details about diluted earnings per share will be covered in the next intermediate accounting course.

 A video is available on the Lyryx site. Click here to watch the video.

 A video is available on the Lyryx site. Click here to watch the video.

3.5 Statement of Changes in Equity (IFRS) and Statement of Retained Earnings (ASPE)

Recall that net income or loss is closed to retained earnings. For ASPE companies, there is no comprehensive income (OCI) and therefore no AOCI account in equity. With this simpler reporting requirement, ASPE companies report retained earnings in the balance sheet and

detail any changes in retained earnings that took place during the reporting period in the statement of retained earnings. An example of a statement of retained earnings is that of Arctic Services Ltd., for the year ended December 31, 2020.

Arctic Services Ltd.
Statement of Retained Earnings
For the Year Ended December 31, 2020

Balance, January 1, as reported		$ 250,000
Cumulative effect on prior years of retrospective application of changing inventory costing method from FIFO to moving weighted average (net of taxes for $5,400)		12,600
Correction for an overstatement of net income from a prior period due to an ending inventory error (net of $3,000 tax recovery)		(7,000)
Balance, January 1, as adjusted		255,600
Net income		80,500
		336,100
Cash dividends declared	$(75,000)	
Stock dividends declared	(60,000)	(135,000)
Balance, December 31		$ 201,100

As discussed at the beginning of this chapter, any error corrections from prior periods or allowable changes in accounting policies will result in a reporting requirement to restate the opening retained earnings balance for the current period. Each error and change in accounting policy item is separately reported, net of tax, with the tax amount disclosed. The retained earnings opening balance is restated and a detailed description is included in the notes to the financial statements. The journal entry for the two restatement items for Arctic Services would be:

General Journal

Date	Account/Explanation	PR	Debit	Credit
	Inventory		18,000	
	Income tax payable			5,400
	Retained earnings			12,600

General Journal

Date	Account/Explanation	PR	Debit	Credit
	Retained earnings		7,000	
	Income tax payable		3,000	
	Inventory			10,000

The statement of retained earnings also includes any current period net income or loss followed by any cash or stock **dividends declared** by the board of directors. This detail provides important information to investors and creditors regarding the proportion of net income that is distributed to the shareholders through a dividend compared to the net income retained for future business purposes such as investment or expansion.

ASPE companies may choose to combine the statement of income and the statement of retained earnings. In this case, the statement of retained earnings is incorporated at the bottom of the statement of income, starting with net income as shown in a simple example below:

Net income	$$$
Retained earnings, January 1	$$$
Dividends declared	$$$
Retained earnings, December 31	$$$

For IFRS companies, net income is closed out to retained earnings, and other comprehensive income (OCI), if any, is closed out to accumulated other comprehensive income (AOCI). An example of how that works is illustrated in the Wellbourn financial statements included in section 3.3 of this chapter. Both retained earnings and AOCI are reported in the equity section of the statement of financial position (SFP) and the statement of changes in equity (IFRS).

For IFRS companies, each account from the equity section of the SFP is to be reported in the statement of changes in equity. The following is an example of the statement of changes in equity for an IFRS company, Velton Ltd., for the year ended December 31, 2020. Note how this statement is worksheet style, which discloses each retrospective adjustment net of tax, followed by a restatement of the equity account opening balances. Each equity account opening balance is then reconciled to its respective closing balance by reporting the changes that occurred during the year, such as the issuance/retirement of shares, net income, and dividends. *The statement also must report total comprehensive income*. Any non-controlling interest would also be reported (as a separate column), the same as was required and illustrated for Toulon Ltd.'s statement of income presented earlier.

Velton Ltd.
Statement of Changes in Equity
for the year ended December 31, 2020

	Preferred Shares	Common Shares	Contributed Surplus	Retained Earnings	Accumulated Other Comprehensive Income	Total
Balance, January 1	$100,000	$500,000	$15,000	$450,000	$ 22,000	$1,087,000
Cumulative effect on prior years of retrospective application of changing inventory costing method from FIFO to moving weighted average (net of taxes for $15,000)				35,000		35,000
Correction for an overstatement of net income from a prior period due to an ending inventory error (net of $6,000 tax recovery)				(20,000)		(20,000)
Balance, January 1, as restated	100,000	500,000	15,000	465,000	22,000	1,102,000
Total comprehensive income:						
Net income				125,000		125,000
Other Comprehensive Income – unrealized gain — FVOCI investments**					3,500	3,500
Total comprehensive income				125,000	3,500	128,500
Issuance of common shares		100,000				100,000
Dividends declared				(50,000)		(50,000)
Balance, December 31	$100,000	$600,000	$15,000	$540,000	$ 25,500	$1,280,500

** net of related tax of $800. May be reclassified subsequently to net income or loss

The equity portion of the SFP is shown below.

Velton Ltd.
Statement of Changes in Financial Position
Shareholders' Equity Section
December 31, 2020

Shareholder's equity	
Paid-in capital:	
Preferred shares, non-cumulative, 2,000 authorized;	
1,000 issued and outstanding	$ 100,000
Common shares, unlimited authorized;	
20,000 issued and outstanding	600,000
Contributed surplus	15,000
	715,000
Retained earnings	540,000
Accumulated other comprehensive income	25,500
Total shareholders' equity	$1,280,500

If the company sustained net losses over several years and retained earnings were insufficient to absorb these losses, retained earnings would have a debit balance and would be reported on the SFP as a **deficit**.

 A video is available on the Lyryx site. Click here to watch the video.

3.6 Analysis of Statement of Income and Statement of Changes in Equity

Financial statement analysis is an evaluative process of determining the past, current, and projected performance of a company. Financial statements report financial data; however, this information must be evaluated to be more useful to investors, shareholders, managers, and other stakeholders. Several techniques are commonly used for financial statement analysis. They were originally presented in the introductory accounting course. A summary review of these techniques follows.

Horizontal analysis compares two or more years of financial data in both dollar amounts and percentage form. An income statement and SFP/BS with comparative data from prior years are examples of where horizontal analysis is incorporated into the financial statements to enhance evaluation. Trends can emerge that are considered as either favourable or unfavourable in terms of company performance.

Vertical or common-size analysis occurs when each category of accounts on the income statement or SFP/BS is shown as a percentage of a total. For example, vertical analysis is used to evaluate the statement of income such as the percentage that gross profit is to

sales or the percentages that operating expenses are to sales. Similarly, vertical analysis of the SFP/BS may be used to evaluate what percentage equity is to total assets. This ratio tells investors what proportion of the net assets is being retained by the company's investors compared to the company's creditors.

Ratio analysis calculates statistical relationships between data. Ratio analysis is used to evaluate various aspects of a company's financial performance such as its efficiency, liquidity, profitability, and solvency. Gross profit ratio (gross profit divided by net sales and/or revenue) and earnings per share (EPS) are examples of key ratios used to evaluate income and changes in equity. One of the most widely used ratios by investors to assess company performance is the price-earnings (P/E) ratio (market price per share divided by EPS). The P/E ratio is the most widely quoted measure that investors use as an indicator of future growth and of risk related to a company's earnings when establishing the market price of the shares. The trend of the various ratios over time is assessed to see if performance is improving or deteriorating. Ratios are also assessed across different companies in the same industry sector to see how they compare. Ratios are a key component to financial statement analysis.

Segmented Reporting

The statement of income can be segmented, or disaggregated, to enhance performance analysis. The statement can be segmented in various ways such as by geography or by type of product or service. As a point of interest, other segmented financial statements include the SFP/BS and the statement of cash flow covered in the next chapter.

For ASPE, there is currently no guidance regarding segmented reporting. For IFRS companies, a segment must meet several characteristics and quantitative thresholds to be a reportable segment for purposes of the published financial statements. Segmented reporting can set apart business components that have a strong financial performance from those that are weak or are negative "losing" performers. Management can use this information to make decisions about which components to keep and which components to discontinue as part of their overall business strategy. Keep in mind that not all business components that experience chronic losses should be automatically discontinued. There are strategic reasons for keeping a "losing" component. For example, retaining a borderline, or losing, segment that produces parts may guarantee access to these critical parts when needed for production of a much larger product to continue uninterrupted. If the parts manufacturing component is discontinued and disposed, this guaranteed access will no longer exist and production in the larger sense can quickly grind to a halt, affecting company sales and profits. Segmented reporting can also assist in forecasting future sales, profits, and cash flows, since different components within a company can have different gross margins, profitability, and risk.

There can be issues with segmented reporting. For example, accounting processes such as allocation of common costs and elimination of inter-segment sales can be challenging. A thorough knowledge of the business and the industry in which the company operates is essential when utilizing segmented reports; otherwise, investors may find segmentation meaningless or, at worst, draw incorrect conclusions about the performance of the business components.

There can be reluctance to publish segmented information because of the risk that competitors, suppliers, government agencies, and unions can use this information to their advantage and to the detriment of the company.

3.7 IFRS and ASPE Applicable Standards

CPA Canada Handbook, Part 1 (IFRS) – IAS 1, Presentation of Financial Statements, IAS 8, Accounting Policies, Changes in Accounting Estimates and Errors, IFRS 5, non-current assets held for sale and discontinued operations

CPA Canada Handbook, Part 2, (ASPE) – Sections 1400 general standards of financial statement presentation, Section 1506, Accounting changes, Section 1520, Income Statement, and Section 3475, Disposal of long-lived assets and discontinued operations

Chapter Summary

LO 1: Describe statement of income, the statement of comprehensive income, and the statement of changes in equity, and their role in accounting and business.

The statement of income reports on company performance over the reporting period in terms of net income. The statement of comprehensive income is a concept only used by IFRS companies that reports on other gains and losses not already reported in net income. The statement of changes in equity (IFRS) reports on what changes took place in each of the equity accounts for the reporting period. For ASPE, this statement is a much simpler statement of retained earnings. Together, these statements enable the company stakeholders such as management, investors, and creditors to assess the financial health of the company and its ability to generate profits and repay debt. Each accounting standard (IFRS and ASPE) has minimum reporting requirements, which were discussed in this chapter.

LO 2: Identify the factors that influence what is reported in the statement of income, the statement of comprehensive income, and the statement of changes in equity.

The accounting standards require that all statements are reported on an accrual basis over a specific period of time (periodicity assumption) so that anything relevant to decision making is included (full disclosure principle). To ensure this, various adjusting entries are recorded to

make certain that the accounting records are up to date, and an accounting fiscal year-end date is carefully chosen. Accrual entries include any revenues earned but not yet recorded, whether paid or not (revenue recognition principle), and any expenses where goods and services have been received but not yet recorded, whether paid or not (matching principle). Other adjusting entries include prepayment items (prepaid expenses and unearned revenues), the estimate for bad debt expense, depreciation and amortization of depreciable assets, unrealized gains and losses of certain assets, and any impairment or write-down entries, if required. Also considered are subsequent events that occur after the year-end date and whether to include them in the financial statements or in the notes to the financial statements. Changes in accounting estimates (prospective treatment with restatement), correcting accounting errors (retrospective treatment with restatement), and changes in accounting policy (retrospective treatment) can all affect the financial statements.

LO 3: Identify the core financial statements and explain how they interconnect together.

The core financial statements interconnect to complete an overall picture of a company's performance over the reporting period (income statement) as well as its current financial state (SFP/BS). Starting with performance, the net income from the statement of income becomes the first amount reported on the statement of comprehensive income. Added to that is other comprehensive income (OCI), which reports any gains or losses not already reported in net income (IFRS only). Net income and OCI each flow to the statement of changes in equity, which reports on all the items that have affected the equity accounts during the reporting period. Together, these three financial statements are used to assess the company performance for the reporting period. The statement of cash flows reconciles cash and cash equivalent opening balances at the beginning of the reporting period to the closing balances at the end of the period. These changes are broken down into sources of cash inflows and outflows. Cash inflows could be from customers, issuing debt, or issuing share capital, while cash outflows could be from payments to suppliers, to employees, the purchase of assets, the payment of debt, any retirement of share capital, or the payment of dividends. These activities are separated and reported into the operating, investing, and financing section. The net amount of change represents the total change between the opening cash and cash equivalent balance to the closing cash and cash equivalent balance. The SFP/BS completes the set of core financial statements. It provides a snapshot at the end of the reporting period, such as month-end or year-end, and identifies the company resources (assets) and the claims to these resources (liabilities). The remaining net assets belong to the various classes of shareholders. The ending cash and cash equivalent balance of the statement of cash flow must reconcile to the cash and cash equivalent balances in the SFP/BS, and the statement of changes in equity totals must reconcile to the SFP/BS equity section, so that all the statements fit together into a single reconciled network of financial information.

There are differences between IFRS and ASPE reporting standards. For APSE, the statement

of income is quite similar but without the requirement for comparative years' data and earnings per share reporting. Comprehensive income is not a concept used by ASPE so there is no requirement for a statement of comprehensive income. ASPE companies report any changes in retained earnings through the statement of retained earnings, which is a much simpler statement that reports only the changes in the retained earnings account compared to the statement of changes in equity (IFRS), which reports the changes for all equity accounts.

LO 4: Describe the various formats used for the statement of income and the statement of comprehensive income, and identify the various reporting requirements for companies following IFRS and ASPE.

The purpose of the statement of income is to identify the revenues and expenses that comprise a company's net income. A comprehensive income statement, required by IFRS, identifies any gains and losses not already included in the statement of income. Together, these statements enable management, creditors, and investors to assess a company's financial performance for the reporting period. Comparing current with past performance, stakeholders can use these statements to predict future earnings and profitability. Since accounting is accrual-based, uncertainty exists in terms of the accuracy and reliability of the data used in the estimates. Net income (earnings) that can be attributable to sustainable ongoing core business activities are higher quality earnings than artificial numbers generated from applying accounting processes, determining various estimates, or gains and losses from non-operating business activities. The lower the quality of earnings, the less reliance will be placed on them by investors and creditors.

The statement of income can be a simple single-step or a more complex multiple-step format. Either one has its advantages and disadvantages. No matter which format is used, certain mandatory reporting requirements for both IFRS and ASPE exist, such as separate reporting for continuing operations and discontinued operations. To be reported as a discontinued operation, the business component must meet the definition of a cash-generating unit and a formal plan to dispose of the business component must exist. Companies can choose to report operating expenses by nature (type of expense) or by function (which department incurred the expense). However, if expenses by function is used, additional reporting of certain line items by nature is still required for both IFRS and ASPE companies such as inventory expensed, depreciation, amortization, finance costs, inventory write-downs, and income taxes to name a few. IFRS companies can choose to keep the statement of income separate from the statement of comprehensive income or combine them into a single statement: the statement of income and comprehensive income. For IFRS companies, the earnings per share are reporting requirements.

LO 5: Describe the various formats used to report the changes in equity for IFRS and ASPE companies, and identify the reporting requirements.

For ASPE companies the various sources of change occurring during the reporting period for retained earnings is reported, while for IFRS companies changes to each of the equity accounts is identified, usually in a worksheet style with each account assigned to a column. One important aspect to either statement is the retrospective reporting for changes in accounting policies or corrections of errors from prior periods. The opening balance for retained earnings is restated by the amount of the change or error, net of tax, with the tax amount disclosed. Other line items for these statements include net income or loss and dividends declared. For IFRS companies reporting will also include any changes to the share capital accounts and accumulated other comprehensive income (resulting from OCI items recorded in the reporting period).

LO 6: Identify and describe the types of analysis techniques that can be used for income and equity statements.

Analysis of the financial statements is critical to decision making and to properly assess the overall financial health of a company. Analysis transforms the data into meaningful information for management, investors, creditors, and other company stakeholders. By evaluating the financial data, trends can be identified which can be used to predict the company's future performance. Some techniques used on financial statements include horizontal analysis that compares data from multiple years, vertical analysis that expresses certain subtotals (gross profit) as a percentage of a total amount (sales), and ratio analysis that highlights important relationships between data.

References

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Exercises

EXERCISE 3–1

The following information pertains to Inglewood Ltd. for the 2020 fiscal year ending December 31:

Gain on sale of FVNI investments (before tax):	$ 1,500
Loss from operation of discontinued division (net of tax)	2,500
Loss from disposal of discontinued division (net of tax)	3,500
Income from operations (before tax)	125,000
Unrealized holding gain of FVOCI investments (net of tax)	12,000

The company tax rate is 27%. The unrealized holding gain is from FVOCI investments where the gain has been recorded to other comprehensive income (OCI).

Required:

a. Calculate income from continuing operations, net income, other comprehensive income, and total comprehensive income.

b. How would your answers change in part (a) if the company followed ASPE?

EXERCISE 3–2

Wozzie Wiggits Ltd. produces and sells gaming software. In 2020, Wozzie's net income exceeded analysts' expectations in the stock markets by 8%, suggesting an 8% increase from operations. Included in net income was a significant gain on sale of some unused assets. The company also changed their inventory pricing policy from FIFO which is currently being used in their industry sector to weighted average cost, causing a significant drop in cost of goods sold. This policy change was fully disclosed in the notes to the financial statements.

Required: Based solely on the information above, do you think that Wozzie's earnings are of high quality? Would you be willing to invest in this company based on the quality of earnings noted in the question?

EXERCISE 3–3

Eastern Cycles Ltd. is a franchise that sells bicycles and cycling equipment to the public. It currently operates several corporate-owned retail stores in Ottawa that are not considered a separate major line of business. It also has several franchised stores in Alberta. The franchisees buy all of their products from Eastern Cycles and pay 5% of their monthly sales revenues to Eastern Cycles in return for corporate sponsored advertising, training, and support. Eastern Cycles continues to monitor each franchise to ensure quality customer service. In 2020, Eastern Cycles sold its corporate owned stores in Ottawa to a franchisee.

Required: Would the sale of the franchise meet the classification of a discontinued operation under IFRS or ASPE?

EXERCISE 3–4

For the year ended December 31, 2020, Bunsheim Ltd. reported the following: sales revenue $680,000; cost of sales $425,750; operating expenses $75,000; and unrealized gain on Available-for-sale investments $25,000 (net of related tax of $5,000). The company had balances as at January 1, 2020, as follows: common shares $480,000; accumulated other comprehensive income $177,000; and retained earnings $50,000. The company did not issue any common shares during 2020. On December 15, 2020, the board of directors declared a $45,000 dividend to its common shareholders payable on January 31, 2021. The company accounts for its investments in accordance with IFRS 9 meaning that any unrealized gains/losses on FVOCI investments are to be reported as other comprehensive income (OCI). On January 4, 2021, the company discovered that there was an understatement in travel expenses from 2019 of $80,000. The books for 2019 are closed.

Required

a. Prepare a statement of changes in equity including required disclosures. The enacted tax rate is 27% and has not changed for several years.

b. Prepare the same statement as in part (a) assuming that Bunsheim Ltd. follows ASPE.

EXERCISE 3–5

For the year ended December 31, 2020, Patsy Inc. had income from continuing operations of $1,500,000. During 2020, it disposed of its Calgary division at a loss before taxes of $125,000. Before the disposal, the division operated at a before-tax loss of $150,000 in 2019 and $175,000 in 2020. Patsy also had an unrealized gain in its Availablefor-sale investments (FVOCI) of $27,500 (net of tax). It accounts for its investments in accordance with IFRS 9. Patsy had 50,000 outstanding common shares for the entire 2020 fiscal year and its income tax rate is 30%.

Required:

a. Prepare a partial statement of comprehensive income with proper disclosures for Patsy Inc. beginning with income from continuing operations. Patsy follows IFRS.

b. How would the statement in part (a) differ if Patsy followed ASPE?

EXERCISE 3–6

Below are the changes in account balances, except for retained earnings, for Desert Dorm Ltd., for the 2020 fiscal year:

	Account increase (decrease)
Accounts payable	$ (23,400)
Accounts receivable (net)	15,800
Bonds payable	46,500
Cash	41,670
Common shares	87,000
Contributed surplus	18,600
Inventory	218,400
Investments – FVNI	(46,500)
Intangible assets – patents	14,000
Unearned revenue	45,200
Retained earnings	??

Required: Calculate the net income for 2020, assuming there were no entries in the retained earnings account except for net income and a dividend declaration of $44,000, which was paid in 2020. (Hint: using the accounting equation $A = L + E$ to help solve this question)

EXERCISE 3–7

In 2020, Imogen Co. reported net income of $575,000, and declared and paid preferred share dividends of $75,000. During 2020, the company had a weighted average of 66,000 common shares outstanding.

Required: Calculate the company's basic earnings per share.

EXERCISE 3–8

A list of selected accounts for Opi Co. is shown below. All accounts have normal balances. The income tax rate is 30%.

Opi Co. For the year ended December 31, 2020	
Accounts payable	$ 63,700
Accounts receivable	136,500
Accumulated depreciation – building	25,480
Accumulated depreciation – equipment	36,400
Administrative expenses	128,700
Allowance for doubtful accounts	6,500
Bond payable	130,000
Buildings	127,400
Cash	284,180
Common shares	390,000
Cost of goods sold	1,020,500
Dividends	58,500
Equipment	182,000
Error correction for understated cost of goods sold from 2019	13,500
Freight-out	26,000
Gain on disposal of discontinued operations – South Division	27,560
Gain on sale of land	39,000
Inventory	161,200
Land	91,000
Miscellaneous operating expenses	1,560
Notes payable	91,000
Notes receivable	143,000
Rent revenue	23,400
Retained earnings	338,000
Salaries and wages payable	23,500
Sales discounts	18,850
Sales returns and allowances	22,750
Sales revenue	1,820,000
Selling expenses	561,600

Required:

a. Prepare a single-step income statement with expenses by function and a separate statement of retained earnings assuming that Opi is a private company that follows ASPE.

b. Prepare a combined single-step income statement and retained earnings by function assuming ASPE.

EXERCISE 3–9

Below are adjusted accounts and balances for Ace Retailing Ltd. for the year ended December 31, 2020:

Cost of goods sold	750,000
Dividends declared (common shares)	245,000
Dividends declared (preferred shares)	82,000
Gain on disposal of discontinued J division	115,000
Gain on sale of FVNI investments	45,000
Interest income	15,000
Loss on impairment of goodwill	12,000
Loss due to warehouse fire	175,000
Loss from operation of discontinued J division	285,000
Loss on disposal of unused equipment from F division	82,000
Retained earnings, January 1, 2020	458,000
Sales revenue	1,500,000
Selling and administrative expenses	245,000
Unrealized gain on FVOCI investments (OCI)	18,600

Additional information:

1. Ace decided to discontinue the J division operations. A formal plan to dispose of J division has been completed. There are no plans to dispose of F division at this time.
2. During 2020, 400,000 common shares were outstanding with no shares activity for 2020.
3. Ace's tax rate is 27%.
4. Ace follows IFRS and accounts for its investments in accordance with IFRS 9 meaning that any unrealized gains/losses for FVNI are reported through net income and FVOCI are reported in OCI.

Required:

a. Prepare a multiple-step statement of income for the year ended December 31, 2020, in good form reporting expenses by function.

b. Prepare a *combined* statement of income and comprehensive income in good form reporting expenses by function.

c. How would the answer in part (b) differ if a statement of comprehensive income were to be prepared without combining it with the statement of income?

d. Prepare a single-step statement of income in good form reporting expenses by function.

e. Explain what types of items are to be reported in other revenue and expenses as part of continuing operations, and provide examples for a retail business.

EXERCISE 3–10

Vivando Ltd. follows IFRS and reported income from continuing operations before income tax of $1,820,000 in 2020. The year-end is December 31, 2020, and the company had 225,000 outstanding common shares throughout the 2020 fiscal year. Additional transactions not considered in the $1,820,000 are listed below:

In 2020, Vivando sold equipment of $75,000. The equipment had originally cost $92,000 and had accumulated depreciation to date of $33,400. The gain or loss is considered ordinary.

The company discontinued operations of one of its subsidiaries, disposing of it during the current year at a total loss of $180,600 before tax. Assume that this transaction meets the criteria for discontinued operations. The loss on operation of the discontinued subsidiary was $68,000 before tax. The loss from disposal of the subsidiary was $112,600 before tax.

The sum of $180,200 was received because of a lawsuit for a breached 2016 contract. Before the decision, legal counsel was uncertain about the outcome of the suit and had not established a receivable.

In 2020, the company reviewed its accounts receivable and determined that $125,600 of accounts receivable that had been carried for years appeared unlikely to be collected. No allowance for doubtful accounts was previously set up.

An internal audit discovered that amortization of intangible assets was understated by $22,800 (net of tax) in a prior period. The amount was charged against retained earnings.

Required: Analyze the above information and prepare an income statement for the year 2020, starting with income from continuing operations before income tax (Hint: refer to the Toulon Ltd. example in Section 4 of this chapter). Calculate earnings per share as it should be shown on the face of the income statement. Assume a total effective tax rate of 25% on all items, unless otherwise indicated.

EXERCISE 3–11

The following account balances were included in the adjusted trial balance of Spyder Inc. at September 30, 2020. All accounts have normal balances:

Accumulated depreciation, office furniture	25,000
Accumulated depreciation, sales equipment	80,000
Accumulated Other Comprehensive Income	162,000
Allowance for doubtful accounts	2,500
Cost of goods sold	1,500,478
Common shares	454,000
Depreciation expense, office furniture	10,150
Depreciation expense, sales equipment	6,972
Depreciation expense, understatement due to error – 2019	24,780
Dividend revenue	53,200
Dividends declared on common shares	12,600
Entertainment expense	20,748
Freight-out	40,502
Gain on sale of land	78,400
Interest expense	25,200
Loss on disposal of discontinued operations – Aphfflek Division	49,000
Miscellaneous operating expenses (administrative)	6,601
Retained earnings	215,600
Salaries and wages expense – office staff	78,764
Sales commissions expense	136,640
Sales discounts	21,000
Sales returns and allowances	87,220
Sales revenue	2,699,900
Supplies expenses (administrative)	4,830
Telephone and Internet expense (administrative)	3,948
Telephone and Internet expense (sales)	12,642

Additional information:

The company follows IFRS and its income tax rate is 30%. On September 30, 2020, the number of common shares outstanding was 124,000 and no changes to common shares during the fiscal year. The depreciation error was due to a missed month-end accrual entry at August 31, 2019.

Required:

a. Prepare a multiple-step income statement in good form with all required disclosures by function and by nature for the year ending September 30, 2020.

b. Prepare a statement of changes in equity in good form with all required disclosures for the year ended September 30, 2020.

c. Prepare a single-step income statement in good form with all required disclosures by nature for the year ending September 30, 2020, assuming this time that the dividends declared account listed in the trial balance are for preferred shares instead of common shares.

d. Assuming that Spyder also recorded unrealized gains for FVOCI investments through OCI of $25,000, prepare a statement of comprehensive income for the company.

Chapter 4

Financial Reports – Statement of Financial Position and Statement of Cash Flows

Amazon's Cash Flow Position

In 2014, Amazon reported its quarterly earnings for their year-to-date earnings release. Since the trend has been for their profits to slide downward in the recent past, initial speculation was that this was causing investor discontent resulting in decreasing stock prices. But was it?

Even though profits were on a downward trend, the earnings releases showed that the operating section of the statement of cash flow (SCF) was reporting some healthy net cash balances that were much higher than net income. This is often caused by net income including large amounts of non-cash depreciation expense.

Moreover, when looking at free cash flow, it could be seen that Amazon had been making huge amounts of investment purchases, causing a sharp drop in the free cash flow levels compared to the operating section of the SCF. However, even with these gigantic investment purchases, free cash flow continued to soar well above its net income counterpart by more than $1 billion. What this tells investors is that there are timing differences between what is reported as net income on an accrual basis and reported as cash flows on strictly a cash basis.

The key to such cash flows success lies in the cash conversion cycle (CCC). This is a metric that measures how many days it takes for a company to pay it suppliers for its resale inventory purchases compared to how many days it takes to convert this inventory back into cash when it is sold and the customer pays their account. For example, if it takes 45 days to pay the supplier for resale inventory and only 40 days to sell and receive the cash from the customer, this creates a negative CCC of 5 days of access to additional cash flows. In industry, Costco and Walmart have been doing well at maintaining single-digit CCC's but Amazon tops the chart at an impressive negative 30.6 days in 2013. Apple also managed to achieve a negative CCC in 2013, making these two companies cash-generating giants in an often-risky high-tech world.

Amazon is using this internal access to additional cash to achieve significant levels of growth; from originally an online merchant of books to a wide variety of products and services, and, most recently, to video streaming. Simply put, Amazon can expand without borrowing from the bank, or from issuing more stock. This has landed Amazon's founder and CEO, Jeff Bezoz, an enviable spot in Harvard Business Review's list of best performing CEOs in the world.

So, which part of the CCC metric is Amazon leveraging the most? While it could be good inventory management, it is not. It is the length of time Amazon takes to pay its suppliers. In 2013, the company took a massive 95.8 days to pay its suppliers, a fact that suppliers may not be willing to accept forever.

Though it might have been too early to tell, some of the more recent earnings release figures for Amazon are starting to show the possibility that the CCC metric may be starting to increase. This shift might be a cause for concern for the investors. Moreover, this could be the real reason why Amazon's stock price was faltering in 2014 rather than because of the decreasing profits initially considered by many to be the culprit.

(Source: Fox, 2014)

Chapter 4 Learning Objectives

After completing this chapter, should be able to:

LO 1: Describe the statement of financial position/balance sheet (SFP/BS) and the statement of cash flows (SCF), and explain their role in accounting and business.

LO 2: Explain the purpose of the SFP/BS.

- LO 2.1: Identify the various disclosure requirements for the SFP/BS and prepare a SFP/BS in good form.
- LO 2.2: Identify and describe the factors can affect the SFP/BS, such as changes in accounting estimates, changes in accounting policies, errors and omissions, contingencies and guarantees, and subsequent events.

LO 3: Explain the purpose of the statement of cash flows (SCF) and prepare a SCF in good form.

- LO 3.1: Explain and describe an acceptable format for the SCF.
- LO 3.2: Describe and prepare a SCF in good form with accounts analysis as required, and interpret the results.

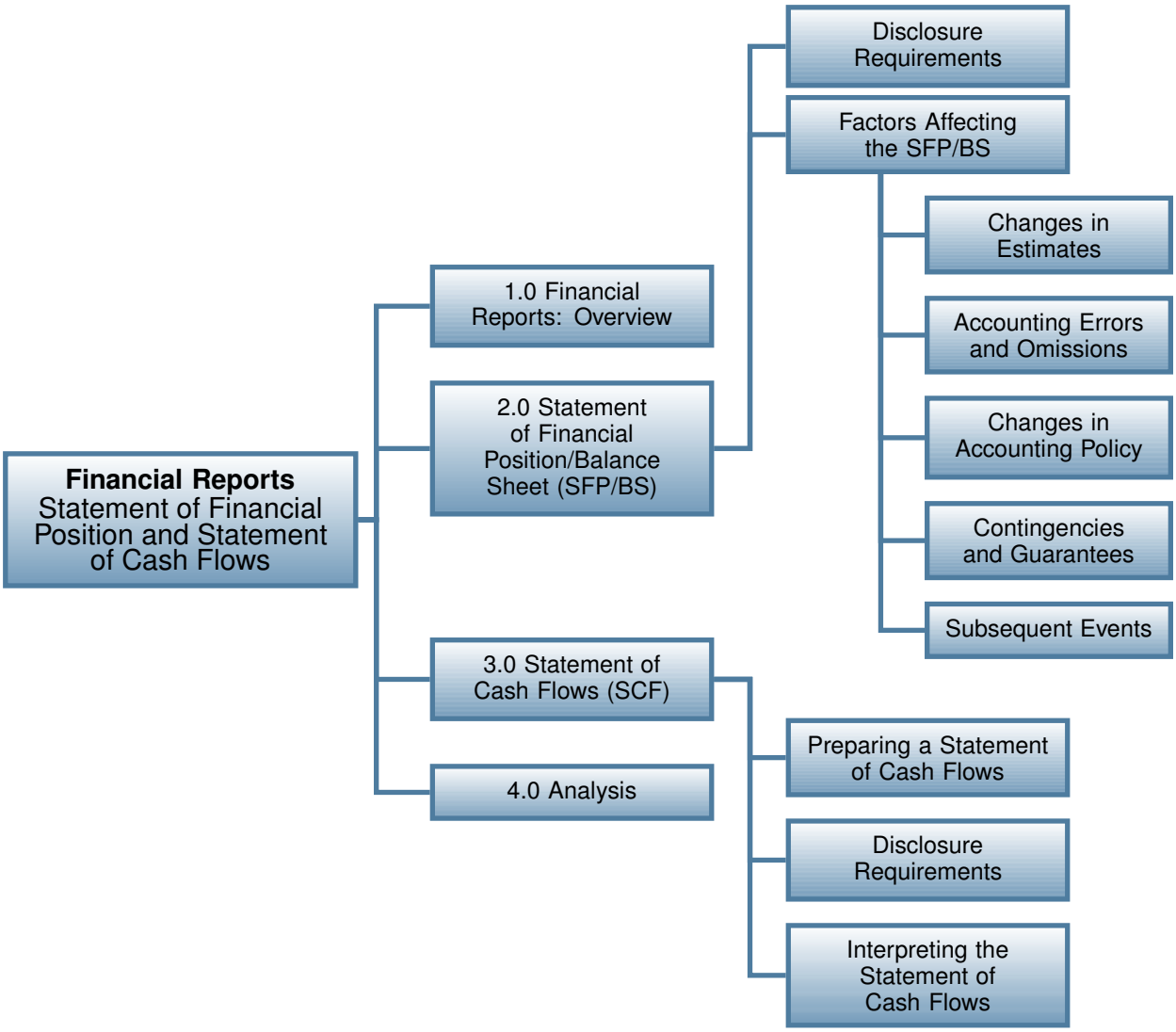
LO 4: Identify and describe the types of analysis techniques that can be used for the SFP/BS and the SCF.

Introduction

In Chapter 3 we discussed three of the core financial statements. This chapter will now discuss the remaining two, which are the SFP/BS, and the SCF. Both of these statements are critical tools used to assess a company's financial position and its current cash resources, as explained in the opening story about Amazon. Cash is one of the most critical assets to success as will be discussed in a subsequent chapter on cash and receivables. How an investor knows when to invest *in* a company and how a creditor knows when to extend credit *to* a company is the topic of this chapter.

NOTE: IFRS refers to the balance sheet as the statement of financial position (SFP) and ASPE continues to use the term balance sheet (BS). To simplify the terminology, this chapter will refer to this statement as the SFP/BS, unless specific reference to either one is necessary.

Chapter Organization



4.1 Financial Reports: Overview

As discussed previously, investors and creditors assess a company's overall financial health by using published financial statements. Recall that the previous chapter about financial reporting illustrated how the core financial statements link into a cohesive network of financial information. The illustration in that chapter showed how the ending cash balance from the statement of cash flows (SCF) is also the ending cash balance in the SFP/BS. This is the final link that completes the connection of the core financial statements.

For example, in the SFP/BS for Wellbourn Services Ltd. at December 31 (which we saw also

in the previous chapter) note how the cash ending balance links the two statements.

Wellbourn Services Ltd.
Statement of Financial Position
December 31, 2020

Assets		Liabilities	
Current assets		Current liabilities	
Cash	$135,500	Accounts payable	$ 77,500
Accounts receivable (net)	225,000	Accrued liabilities	225,000
Inventory	130,000	Total current liabilities	302,500
Total current assets	490,500	Bonds payable	160,000
Investments	100,000	Total liabilities	462,500
Property, plant, and equipment (net)	246,000	Equity	
Intangible assets	15,000	Common shares	210,000
Total assets	$851,500	Contributed surplus	25,000
		Retained earnings	105,500
		AOCI	48,500
		Total equity	389,000
		Liabilities and equity	$851,500

Wellbourn Services Ltd.
Statement of Cash Flows
for the year ended December 31, 2020

Cash flows from operating activities		
Cash received from clients	$ 50,000	
Cash paid for supplies	(25,000)	
Cash paid to employees	(51,200)	
Net cash used by operating activities		(26,200)
Cash flows from investing activities		
Purchase of equipment	(25,000)	
Net cash used by investing activities		(25,000)
Cash flows from financing activities		
Dividends paid	(50,000)	
Issued bonds	160,000	
Net cash received by financing activities		110,000
Net increase in cash		58,800
Cash balance, January 1		76,700
Cash balance, December 31		$135,500

The SFP/BS provides information about a company's resources (assets) at a specific point in time and whether these resources are financed mainly by debt (current and long-term liabilities) or equity (shareholders' equity). In other words, the SFP/BS provides the information needed to assess a company's liquidity and solvency. Combined, these represent a company's **financial flexibility**.

Recall the basic accounting equation:

$$\textbf{Assets} = \textbf{Liabilities} + \textbf{Equity}$$

The key issues to consider regarding the SFP/BS are the valuation and management of resources (assets) and the recognition and timing of debt obligations (liabilities). Reporting the results within the SFP/BS creates a critical reporting tool to assess a company's overall financial health.

The statement of cash flows, discussed later in this chapter, identifies how the company utilized its cash inflows and outflows over the reporting period. Since the SCF separates cash flows into those resulting from operating activities versus investing and financing activities, investors and creditors can quickly see where the main sources of cash originate. If cash sources are originating more from investing activities than from operations, this means that the company is likely selling off some of its assets to cover its obligations. This may be appropriate if these assets are idle and no longer contributing towards generating profit, but otherwise, selling off useful assets could trigger a downward spiral, with profits plummeting as a result. If cash sources are originating mainly from financing activities, the company is likely sourcing its cash from debt or from issuing shares. Higher debt requires more cash to make the principal and interest payments, and more shares means that existing investors' ownership is becoming diluted. Either scenario will be cause for concern for both investors and creditors. Even if most of the cash sources are mainly from operating activities, a large difference between net income and the total cash from operating activities is a warning sign that investors and creditors should be digging deeper.

The bottom line after reviewing the two statements is: if debt is high and cash balances are low, the greater the risk of failure.

The SFP/BS will now be discussed in detail.

4.2 Statement of Financial Position/Balance Sheet

The purpose of the SFP/BS is to report the assets of a company and the composition of the claims against those assets by creditors and investors at a specific point in time. Assets and liabilities come from several sources and are usually separated into current and non-current (IFRS) or long-term (ASPE) categories.

4.2.1 Disclosure Requirements

IFRS (IAS 1) and ASPE (section 1521) identify the disclosure requirements for SFP/BS, which are quite similar. Listed below are summary points for some of the more commonly required

disclosures for both standards:

- The application of the standards is required, with additional disclosures when necessary, so that the SFP/BS will be **relevant** and **faithfully representative**. Relevance means that the information in the SFP/BS can make a difference in decision-making. Faithfully representative means that the statement is complete, neutral, and free from errors.
- Any material uncertainties about a company's ability to continue as a **going concern** are to be disclosed.
- Company name, name of the financial statement, and date must be provided.
- The SFP/BS is to report assets and liabilities separately in many cases. The schedule below lists many of the more common assets and liabilities that are to be separately reported.

  In addition, any material **classes of similar items** are to be separately disclosed in either the statement or in the notes to the financial statements (e.g., items of property, plant, and equipment, types of inventories, or classes of equity share capital).
- When preparing the SFP/BS, assets are not to be netted with liabilities. This does not apply to contra accounts.
- Assets and liabilities are to be separated into current and non-current (long-term). Some companies further report assets in order of their liquidity.
- The measurement basis used for each line item in the statement is to be disclosed. Examples would be whether the company applied fair value, fair value less costs to sell, cost, amortized cost, net realizable value, or lower of cost and net realizable value (LCNRV) when preparing the statement.
- Due dates and interest rates for any financial instruments payable such as loans, notes, mortgages, and bonds payable, as well as details about any security required for the loan are to be disclosed.
- Cross-reference note disclosures to the related line items in the statement.

Below are the basic classifications for some of the more common reporting line items and accounts. The focus is mainly IFRS for simplicity, though ASPE is substantially similar. The required supplemental disclosures below focus on the measurement basis of the various assets, the due dates, interest rates, and security conditions for non-current liabilities; and the structure for each class of share capital in shareholders' equity when preparing a SFP/BS. These will be discussed in more detail in the chapters that follow in the next intermediate accounting course.

SFP/BS – Classifications and Reporting Requirements

Classification	Report Line Items	Includes	Measurement Basis and Other Required Disclosures at Each Reporting Date
Current assets – assets realized within one year from the reporting date or the operating cycle, whichever is longer	Cash and cash equivalents (unrestricted)	Currency, coin, bank accounts, petty cash, treasury bills maturing within three months at acquisition	Fair value, stated in local currency. Restricted cash and compensating balances are reported separately as a current or long-term asset, as appropriate.
	Investments – trading	Equity investments such as shares purchased to sell within a short time	Usually fair value
	Accounts receivable	Trade receivables net of allowance for doubtful account (AFDA)	Net realizable value as a fair value measure
	Related party receivables	Amounts owing by related parties	Carrying amount or exchange amount
	Notes receivable	Notes receivable within one year	Net realizable value
	Inventories	Raw materials, work-in-process, finished goods held for sale, or goods held for resale	Lower of cost and net realizable value (LCNRV) using FIFO, weighted average cost or specific identification
	Supplies on hand	Supplies that are expected to be consumed within one year	Usually invoice cost
	Prepaid expenses	Cash paid items where the expense is to be incurred within one year of the reporting date	Usually invoice cost
	Assets held for sale	Land, buildings, and equipment no longer used to generate income	If criteria met (ASPE), lower of carrying less costs to sell
	Income taxes receivable	Income taxes receivable based on current taxable loss	Based on tax rate
	Deferred income tax assets	Current portion of deferred income taxes avoided/saved arising from differences between accounting income/loss and taxable income/loss	ASPE only Under IFRS, all deferred tax is non-current

Classification	Report Line Items	Includes	Measurement Basis and Other Required Disclosures at Each Reporting Date
Non-current / long-term assets	Investments – non-strategic	Debt and equity investments such as held to maturity to collect principal and interest (AC), fair value through OCI to collect principal and interest and to sell (FVOCI), and FVNI for all else	AC – cost, amortized cost FVOCI – fair value through OCI (IFRS only) FVNI – fair value through net income - debt or equity investments not classified as FVOCI (IFRS), or equity investments in active markets (ASPE)
	Investments – strategic	Associate/Significant Influence equity investments in shares	IFRS – equity method ASPE – equity method, cost method, or FVNI
	Joint-ventures and subsidiaries	Equity investments of greater than 50% of the investee company's outstanding shares	Partial or full consolidation
	Investment property	Land or building held as an investment	Usually fair value
	Biological assets	Dairy cattle, pigs, sheep, farmed fish, trees for timber, trees or vines for fruit	IFRS – fair value less costs to sell ASPE – N/A
	Property, plant, and equipment	Tangible assets used to generate income such as land, buildings, machinery, equipment, furniture	Land – cost All else – amortized cost IFRS also allows fair value (revaluation); accumulated depreciation disclosed separately
	Intangible assets	Copyrights, customer lists, franchises, patents, trademarks, trade names	Finite life and indefinite life – initially cost, and subsequently cost less accumulated amortization (finite life only) net of accumulated impairment losses (both) Accumulated amortization disclosed separately

Classification	Report Line Items	Includes	Measurement Basis and Other Required Disclosures at Each Reporting Date
	Goodwill	Purchased goodwill	Goodwill – excess of purchase price over fair values of net identifiable assets and tested annually for impairment
	Deferred income tax assets	Non-current portion of deferred income taxes avoided/saved arising from differences between accounting income/loss and taxable income/loss	IFRS and ASPE
Current liabilities – obligations due within one year from the reporting date or the operating cycle, whichever is longer	Bank indebtedness or bank overdraft	Amounts owing to the bank that cannot be offset by a same-bank positive balance, amount, and is payable on demand	Fair value or contract amount stated in local currency
	Accounts payable	Trade payables, such as suppliers' invoices owing for goods and services received	Invoice cost, net of realized discounts
	Notes and loans payable	Notes and loans due within one year	Also includes principal portion of long-term debt obligation due within one year of the reporting date
	Accrued liabilities	Adjusting entries for various types of expenses incurred but not paid such as salaries, benefits, interest, property taxes, non-trade payables	Invoice or contract cost
	Unearned revenue	Cash received in advance for goods and services not yet provided to customer	Consideration amount received
	Income taxes payable	Income taxes payable based on current taxable income	Based on taxable income at the current tax rate
	Deferred income tax liabilities	Current portion of deferred income taxes expected to be owed and arising from differences between accounting income/loss and taxable income/loss	ASPE only

Classification	Report Line Items	Includes	Measurement Basis and Other Required Disclosures at Each Reporting Date
Non-current/long-term liabilities	Long-term debt payable	Long-term mortgages, bonds, notes, loans, capital leases net of current portions, long-term construction obligations	Each item is reported separately Measurement basis varies – amortized cost, fair value, discounted present value, estimated construction obligation, and so on Reporting requirements include the amortization period, due date, interest rate and security conditions
	Employee pension benefits payable	Employer pension obligations for the shortfall between the defined benefit obligation (DBO) and the plan assets both of which are held and reported through a separate trust	The net defined benefit liability/asset is determined by deducting the fair value of the plan assets from the present value of the defined benefit obligation
	Deferred income tax liabilities	Non-current portion of deferred income taxes expected to be owed arising from differences between accounting income/loss and taxable income/loss	IFRS and ASPE
Equity – a company's net assets, which is equal to total assets minus total liabilities Represents the ownership interest	Share capital	Preferred shares and common shares of various classes are each separately reported	The exchanged value (transaction price less any transaction costs) of issued shares The dividend amount, characteristics of each share class, as well as the number of shares authorized, issued, and outstanding for each class of share

Classification	Report Line Items	Includes	Measurement Basis and Other Required Disclosures at Each Reporting Date
	Contributed surplus	Gains from certain shares transactions, donated assets by a shareholder, redemption or conversion of shares	
	Retained earnings/(deficit)	Undistributed accumulated net income If a negative number, label as a “deficit”	
	Accumulated other comprehensive income (AOCI)	Accumulated gains or losses reported in other comprehensive income (OCI) each reporting period that are closed to AOCI at the end of that reporting period	IFRS only
Non-controlling interest/minority interest	Minority interest	An equity claim for the portion of a subsidiary corporation’s net assets that are not owned by the parent corporation (third-party investors)	

Note that in addition to the measurement basis identified for each asset category in the chart above, many assets’ valuations can be subsequently adjusted, depending on the circumstances. Below are examples of some of the common valuation adjustments made to various asset accounts that will be discussed in later chapters.

Cash and cash equivalents	Foreign exchange adjustments for foreign currencies
Investments – trading	Adjust to fair values, therefore no subsequent adjustment for impairment
Accounts receivable and AFDA	AFDA adjustments at each reporting date are the basis for reporting accounts receivable at NRV
Related party receivables	Adjust for impairment
Notes receivable	Adjust for impairment
Inventory	Adjust for cost of goods sold, shrinkage, obsolescence, damage; reported at lower of cost and net realizable value (LCNRV)
Supplies/office supplies	Adjust for usage, shrinkage, obsolescence, damage
Assets held for sale	Adjust to fair values, therefore no subsequent adjustment for impairment
Investments	Adjust to either fair value or for impairment, depending on classification of investment (refer to classification schedule above for details)
Biological assets	Adjust to fair values, therefore no subsequent adjustment for impairment
Property, plant, and equipment	Adjust for impairment
Intangible assets	Adjust for impairment

Disclosures such as those listed in the classification schedule above may be presented in parentheses beside the line item within the body of the SFP/BS, if the disclosure is not lengthy. Otherwise, the disclosure is to be included in the notes to the financial statements and cross-referenced to the corresponding line item in the SFP/BS.

Using parentheses tends to be more common for ASPE companies with simpler disclosure requirements. IFRS companies and larger ASPE companies extensively use the cross-referencing method because of the more complex and lengthy notes disclosures required.

Below is an example of a Statement if Financial Position. Recall that a *classified* SFP/BS reports groupings of similar line items together as either current or non-current (long-term) assets and liabilities.

ABC Company Ltd.
Statement of Financial Position
December 31, 2020

Assets			
Current assets			
Cash			$ 250,000
Investments (fair value)			
Accounts receivable		$180,000	
Allowance for doubtful accounts		(2,000)	178,000
Note receivable (NRV)			15,000
Inventory (at lower of FIFO cost and NRV)			500,000
Prepaid expenses			15,000
Total current assets			958,000
Long term investments (fair value			25,000
Property, plant and equipment			
Land		75,000	
Building	$ 325,000		
Accumulated depreciation	(120,000)	205,000	
Equipment	100,000		
Accumulated depreciation	(66,000)	34,000	314,000
Intangible assets (net of accumulated amortization for $25,000)			55,000
Goodwill			35,000
Total assets			$1,387,000
Liabilities and Shareholders' Equity			
Current liabilities			
Accounts payable		$ 75,000	
Accrued interest payable		15,000	
Accrued other liabilities		5,000	
Income taxes payable		44,000	
Unearned revenue		125,000	
Total current liabilities			$ 264,000
Long-term bonds payable (20-year 5% bonds, due June 20, 2029)			200,000
Total liabilities			464,000
Shareholders' equity			
Paid in capital			
Preferred, ($2, cumulative, participating – authorized, 30,000 shares; issued and outstanding, 15,000 shares)	$ 150,000		
Common (authorized, 400,000 shares; issued and outstanding 250,000 shares)	750,000		
Contributed surplus	15,000	915,000	
Retained earnings		8,000	923,000
Total liabilities and shareholders' equity			$1,387,000

Note that the measurement basis disclosures are in parenthesis for any assets where a measurement other than cost is possible. Also note the interest rate and due date parenthetical disclosure for the long-term liability. In the equity section, the class, authorized, and

outstanding shares are disclosed.

Taking a closer look at this statement, ASPE Company reports $1,387,000 in total assets and $464,000 in corresponding obligations against those assets owing to suppliers and other creditors.

On the topic of debt reporting, the current portion of long-term debt is a reported as a current liability. The current portion of the long-term debt is the amount of **principal** that will be paid within one year of the SFP/BS date.

For example, on December 31, 2019, ASPE Company signed a three-year, 2%, note. Payments of $137,733 are payable each December 31. If the market rate was 2.75%, the present value of the note would be $391,473 at the time of signing on December 31, 2019. Below is the payments schedule of the note using the effective interest method.

	Payment Amount	Interest @ 2.75%	Principal	Balance
December 31, 2019				$391,473
December 31, 2020	$137,733	$10,766	$126,967	264,506
December 31, 2021	137,733	7,274	130,459	134,047
December 31, 2022	137,733	3,686	134,047 (rounded)	0

If the SFP/BS date is December 31, 2020, the current portion of the long-term debt to report as a current liability would be $130,459 from the note payable payments schedule above. Note that this amount comes from the year following the 2020 reporting year to correspond with the principal amount owing within one year of the current reporting date (December 31, 2020). The total amount owing as at December 31, 2020 is $264,506; therefore, the long-term portion of $134,047 would be the amount owing net of the current portion of $130,459. Below is how it would be reported in the SFP/BS at December 31, 2020:

Current Liabilities	
Current portion of long-term note payable	$130,459
Long-term Liabilities	
Note payable, 2%, three-year, due date Dec 31, 2022	$134,047
(balance owing Dec 31, 2020, of $264,506 − $130,459)	

If the current portion of the long-term debt is not reported as a current liability, there will be a material reporting misstatement that would affect the assessment of the company's liquidity and solvency.

Total equity of $923,000 represents the remaining assets financed by the company shareholders. Ranking first are the preferred shareholders capital investors of $150,000. They are

usually reported before the common shares because they are senior to common shares in terms of both dividend payouts and claims to resources if a company liquidates. However, this is not a reporting requirement. The **contributed surplus** of $15,000 is additional paid-in capital from shareholders. Examples of transactions that recognize contributed surplus include:

- stock options such as an employee stock option plan, or other share-based compensation plan and issuance of convertible debentures
- for certain share re-purchase transactions where the purchase proceeds are lower than the assigned value of the shares
- donated assets by shareholders
- defaulted shares subscriptions
- certain related party transactions (ASPE)

If there are more line items than simply common shares, a **paid-in capital** subtotal is also required for IFRS companies. Paid-in capital is the total amount "paid in" by shareholders and therefore not resulting from ongoing operations. It is comprised of all classes of share capital plus contributed surplus, if any. Finally, the retained earnings line item is the total net income accumulated by the company since its inception that has not been distributed in dividends to the shareholders.

Below are other reporting requirements:

- The statement can be prepared on a consolidated basis. This means that there are subsidiaries included where the reporting company is the parent company. Subsidiaries are investments in the shares of another company where the shares purchased are greater than 50%. In this case, there will be a line item called "non-controlling interest" that must be included for the portion of the subsidiary owned by other third-party investors.
- The presentation currency is stated as Canadian dollars and the level of rounding can be to the nearest thousand dollars or million dollars, depending on the size of the company.
- The financial data is to include the previous year (an IFRS disclosure requirement).
- An **accumulated other comprehensive income/loss (AOCI)** is an equity account used only by IFRS companies to accumulate items reported in OCI in the statement of comprehensive income. AOCI. Recall from the previous chapter that an example of an OCI transaction would be the unrealized gains or losses from fair value adjustments while holding certain FVOCI investments. FVOCI investments and AOCI will be covered in detail later in this course. For now, note the position of the AOCI account in the equity section.

 A video is available on the Lyryx site. Click here to watch the video.

4.2.2 Factors Affecting the Statement of Financial Position/Balance Sheet (SFP/BS)

Accounting Estimates, Changes in Accounting Policy, and Correction of Errors

These were discussed in the previous chapter, but a summary of the pertinent information in this chapter is warranted because of their impact on the SFP/BS.

Financial statements can be affected by changes in accounting estimates, changes due to accounting errors or omissions, and changes in accounting policies. These were first introduced in the introductory accounting course and will also be discussed in detail in the next intermediate accounting course. However, it is worth including a review at this time because of the potentially significant effect on the financial statements.

Changes in Accounting Estimates

Accounting is full of estimates that are based on the best information available at the time. As new information becomes available, estimates may need to be changed. Examples of changing estimates would be the useful life, residual value, or the depreciation pattern used to match the use of assets with revenues earned. Other changes in estimates involve uncollectible receivables, asset impairment losses, and pension assumptions that could affect the accrued pension asset/liability account in the SFP/BS. Changes in accounting estimates are applied **prospectively**, meaning they are applied to the current fiscal year if the accounting records have not yet been closed and for all future years going forward.

Changes Due to Accounting Errors or Omissions

The accounting treatment for an error or omission is a **retrospective adjustment with restatement**. Retrospective adjustment means that the company reports treat the error or omission as though it had always been corrected. If an accounting error in inventory originating in the current fiscal year is detected before the current year's books are closed, the inventory error correction is easily recorded to the current fiscal year accounts. If the accounting records are already closed when the inventory error is discovered, the error is adjusted to the inventory account and to retained earnings, *net of taxes*. This results in a restatement of inventory and retained earnings in the current year. If the financial statements are comparative and include

previous year's data, this data is also **restated** to include the error correction from the previous year.

Changes in Accounting Policy

The accounting treatment for a change in accounting policy is **retrospective adjustment with restatement**.

Examples of changes in accounting policies are:

- Changes in valuation methods for inventory such as changing from FIFO to weighted average cost.
- Changes in financial assets and liabilities such as FVNI, FVOCI and AC investments or certain lease obligations. Details of these are discussed in the chapter on intercorporate investments, later in this text.
- Changes in the basis of measurement of non-current assets such as historical cost and revaluation.
- Changes in the basis used for accruals in the preparation of financial statements.

Accounting policies must be applied consistently to promote comparability between financial statements for different accounting periods. A change in accounting policy is only allowed under the following two conditions:

- due to changes in a primary source of GAAP
- may be applied voluntarily by management to enhance the relevance and reliability of information contained in the financial statements for IFRS. [ASPE has some exceptions to this "relevance and reliability" rule to provide flexibility for changes from one existing accounting standard to another.]

Changes in accounting policies are applied **retrospectively** in the financial statements. As with accounting errors, retrospective application means that the company implements the change in accounting policy as though it had always been applied. Consequently, the company will adjust all comparative amounts presented in the financial statements affected by the change in accounting policy for each prior period presented. Retrospective application reduces the risk of changing policies to manage earnings aggressively because the restatement is made to all prior years as well as the current year. If this were not the case, the change made to a single year could materially affect the statement of income for the current fiscal year. A cumulative

amount for the restatement is estimated and adjusted to the affected asset or liability in the SFP/BS and to the opening retained earnings balance of the current year, net of taxes, in the statement of changes in equity (IFRS) or the statement of retained earnings (ASPE).

Contingencies, Provisions and Guarantees

In accounting, a **contingency (ASPE) or provision (IFRS)** exists when a material future event, or circumstance, could occur but cannot be predicted with certainty. IFRS (IAS 37.10) has the following definitions regarding the various types of contingencies in accounting (IFRS, 2015).

Key definitions [IAS 37.10]

Provision: a liability of uncertain timing or amount.

Liability:

- present obligation resulting from past events
- settlement is expected to result in an outflow of resources (payment)

Contingent liability:

- a possible obligation depending on whether some uncertain future event occurs, or
- a present obligation but payment is not probable, or the amount cannot be measured reliably

Contingent asset:

- a possible asset that arises from past events, and
- whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity.

IAS 37 explains that a **contingent liability** is to be disclosed in the financial statement notes. Figure 4.1 is a decision tree that identifies the various decision points when determining if a potential obligation should be recognized and recorded, because it meets the definition of a liability; added only to the notes, because it meets the definition of a contingent liability; or omitted altogether because it fails to meet any of the relevant criteria (Friedrich, Friedrich, & Spector, 2009).

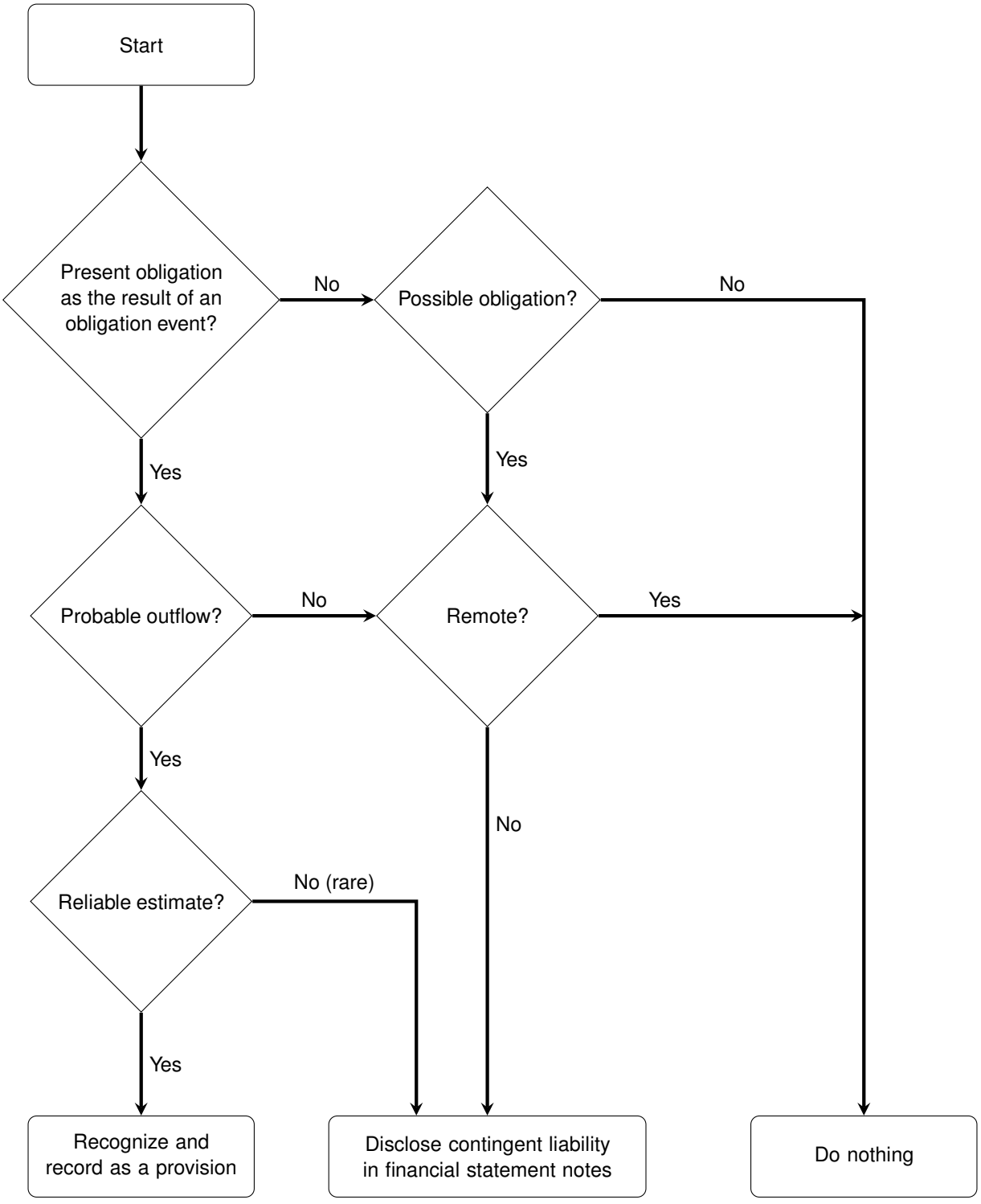


Figure 4.1: Decision tree to determine if a potential obligation should be recognized and recorded (Friedrich, Friedrich, & Spector, 2009)

IAS 37 also states that a contingent asset is not to be recorded until it is actually realized but

can be included in the notes if it is probable that an inflow of economic benefits will occur (IFRS, 2012). If a note disclosure is made, management must take care not to mislead the reader regarding its potential realization; if the potential asset is not probable, it must not be disclosed.

ASPE is similar, but the provision is usually interpreted as “more likely than not” whereas a contingent liability is one that is “likely.”

Contingencies will be discussed further in the chapter on liabilities in the next intermediate accounting course.

A guarantee is a type of contingent liability because it is a promise to take responsibility for another company’s financial obligation if that company is unable to do so. An example might be a parent company that guarantees part or all of a bond issuance to investors by its subsidiary company. Guarantees are not recognized and recorded because they are not probable, so they are to be disclosed in the notes. This will enable investors and creditors to assess the potential impact of the guarantee and the risk associated with it.

Subsequent Events

There is a period of time after the year-end date when economic events apparent in the new year may need to be either reported in the financial statements for the year just ended or disclosed in the notes prior to their release.

If this subsequent event is significant and relates to business operations prior to the reporting date, it is to be included in the financial statements prior to release. These would include adjusting entries such as inventory write-downs due to shrinkage, recording additional accounts payable for late arriving invoices from suppliers or correction of errors or omissions found when reconciling the general ledger accounts as part of the year-end process.

If a subsequent event is significant but relates to operations occurring after the reporting period, it is to be included in the notes. An example might be where early in the new fiscal year, there is a flood causing serious damage to buildings and equipment, if the repair or replacement costs are significant and perhaps uninsured, these costs, though correctly paid and recorded in the new year, are to be disclosed in the notes to the financial statements for the year-end just ended. This will ensure that the company stakeholders will be aware of all the information about risks that could detrimentally affect company operations.

4.3 Statement of Cash Flows (SCF)

The last core final financial statement to discuss is the statement of cash flows. The purpose of this statement is to provide a means to assess the enterprise's capacity to generate cash and to enable stakeholders to compare cash flows of different entities (CPA Canada, 2016). This statement is an integral part of the financial statements for two reasons. First, this statement helps readers to understand where these cash flows in (out) originated during the current year, to assess a company's liquidity, solvency, and financial flexibility. Second, these historic cash flows in (out) can be used to predict future company performance.

The statement of cash flows can be prepared using two methods: the direct method and the indirect method. Both methods organize cash flows into three activities: operating, investing, and financing activities. The **direct method** reports cash flows from operating activities into categories such as cash from customers, cash to suppliers, and cash to employees. The **indirect method** reports cash flows from operating activities starting with net income/loss adjusted for any non-cash items, followed by the changes in each of the working capital accounts (i.e., current assets and current liabilities accounts). The total cash flows from the operating activities are the same for both methods. The investing and financing activities are prepared the same way under both methods.

This course will explain how to prepare the statement of cash flows using the **indirect method**. The direct method will be discussed in a subsequent intermediate accounting course.

Below is a statement of cash flows that illustrates the overall format and its connections with the income statement and SFP/BS.

XYZ Company Ltd.
Statement of Cash Flows
for the year ended December 31, 2020

		Linkage to other financial statements:
Cash flows from operating activities		
Net income (loss)	$$$ or ($$$)	line items from the income statement
Non-cash items (adjusted from net income)		
Depreciation, depletion and amortization expenses	+ $$$	
Losses (gains) from sale of non-current tangible assets	$$$ or ($$$)	
Deferred income tax expense	+ $$$	
Impairment losses from inventory or receivables	+ $$$	
Investment income from investment in associate	($$$)	
Investment income from investment in associates (equity method)[1]	($$$)	
Unrealized investment losses (gains) (due to +/- changes in their fair value)[1]	($$$)	
Unrealized foreign exchange losses (gains)	$$$ or ($$$)	
Cash in (out) from operating working capital		
Decrease (increase) in trading investments	$$$ or ($$$)	changes in current assets and current liabilities from the balance sheet
Decrease (increase) in accounts receivable	$$$ or ($$$)	
Decrease (increase) in notes receivable	$$$ or ($$$)	
Decrease (increase) in inventory	$$$ or ($$$)	
Decrease (increase) in prepaid expenses	$$$ or ($$$)	
Decrease (increase) in accounts payable	$$$ or ($$$)	
Decrease (increase) in interest payable	$$$ or ($$$)	
Decrease (increase) in other liabilities	$$$ or ($$$)	
Decrease (increase) in income taxes payable	$$$ or ($$$)	
Decrease (increase) in unearned revenue	$$$ or ($$$)	
Net cash from operating activities		
Cash flows from investing activities		
Sales proceeds or (purchase) of non-current investments	$$$ or ($$$)	changes in non-current assets accounts
Sales proceeds or (purchase) of property, plant, and equipment	$$$ or ($$$)	
Sales proceeds or (purchase) of intangible assets	$$$ or ($$$)	
Net cash from investing activities	$$$ or ($$$)	
Cash flows from financing activities		
Additions to or (repayment) of long-term debt	$$$ or ($$$)	changes in non-current liabilities and equity accounts (share capital and dividends)
Proceeds from shares issuance	$$$ or ($$$)	
Dividends paid	($$$)	
Net cash from financing activities	$$$ or ($$$)	
Net increase (decrease) in cash and cash equivalents	$$$ or ($$$)	← sum of the 3 sections above
Cash and cash equivalents, January 1	$$$	reconciles the net change with opening and closing cash and cash equivalent balances from the balance sheet
Cash and cash equivalents, December 31	$$$	

[1] Discussed in Chapter 8, Intercorporate Investments

Note that interest and dividends paid can also be reported in the operating activities section.

For the indirect method, the sum of the non-cash adjustments and changes to current assets and liabilities represents the total cash flow in (out) from operating activities. Any **non-cash transactions** relating to the investing or financing activities are excluded from the SCF but are disclosed in the notes. An example would be an exchange of property, plant, or equipment for common shares or a long-term note payable. The final section of the statement reconciles the net change from the three sections with the opening and closing cash and cash equivalents balances.

4.3.1 Preparing a Statement of Cash Flows

Presented below is the SFP/BS and income statement for Watson Ltd.

Watson Ltd.
Balance Sheet
As at December 31, 2020

	2020	2019
Assets		
Current assets		
Cash	$ 307,500	$ 250,000
Investments (trading, at fair value through net income)	12,000	10,000
Accounts receivable (net)	249,510	165,000
Notes receivable	18,450	22,000
Inventory (at lower of FIFO cost and NRV)	708,970	650,000
Prepaid insurance expenses	18,450	15,000
Total current assets	1,314,880	1,112,000
Long term investments (at amortized cost)	30,750	0
Property, plant, and equipment		
Land	92,250	92,250
Building (net)	232,000	325,000
	324,250	417,250
Intangible assets (net)	110,700	125,000
Total assets	$1,780,580	$1,654,250
Liabilities and Shareholders' Equity		
Current liabilities		
Accounts payable	$ 221,000	$ 78,000
Accrued interest payable	24,600	33,000
Income taxes payable	54,120	60,000
Unearned revenue	25,000	225,000
Current portion of long-term notes payable	60,000	45,000
Total current liabilities	384,720	441,000
Long-term notes payable (due June 30, 2025)	246,000	280,000
Total liabilities	630,720	721,000
Shareholders' equity		
Paid in capital		
Preferred, ($2, cumulative, participating – authorized issued and outstanding, 15,000 shares)	184,500	184,500
Common (authorized, 400,000 shares; issued and outstanding (2020: 250,000 shares); (2019: 200,000 shares)	862,500	680,300
Contributed surplus	18,450	18,450
	1,065,450	883,250
Retained earnings	84,410	50,000
	1,149,860	933,250
Total liabilities and shareholders' equity	$1,780,580	$1,654,250

Watson Ltd.
Income Statement
For the Year Ended December 31, 2020

Sales	$3,500,000
Cost of goods sold	2,100,000
Gross profit	1,400,000
Operating expenses	
Salaries and benefits expense	800,000
Depreciation expense	43,000
Travel and entertainment expense	134,000
Advertising expense	35,000
Freight-out expenses	50,000
Supplies and postage expense	12,000
Telephone and internet expense	125,000
Legal and professional expenses	48,000
Insurance expense	50,000
	1,297,000
Income from operations	103,000
Other revenue and expenses	
Dividend income	3,000
Interest income from investments	2,000
Gain from sale of building	5,000
Interest expense	(3,000)
	7,000
Income from continuing operations before income tax	110,000
Income tax expense	33,000
Net income	$ 77,000

Additional information:

1. The trading investment does not meet the criteria to be classified as a cash equivalent and no purchases or sales took place in the current year.
2. An examination of the intangible assets sub-ledger revealed that a patent had been sold in the current year. The intangible assets have an indefinite life.
3. No long-term investments were sold during the year.
4. No buildings or patents were purchased during the year.
5. Most of the unearned revenues occurred on December 31, 2019.
6. There were no other additions to the long-term note payable during the year.
7. Common shares were sold for cash. No other transactions occurred during the year.
8. Cash dividends were declared and paid.

The statement of cash flows can be challenging to prepare. This is because preparing the entries requires analyses of the accounts as well as an understanding of the types of transactions that affect each account. Preparing a statement of cash flows is made much easier if specific steps in a sequence are followed. Below is a summary of those steps.

1. Complete the statement **headings**.
2. Record the **net income/loss** in the operating activities section.
3. **Adjust for** any non-cash line items reported in the income statement to restate net income/loss from an accrual to a cash basis (i.e., depreciation expense, amortization expense and any non-cash gains or losses).
4. Record the description and change amount as cash inflows or outflows for **each current asset and current liability** (working capital accounts) except for the "current portion of long-term debt" line item, since it is not a working capital account. Subtotal the operating activities section.
5. In the investment activities section, using T-accounts or other techniques, determine the change for each **non-current (long-term) asset account**. Analyze and determine the reasons for the change. Record a description and the change amount(s) as cash inflows or outflows.
6. In the financing activities section, add back to long-term debt any current portion identified in the SFP/BS for both years, if any. Using T-accounts or other techniques, determine the change for each **non-current liability and equity account**. Analyze and determine the reason for the change(s). Record a description and the change amount(s) as cash inflows or outflows.
7. **Subtotal** the three sections and record as the net change in cash. Record the **opening and closing cash and cash equivalents balances**. Sum the opening balance, the new change in cash subtotal, and the closing balance. This should to reconcile with the ending cash and cash equivalent balances from the SFP/BS.
8. Complete any **required disclosures**.

To summarize the steps above into a few key words and phrases to remember:

Headings
Record net income/(loss)
Adjust out non-cash income statement items
Current assets and current liabilities changes
Non-current asset accounts changes
Non-current (long-term) liabilities and equity accounts changes
Subtotal and reconcile
Disclosures

Applying the Steps:

1. **Headings:**

Watson Ltd.
Statement of Cash Flows
For the Year Ended December 31, 2020

Cash flows from operating activities
Net income (loss)
Non-cash items (adjusted from net income):

Net cash from operating activities
Cash flows from investing activities

Net cash from investing activities
Cash flows from financing activities

Net cash from financing activities
Net increase (decrease) in cash
Cash, January 1
Cash, December 31

2. **Record net income/(loss)**

   As illustrated in step 3 below.

3. **Adjustments:**

Watson Ltd.
Income Statement
For the Year Ended December 31, 2020

Sales	$3,500,000
Cost of goods sold	2,100,000
Gross profit	1,400,000
Operating expenses	
Salaries and benefits expense	800,000
Depreciation expense	43,000
Travel and entertainment expense	134,000
Advertising expense	35,000
Freight-out expenses	50,000
Supplies and postage expense	12,000
Telephone and internet expense	125,000
Legal and professional expenses	48,000
Insurance expense	50,000
	1,297,000
Income from operations	103,000
Other revenue and expenses	
Dividend income	3,000
Interest income from investments	2,000
Gain from sale of building	5,000
Interest expense	(3,000)
	7,000
Income from continuing operations before income tax	110,000
Income tax expense	33,000
Net income	$ 77,000

Watson Ltd.
Statement of Cash Flows
For the Year Ended December 31, 2020

Cash flows from operating activities	
Net income (loss)	$77,000
Non-cash items (adjusted from net income):	
Depreciation expense	43,000
Gain from sale of equipment	(5,000)

Enter the amount of the net income/(loss) as the first amount in the operating activities section. Next, review the income statement and select the non-cash items. Look for items such as depreciation, depletion, amortization, and gain/loss on sale/disposal of assets. In this case, there are two non-cash items to adjust. Record them as adjustments to net income in the statement of cash flows.

4. **Current assets and liabilities:**

Calculate and record the change for each current asset and current liability (except the current portion of long-term notes payable, which is to be included with its corresponding long-term notes payable account) as shown in the financing activities section below:

Watson Ltd. Statement of Cash Flows for the year ended December 31, 2020	
Cash flows from operating activities	
Net income (loss)	$ 77,000
Non-cash items (adjusted from net income):	
Depreciation expense	43,000
Gain from sale of building	(5,000)
Cash in (out) from operating working capital:	
Increase in trading investments	(2,000)
Increase in accounts receivable	(84,510)
Decrease in notes receivable	3,550
Increase in inventory	(58,970)
Increase in prepaid expenses	(3,450)
Increase in accounts payable	143,000
Decrease in interest payable	(8,400)
Decrease in income taxes payable	(5,880)
Decrease in unearned revenue	(200,000)
Net cash from operating activities	(101,660)
Cash flows from investing activities	

Accounting Equation:

A = L + E MUST ALWAYS BALANCE!

Assets = Liabilities + Equity

Cash + (all other) Assets = Liabilities + Equity

Cash + Assets = Liabilities + Equity

Cash + Assets = Liabilities + Equity

Cash + Assets = Liabilities + Equity

Cash inflows are reported as positive numbers, while cash outflows are reported as negative numbers. To determine if the amount is a positive or negative number, a simple method is to use the accounting equation to determine whether cash is increasing as a positive number or decreasing as a negative number.

Recall that the **accounting equation**, Assets $=$ Liabilities $+$ Equity, must *always* remain in balance. This concept can be applied when analyzing the various accounts and recording the changes. For example, accounts receivable has increased from $165,000 to $249,510 for a total change of $84,510. Using the accounting equation, this can be expressed as:

Expanding the A $=$ L $+$ E equation a bit:

Cash + accounts receivable + all other assets = Liabilities + Equity

If accounts receivable increases by $84,510, this can be expressed as a black up-arrow above the account in the equation:

↑

Cash + accounts receivable + all other assets = Liabilities + Equity

If accounts receivable **increases**, its effect on the cash account must be a corresponding **decrease** to keep the equation balanced:

↓ ↑
Cash + accounts receivable + all other assets = Liabilities + Equity

If cash **decreases**, it is a cash outflow, and the number must be negative (bracketed) as shown in the statement above.

The same technique can be used when analyzing liability or equity accounts. For example, an increase in account payable (liability) of $143,000 will affect the equation as follows:

↑
Cash + all other assets = Liabilities + Equity

If accounts payable **increases**, cash must also **increase** by a corresponding amount in order to keep the equation in balance.

↑ ↑
Cash + all other assets = Liabilities + Equity

If cash **increases**, it is a cash inflow and the number must be positive (no brackets) as shown in the statement above.

5. **Non-current asset changes:**

The next section is the investing activities section. The analysis of all the non-current asset accounts must also take into account whether there have been any current year purchases or disposals/sales (or both) as part of the analysis. The use of T-accounts for this type of analysis provides a useful visual tool to help understand the changes that occurred in the account.

Cash flows from investing activities		↓ ↑
Investments (trading, FVNI)	(30,750)	Cash + Assets = Liabilities + Equity
Sales proceeds from sale of building	55,000	
Sales proceeds from sale of patent	14,300	↑ ↓
Net cash from investing activities	38,550	Cash + Assets = Liabilities + Equity
Cash flows from financing activities		

There are four non-current asset accounts: long-term investments, land, buildings, and intangible assets. The land account had no change so there were no purchases or sales of land. Analyzing the investment account results in the following cash flows:

Long-term investment	
–	
??	= purchase of investment
30,750	

Since the additional information presented above stated that there were no sales of long-term investments during the year, the entry would have been for a purchase:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Long term investments (at amortized cost)		30,750	
	Cash			30,750

Cash paid for the investment was therefore $30,750.

Analysis of the buildings account is a bit more complex because of the effects of the contra account for accumulated depreciation. In this case, the building account and its contra account must be merged since the SFP/BS reports only the net carrying amount. Analyzing the buildings account results in the following cash flows:

Building (net of accum. depr.)		
325,000		
	43,000	current year accum. depr.
	??	= sale of building
232,000		

Building (net of accum. depr.)		
325,000		
	43,000	
	50,000	= X
232,000		

Since there was a gain from the sale of buildings, the entry would have been:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		55,000	
	Gain on sale of building			5,000
	Buildings (net)			50,000

Cash proceeds were therefore $55,000.

The sale of the patent is straightforward since there were no other sales or purchases in the current year.

6. **Non-current liabilities and equity changes:**

Net cash from investing activities	38,550
Cash flows from financing activities	
Repayment of long-term note	(19,000)
Proceeds from shares issuance	182,200
Dividends paid	(42,590)
Net cash from financing activities	120,610

↑ ↑
Cash + Assets = Liabilities + Equity

↓ ↓
Cash + Assets = Liabilities + Equity

There are five long-term liability and equity accounts: long-term notes payable, preferred shares, common shares, contributed surplus, and retained earnings. The preferred shares and contributed surplus accounts had no changes to report. Analyzing the long-term note payable account results in the following cash flows:

Long-term note payable		
280,000		
45,000		
	??	= repayment
246,000		
60,000		

Since there were no other transactions stated in the additional information above, the entry would have been:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	LT note payable		19,000	
	Cash			19,000

Cash paid was therefore $19,000.

Note how the current portion of long-term debt has been included in the analysis of the long-term note payable. The current portion line item is a reporting requirement regarding the principal amount owing one year after the reporting date, but it is not actually a working capital account, so it is omitted from the operating section and included with its corresponding long-term liability account in the financing activities section as shown above.

The common shares and retained earnings accounts are straightforward and the analysis of each are shown below.

Common shares	
	680,300
	??
	862,500

= share issuance

Since there were no other transactions stated in the additional information above, the entry would have been:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		182,200	
	Common shares			182,200

Cash received was therefore $182,200.

Retained earnings		
	50,000	
	77,000	net income
??		= dividends paid
	84,410	

The additional information stated that cash dividends were declared and paid, so the entry would have been:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Retained earnings		42,590	
	Cash			42,590

Cash paid was therefore $42,590.

7. **Subtotal and reconcile:**

   The three activities total a net increase in cash of $57,500. When added to the opening cash balance of $250,000, the resulting total of $307,500 is equal to the ending cash balance, December 31, 2020 in the SFP/BS. This can be seen in the completed statement below.


A video is available on the Lyryx site. Click here to watch the video.


A video is available on the Lyryx site. Click here to watch the video.

4.3.2 Disclosure Requirements

Step 8 involves the identification and preparation of disclosures.

8. **Required disclosures:**

   The statement of cash flows must disclose cash flows associated with interest paid and received, dividends paid and received, and income taxes paid, as well as any non-cash transactions that occurred in the current year. These can be disclosed in the notes or at the bottom of the statement, if not too lengthy. The cash received for dividend income and interest income was taken directly from the income statement since no accrual accounts exist on the SFP/BS for these items. Cash paid for interest charges and income taxes are calculated based on an analysis of their respective liability accounts from the SFP/BS and expense accounts from the income statement.

   Following is the completed statement of cash flows, including disclosures, for Watson Ltd., for the year ended December 31, 2020:

Watson Ltd.
Statement of Cash Flows
For the Year Ended December 31, 2020

Cash flows from operating activities	
Net income (loss)	$ 77,000
Non-cash items (adjusted from net income):	
Depreciation expense	43,000
Gain from sale of equipment	(5,000)
Cash in (out) from operating working capital:	
Increase in trading investments	(2,000)
Increase in accounts receivable	(84,510)
Decrease in notes receivable	3,550
Increase in inventory	(58,970)
Increase in prepaid expenses	(3,450)
Increase in accounts payable	143,000
Decrease in interest payable	(8,400)
Decrease in income taxes payable	(5,880)
Decrease in unearned revenue	(200,000)
Net cash from operating activities	(101,660)
Cash flows from investing activities	
Purchase of AC investments	(30,750)
Sales proceeds from sale of building	55,000
Sales proceeds from sale of patent	14,300
Net cash from investing activities	38,550
Cash flows from financing activities	
Repayment of long-term note	(19,000)
Proceeds from shares issuance	182,200
Dividends paid	(42,590)
Net cash from financing activities	120,610
Net increase (decrease) in cash	57,500
Cash, January 1	250,000
Cash, December 31	$ 307,500

Disclosures:	
Cash paid for income taxes (60,000 + 33,000 − 54,120)	$38,880
Cash paid for interest charges (33,000 + 3,000 − 24,600)	11,400
Cash received for interest income	2,000
Cash received for dividend income	3,000

[There were no non-cash transactions to disclose.]

4.3.3 Interpreting the Statement of Cash Flows

The cash balance shows an increase of $57,500 from the previous year. Without looking deeper into the reasons why, a hasty conclusion could be drawn that all is well with Watson Ltd. However, there is trouble ahead for this company. For example, the operating activities section, which represents the reason for being in business, is in a negative cash flow position. The profit that a company earns is expected to result in positive cash flows, and this positive cash flow should be reflected in the operating activities section. In this case, it does not, since there is a negative cash flow of $101,660 from operating activities. Why?

For Watson, both the accounts receivable and inventory have increased, resulting in a net decrease in cash of $143,480. An increase in accounts receivable may mean that sales have occurred, but the collections are not keeping pace with the sales on account. An increase in inventory may be because there have not been enough sales in the current year to cycle the inventory from a current asset to sales/profit and ultimately into cash. The risk of holding large amounts of inventory is the increased possibility that inventory will become obsolete or damaged and unsellable.

In this case, an additional reason for decreased net cash from operating activities is due to a decrease in unearned revenue. This is an interesting issue that needs to be explained more fully. Recall that unearned revenue is cash received from customers in advance of earning the revenue. In this case, the cash would have been reported as a positive cash flow in the operating activities section in the previous reporting period when the cash was actually received. At that time, the cash generated from operating activities would have increased by the amount of the cash received for the unearned revenue. The entry upon receipt of the cash would have been:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		225,000	
	Unearned revenue			225,000

When the company provides the goods and services to the customer, the net income reported at the top of the operating section will reflect that portion of the unearned revenue that is now earned. However, it did not obtain actual cash for this revenue in this reporting period because the cash was already received in the prior reporting period. Keep in mind that unearned revenue is not normally an obligation that must be paid in cash to the customer. Once the goods and services are provided to the customer, the obligation ceases.

Looking at the investing activities, there was a sale of a building and a purchase of a long-term investment. The sales proceeds from the building may have been partially invested in the investment to make a return on the cash proceeds until it can be used for its intended purpose in the future. Again, more analysis is necessary to confirm whether this is the case. The sale of the patent also generated a positive cash flow. There was no gain on sale of the

patent reported in the income statement, so the sales proceeds did not exceed its carrying value at the time it was sold. Hopefully, the patent sale was not the result of a panic sale to raise additional cash.

Looking at the financing activities the majority of cash inflows for this reporting period resulted from the issuance of additional common shares of $182,200. This represents an increase in the share capital of greater than 25%. Increased shares will have a negative impact on the earnings per share and possibly its market price as well, which may send warning signals to investors. The shareholders were also paid dividends of $42,590, but this amount only barely covers the preferred shareholders dividend of $30,000 (15,000 $\times$ $2) plus its share of the participating dividend. This leaves very little dividend left over for the common shareholders. At some point, the common shareholders will likely become concerned with receiving so little in dividends, along with the dilution of their shareholdings due to the large issuance of additional shares.

When looking at the opening and closing cash balances for Watson, these seem like sizeable balances, but what matters is *where* the cash came from and whether those sources are sustainable. The $250,000 opening balance was almost entirely due to the $225,000 unearned revenue received in advance, but this is likely not a sustainable source. The ending cash balance of $307,500 is due to the issuance of additional share capital of $182,200 (possibly a one-time transaction) and an increase in accounts payable of $143,000 that must be paid soon. Consider that during the year, the cash from the unearned revenues was being consumed and the issuance of the additional capital had not yet occurred. It would be no surprise, if cash at the mid-year point was insufficient to cover even the short-term liabilities, hence the increase in accounts payable and ultimately the issuance of additional capital shares.

Watson is currently unable to generate positive cash flows from its operating activities. The unearned revenue of $225,000 at the start of the year added some needed cash early on, but this reserve was depleted by the end of the reporting year. In the meantime, without a significant change in how the company manages its inventory and receivables, Watson may continue to experience a shortage of cash from its operating activities. To compensate, it may continue to sell off assets, issue more shares, or incur more long-term debt to obtain needed cash. In any case, these sources will dry up eventually when investors are no longer willing to invest, creditors are no longer willing to loan cash, and no assets worth selling remain. This current negative cash position from operating activities for Watson Ltd. is unsustainable and must be turned around quickly for the company to remain a going concern.

Not all companies who report profits are financially stable. This is because profits do not translate on a one-to-one basis with cash. Watson reported a $77,000 net income (profit), but it is currently experiencing significant negative cash flows from its operating activities.

If sufficient cash is generated from operating activities, the company will not have to increase its debt, issue shares, or sell off useful assets to pay their bills. For Watson Ltd., it increased its short-term debt (accounts payable), sold off a building, and issued 25% more common shares.

Perhaps Watson's negative cash flow from operating activities will turn itself around in the next reporting period. This would be the company's best hope. For other companies who experience positive cash flows from operations, they must also ensure that this is sustainable and can be repeated consistently in the future.

4.4 Analysis

Statement of Financial Position/Balance Sheet (SFP/BS)

The SFP/BS is made up of many line items, comprised of many general ledger accounts, using different measurement bases (historical cost, fair value, and other valuation methods previously discussed in this chapter), and with significant adjusting entries for accruals and application of the company's accounting policies. For this reason, the SFP/BS does not present a clear-cut, definitive report of a company's exact financial state. Its purpose is to provide an overview as a starting point for further analysis. Some types of analysis typically undertaken by management are discussed below.

Comparative SFP/BS

Arranging previous reporting data beside the current data is a useful tool with which to analyze trends. Some companies also include the percentage change for each line item to allow certain changes in amounts to become highly visible. This enables analysts to narrow down possible areas of poor performance where further investigation will be undertaken to determine the reasons why.

Ratio Analyses

Ratio analysis is simply where relationships between selected financial data (presented in the numerator and denominator of the formula) provide key information about a company. Ratios from current year financial statements may be more useful when they are used to compare with benchmark ratios. Examples of benchmark ratios are ratios from other companies, ratios from the industry sector the company operates in, or historical and future ratio targets set by management as part of the company's strategic plan.

Care must be taken when interpreting ratios, because companies within an industry sector may use different accounting policies that will affect the comparison of ratios. In the end, ratios are based on current and past performance and are merely indicators. Further investigation is needed to gather more business intelligence about the reasons *why* certain variances are occurring.

Below are some common ratios used to analyze the SFP/BS and SCF financial statements:

Ratio	Formula	Purpose
Liquidity ratios – ability to pay short term obligations		
Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	ability to pay short term debt
Quick ratio (or acid test ratio)	$\frac{\text{Cash*, marketable securities and net receivables}}{\text{Current liabilities}}$	ability to pay short term debt using near-cash assets

* Cash includes cash equivalents, if any.

Ratio	Formula	Purpose
Activity ratios – ability to effectively use assets		
Accounts receivable turnover	$\frac{\text{Net sales}}{\text{Average net accounts receivable}}$	how quickly accounts receivable is collected
In days	$\frac{365}{\text{Accounts receivable turnover}}$	average # of days to collect accounts receivable
Days' sales uncollected	$\frac{\text{Accounts receivable}}{\text{Net sales}} \times 365$	average # of days that sales are uncollected (this can be compared to the credit terms of the company)
Inventory turnover	$\frac{\text{Cost of goods sold}}{\text{Average inventory}}$	how quickly inventory is sold
In days	$\frac{365}{\text{Inventory turnover}}$	average number of days to sell inventory
Days' sales in inventory	$\frac{\text{Ending inventory}}{\text{Cost of Goods Sold}} \times 365$	average # of days for inventory to convert to sales
Asset turnover	$\frac{\text{Net sales}}{\text{Average total assets}}$	the ability of assets to generate sales

Ratio	Formula	Purpose
Profitability ratios – ability to generate profits		
Return on total assets	$\frac{\text{Net income}}{\text{Average total assets}} \times 100\%$	overall profitability of assets
Return on common shareholders' equity	$\frac{\text{Net income} - \text{Preferred dividends}}{\text{Average common shareholders' equity (includes retained earnings/deficit)}} \times 100\%$	overall profitability of common shareholders' investment
Earnings per share	$\frac{\text{Net income} - \text{Preferred dividends}}{\text{Weighted average common shares outstanding (WACS)}}$	net income for each common share
Payout ratio	$\frac{\text{Cash dividends}}{\text{Net income}} \times 100\%$	percentage of earnings distributed as dividends

Ratio	Formula	Purpose
Coverage – ability to pay long-term obligations		
Debt ratio	$\frac{\text{Total liabilities}}{\text{Total assets}} \times 100\%$	percentage of assets provided by creditors
Equity ratio	$\frac{\text{Total equity}}{\text{Total assets}} \times 100\%$	percentage of assets provided by investors
Cash debt coverage ratio	$\frac{\text{Net cash from operating activities}}{\text{Average total liabilities}} \times 100\%$	the ability to pay debt from net cash from operating activities (statement of cash flows)
Book value per common share	$\frac{\text{Common shareholders' equity}}{\text{\# of common shares outstanding}}$	the amount per common share if company liquidated at reported amounts.

Many of the ratios identified above will be illustrated throughout the remaining chapters of this course.

Note that ratios are not particularly meaningful without historical trends or industry standards. Some general benchmarks signifying a reasonably healthy financial state are:

Current ratio	2:1
Quick ratio	1:1
Days' sales uncollected	1.3 times the credit policy in days

For example, if the credit policy were 30 days, a reasonable day's sales uncollected ratio would be 30 days $\times$ 1.3 $=$ 39 days that a sale would remain uncollected.

Inventory turnover	5 times per year (or in days, every 365 ÷ 5 = 73 days)

Again, it is important to understand that the general benchmarks identified above are guidelines only. Industry standard ratios are superior in every way, if available, since ratios are only as good as what they are being compared to (the benchmark). If the comparative ratio is not accurate for that industry, the analysis will be meaningless. (This is often referred to as "garbage in; garbage out.") As a result, management can make incorrect decisions on that basis, seriously impairing a company's potential future performance and sustainability.

Below are the ratio calculations for Watson Ltd. as at December 31, 2020, based on the financial data presented in the previous section of this chapter. The material in this chapter is intended as a high-level review. In-depth discussions are included in the introductory accounting course, and students are encouraged to review that material at this time, if needed.

Ratio	Formula	Calculation	Results
Liquidity ratios – ability to pay short term obligations			
Current ratio	$\frac{\text{Current assets}}{\text{current liabilities}}$	$\frac{1{,}314{,}880}{384{,}720} = 3.42$ to 1	reasonable
Quick ratio (or acid test ratio)	$\frac{\text{Cash, marketable securities and net receivables}}{\text{Current liabilities}}$	$\frac{307{,}500 + 12{,}000 + 249{,}510 + 18{,}450}{384{,}720}$ $= 1.53$ to 1	reasonable

Ratio	Formula	Calculation	Results
Activity ratios – ability to effectively use assets			
Accounts receivable turnover	$\frac{\text{Net sales}}{\text{Average net accounts receivable}}$	$\frac{3{,}500{,}000}{((249{,}510 + 165{,}000) \div 2)} = 16.89$ times / year	reasonable
In days	$\frac{365}{\text{Accounts receivable turnover}}$	$\frac{365}{16.89} =$ every 21 days	reasonable
Days' sales uncollected	$\frac{\text{Accounts receivable}}{\text{Net sales}} \times 365$	$\frac{249{,}510}{3{,}500{,}000} \times 365 = 26$ days	reasonable, given the typical credit policy of net 30 days
Inventory turnover	$\frac{\text{Cost of goods sold}}{\text{Average inventory}}$	$\frac{2{,}100{,}000}{((708{,}970 + 650{,}000) \div 2)} = 3.09$ times	this would be low, if the industry standard is around 5 times
In days	$\frac{365}{\text{Inventory turnover}}$	$\frac{365}{3.09} =$ every 118 days	possibly too low if standard is 5 times or every 73 days
Days' sales in inventory	$\frac{\text{Ending inventory}}{\text{Cost of Goods Sold}} \times 365$	$\frac{708{,}970}{2{,}100{,}000} \times 365 = 123$ days	the total # of days to sell inventory and collect the cash from accounts receivable is 123 + 26 = 149 days
Asset turnover	$\frac{\text{Net sales}}{\text{Average total assets}}$	$\frac{3{,}500{,}000}{((1{,}780{,}580 + 1{,}654{,}250) \div 2)} = 2.04$	depends on industry average and company trends

Ratio	Formula	Calculation	Results
Profitability ratios – ability to generate profits			
Return on total assets	$\frac{\text{Net income}}{\text{Average total assets}} \times 100\%$	$\frac{77{,}000}{((1{,}780{,}580 + 1{,}654{,}250) \div 2)} = 4.48\%$	depends on industry average and company trends
Return on common shareholders' equity	$\frac{\text{Net income} - \text{Preferred dividends}}{\text{Average common shareholders' equity (includes retained earnings/deficit)}} \times 100\%$	$\frac{(77{,}000 - 30{,}000)}{((862{,}500 + 18{,}450 + 84{,}410 + 680{,}300 + 18{,}450 + 50{,}000) \div 2)} = 5.48\%$	depends on industry average and company trends
Earnings per share	$\frac{\text{Net income} - \text{Preferred dividends}}{\text{Weighted average common shares outstanding (WACS)}}$	$\frac{(77{,}000 - 30{,}000)}{225{,}000} = \$20.89$ per share WACS $(250{,}000 + 200{,}000) \div 2 = 225{,}000$ shares assuming that sale of the shares occurred mid year	depends on industry average and company trends
Payout ratio	$\frac{\text{Cash dividends}}{\text{Net income}} \times 100\%$	$\frac{42{,}590}{77{,}000} \times 100\% = 55.3\%$	depends on industry average and company trends

Ratio	Formula	Calculation	Results
Coverage – ability to pay long-term obligations			
Debt ratio	$\frac{\text{Total liabilities}}{\text{Total assets}} \times 100\%$	$\frac{630{,}720}{1{,}780{,}580} \times 100\% = 35.42\%$	low
Equity ratio	$\frac{\text{Total equity}}{\text{Total assets}} \times 100\%$	$\frac{1{,}149{,}860}{1{,}780{,}580} = 64.58\%$ OR $100\% - 35.42\%$ debt ratio $= 64.58\%$	high
Cash debt coverage ratio	$\frac{\text{Net cash provided by operating activities}}{\text{Average total liabilities}} \times 100\%$	$\frac{101{,}660}{((630{,}720 + 721{,}000) \div 2)} = (15.04\%)$	unfavourable due to negative cashflow from operating activities
Book value per common share	$\frac{\text{Common shareholders' equity}}{\text{\# of shares outstanding}}$	$\frac{(862{,}500 + 18{,}450 + 84{,}410)}{250{,}000} = \$3.86$	depends on industry average and company trends and assumes no preferred shares dividends are in arrears

Cash Flow Ratio

It is critical to monitor the trends regarding cash flows over time. If trends are tracked, ratio analyses can be a powerful tool to evaluate a company's cash flows. Below are some of the cash flow ratios currently used in business:

Ratio	Formula	Purpose
Liquidity ratios – ability to pay short term obligations:		
Current cash debt coverage ratio	$\frac{\text{Net cash flow from operating activities}}{\text{Average current liabilities}}$	ability to pay short term debt from its day-to-day operations. A ratio of 1:1 is reasonable.
Financial flexibility – ability to react to unexpected expenses and investment opportunities:		
Cash debt coverage ratio	$\frac{\text{Net cash flow from operating activities}}{\text{Average total liabilities}}$	the ability to pay debt from net cash from operating activities (statement of cash flows)

Free Cash Flow Analyses

Free cash flow is the remaining cash flow from the operating activities section after deducting cash spent on capital expenditures such as purchasing property, plant, and equipment. Some companies also deduct cash paid dividends. The remaining cash flow represents cash available to do other things, such as expand operations, pay off long-term debt, or reduce the number of outstanding shares. Below is the calculation using the data from Watson Ltd. statement of cash flows:

Watson Ltd.
Free Cash Flow
December 31, 2020

Cash flow provided by operating activities	$(101,660)
Less capital expenditures	0
Dividends	$ (42,590)
Free cash flow	$(144,250)

It is no surprise that Watson has no free cash flow and no financial flexibility, since its operating activities are in a negative position. Note that the dividend deduction in the free cash flow calculation is optional, since dividends can be waived at management's discretion. In Watson's case, it met its current year dividend cash requirements by selling more common shares to raise additional cash. The capital expenditures should be for those relating to daily operations that are intended to sustain ongoing operations. For this reason, capital expenditures purchased as investments are usually excluded from the free cash flow analysis.

Chapter Summary

LO 1: Describe the statement of financial position/balance sheet (SFP/BS) and the statement of cash flows (SCF), and explain their role in accounting and business.

The statement of financial position (IFRS) also known as the balance sheet (ASPE) reports on what resources the company has (assets) at a specific point in time and what claims to those resources exist (liabilities and equity). The statement provides a way to assess a company's liquidity and solvency – both together creating a picture of the company's financial flexibility. The structure of the SFP/BS follows the basic accounting equation: $A = L + E$, where assets are presented first, followed by liabilities and equity, which together equal the total assets. Key issues are the recognition and valuation used for each account reported.

The statement of cash flows reports on how the company obtains and utilizes its cash flows and reconciles with the cash balance reported in the SFP/BS. It is separated into operating, investing, and financing activities. The combination of positive and negative cash flows from each activity can provide important information about how the company manages its cash flows.

LO 2: Explain the purpose of the SFP/BS and prepare a SFP/BS in good form.

The classified SFP/BS separates the assets and liabilities into current and non-current (long-term) subsections based on meeting certain criteria. The statement has many disclosure requirements that ensure it is faithfully representative, that the business continues as a going concern, and that revenue and expenses are grouped into appropriate classifications that meet the standards for disclosure. Some of the more common required disclosures are listed, including the measurement basis of each account, such as cost, net realizable value, fair value, and so on. The acceptable options regarding how to present the required disclosures include using parentheses in the body of the statement or disclosing in the notes to the financial statements.

Several factors influence what is reported in the SFP/BS. Included are changes in accounting estimates that are applied prospectively and changes due to errors or omissions or accounting policy that are applied retroactively with restatement. Descriptions of these are to be included in the notes with detailed explanations. Other factors that can affect the SFP/BS are provisions, contingencies and guarantees that may need to be recognized within the statement or disclosed in the notes. Certain subsequent events will also affect what is reported in the SFP/BS.

LO 3: Explain the purpose of the statement of cash flows and prepare a SCF in good form.

The statement of cash flows (SCF) provides the means to assess the business's capacity to generate cash and to determine where the cash flows come from. The statement combines with the SFP/BS to evaluate a company's liquidity and solvency; when combined, these represent a company's financial flexibility. This information can be used to predict the future financial position and cash flows of the company based on past events. The SCF can be prepared using either the direct or indirect method. Regarding the indirect method, the statement is presented in three distinct sections, which follow the basic structure of the balance sheet classifications: operating activities (current assets, and current liabilities), investing activities (non-current assets), and financing activities (long-term debt and equity). The changes between the opening and closing balances of the SFP/BS accounts are reported in the SCF as either cash inflows or cash outflows. The three sections net to a single net cash change amount that, when combined with the cash and cash equivalent opening balances, results in the same amount as the ending balances reported in the SFP/BS.

An important section in the SCF is the operating activities section because it reports the cash flows resulting from daily operations which is the reason why the company is in business. If cash flows are negative in this section, management must determine if this is due to a temporary condition or if fundamental changes are needed to better manage activities such as the collections of accounts receivables or levels of unsold inventory. If a company is in a negative cash flow position from operating activities, it will usually either increase its debt by borrowing, increase its equity by issuing more shares, or sell off some of its assets. If these activities are undertaken, they will be detected as cash inflows from either the investing or financing sections. None of these three options are ideal and can be done in the short run, but they cannot be sustained in the long run. Even positive cash flows from operating activities must be evaluated to determine if they are sustainable and will continue into the future.

LO 4: Identify and describe the types of analysis techniques that can be used for the statement of financial position/balance sheet and the statement of cash flows.

Several analytical techniques can be applied when reviewing the SFP/BS. For example, comparative years' data can be presented to help identify trends. Using a percentage for each line item will help highlight items that may possess unusual characteristics for further analysis. Ratio analysis is the most often used technique but is of limited value if no benchmarks such as historical ratios or industry standards exist. Ratios typically focus on an aspect of a company such as liquidity, profitability, effectiveness of assets used, and ability to service short- and long-term debts. Care must be taken when interpreting the results of ratio analysis, and management must be aware that differences in ratios from competitors' financial statements can result from changes in accounting policies or the application of different accounting estimates and methods.

Another technique called free cash flow analysis calculates the remaining cash flow from the operating activities section after deducting cash spent on capital expenditures such as purchasing property, plant, and equipment. Some companies also deduct cash paid as dividends. The cash flow remaining is available to use for expansion, repayment of long-term debt, or down-sizing shareholdings to improve the share price, reduce the amount of dividends to pay, and to attract investors.

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Exercises

EXERCISE 4–1

Using the classification codes identified in brackets below, identify where each of the accounts below would be classified:

Current assets (CA)
Long-term investments (LI)
Property, plant, and equipment (PPE)
Intangible assets (IA)
Accumulated other comprehensive income (AOCI)
Non-current liabilities (NCL)
Share Capital (Cap)
Contributed surplus (CS)
Retained earnings (RE)
Current liabilities (CL)

Account name	Classification
Preferred shares	
Franchise agreement	
Salaries and wages payable	
Accounts payable	
Buildings (net)	
Investment – Held for Trading	
Current portion of long-term debt	
Allowance for doubtful accounts	
Accounts receivable	
Bond payable (maturing in 10 years)	
Notes payable (due next year)	
Office supplies	
Mortgage payable (maturing next year)	
Land	
Bond sinking fund	
Inventory	
Prepaid insurance	
Income tax payable	
Cumulative unrealized gain or loss from an OCI investment	
Investment in associate	
Unearned subscriptions revenue	
Advances to suppliers	
Unearned rent revenue	
Copyrights	
Petty cash	
Foreign currency bank account or cash	

EXERCISE 4–2

Below is a statement of financial position as at December 31, 2021, for Aztec Artworks Ltd., prepared by the company bookkeeper:

Aztec Artworks Ltd.
Statement of Financial Position
For the Year Ended December 31, 2021

Current assets	
Cash (including a bank overdraft of $18,000)	$ 225,000
Accounts receivable (net)	285,000
Inventory (FIFO)	960,000
Investments (trading)	140,000
Property, plant, and equipment	
Construction work in progress	220,000
Building (net)	1,500,000
Equipment (net)	380,000
Land	420,000
Intangible assets	
Goodwill	190,000
Investment in bonds	200,000
Prepaid expenses	30,000
Patents (net)	21,000
Current liabilities	
Accounts payable	450,000
Notes payable	300,000
Pension obligation	210,000
Rent payable	120,000
Long-term liabilities	
Bonds payable	800,000
Shareholders' equity	
Common shares	700,000
Preferred shares	900,000
Contributed surplus	430,000
Retained earnings	501,000
Accumulated other comprehensive income	160,000

Additional information as at December 31, 2021:

1. Cash is made up of petty cash of $3,000, a bond sinking fund of $100,000, and a bank overdraft of $18,000 held at a different bank than the bank account where the cash balance is currently on deposit.

2. Accounts receivable balance of $285,000 includes:

Credit balances to be cleared in 90 days	35,000
Allowance for doubtful accounts	12,000

   The company considers the credit balance to be significant.

3. Inventory ending balance does not include inventory costing $20,000 shipped out on consignment on December 30, 2021. The company uses FIFO cost formula and a perpetual inventory system.

   The net realizable value of the inventory at year-end is:

Inventory, December 31	$960,000
Inventory on consignment	25,000

4. Investments are held for trading purposes. Their fair value at year-end is $135,000.
5. The accumulated depreciation account balance for buildings is $450,000 and $120,000 for equipment. The construction work-in-progress represents the costs to date on a new building in the process of construction. The land where the building is being constructed was purchased of $220,000. The remaining land is being held for investment purposes.
6. Goodwill of $190,000 was included in the accounts when management decided that their product development team has added significant value to the company.
7. The investment in bonds is being held to maturity in 2030, and is accounted for using amortized cost.
8. Patents were purchased by Aztec on January 1, 2019, at a cost of $30,000. They are being amortized on a straight-line basis over 10 years.
9. Income tax payable of $80,000 was accrued on December 31 and included in the accounts payable balance.
10. The notes payable are due June 30, 2022. The principal is not due until then.
11. The pension obligation is considered by the auditors to be a long-term liability.
12. The 20-year bonds payable bear interest at 5% and are due August 31, 2025. The bonds' annual interest was paid on December 31. The company established the bond sinking fund that is included in the cash balance.
13. For common shares, 900,000 are authorized and 700,000 are issued and outstanding. The preferred shares are $2, non-cumulative, participating shares. Fifty thousand are authorized and 20,000 are issued and outstanding.
14. Net sales for the year are $3,000,000 and gross profit is 40%.

Required:

a. Prepare a corrected classified SFP/BS as at December 31, 2021, in good form, including all required disclosures identified in Chapter 4. Adjust the account balances as required based on the additional information presented.

b. Calculate one liquidity ratio and one activity ratio and comment on the results. Use ending balances in lieu of averages when calculating ratios.

EXERCISE 4–3

Below is the trial balance for Johnson Berthgate Corp. at December 31, 2021. Accounts are listed in alphabetical order and all have normal balances.

Account	Balance
Accounts payable	$ 350,000
Accounts receivable	330,000
Accrued liabilities	70,000
Accumulated depreciation, buildings	110,000
Accumulated depreciation, equipment	50,000
Accumulated other comprehensive income	55,000
Administrative expenses	580,000
Allowance for doubtful accounts	15,000
Bonds investment at amortized cost	190,000
Bonds payable	655,684
Buildings	660,000
Cash	131,000
Commission payable	90,000
Common shares	520,000
Correction of prior year's error – a missed expense in 2020 (net of tax)	90,000
Cost of goods sold	3,050,000
Equipment	390,000
Freight-out	11,000
Goodwill	30,000
Income tax expense	8,500
Intangible assets, franchise (net)	115,000
Intangible assets, patents (net)	125,000
Interest expense	135,000
Inventory	440,000
Investment (available for sale)	180,000
Investment (trading)	100,000
Land	170,000
Notes payable (due in 6 months)	60,000
Notes payable	571,875
Preferred shares	80,000
Prepaid advertising	6,000
Retained earnings	290,941
Sales revenue	4,858,000
Selling expenses	1,190,000
Unearned consulting fees	13,000
Unrealized gain on trading investments	40,000
Unusual gain	102,000

Additional information as at December 31, 2021:

1. Inventory has a net realizable value of $430,000. The weighted average cost method of inventory valuation was used.
2. Trading investments are securities held for trading purposes and have a fair value of $120,000. Investments in bonds are being held to maturity at amortized cost with interest payments each December 31. Investments in other securities are classified as available for sale (FVOCI) and any gains or losses will be recognized through other comprehensive income (OCI). These have a fair value of $180,000 at the reporting date.
3. Correction of the prior period error relates to a missed travel expense from 2020. The books are still open for 2021.
4. Patents and franchise were being amortized on a straight-line basis. Accumulated amortization to December 31, 2021 is $80,000 for patents and $45,000 for the franchise.
5. Goodwill was recognized at the time of the purchase as the excess of the cash paid purchase price over the net identifiable assets.
6. The bonds were issued at face value on December 31, 2005 and are 5%, 20 year, with interest payable annually each December 31.
7. The 3%, 5-year note payable will be repaid by December 31, 2024 and was signed when market rates were 3.5%.

   Below is the payment schedule:

	Payment Amount	Interest @ 3.5%	Amortization	Balance
December 31, 2019				$566,906
December 31, 2020	17,400	19,842	2,442	569,348
December 31, 2021	17,400	19,927	2,527	571,875
December 31, 2022	17,400	20,016	2,616	574,491
December 31, 2023	17,400	20,107	2,707	577,198
December 31, 2024	17,400	20,202	2,802	580,000

8. During the year ended December 31, 2021, no dividends were declared and there was no preferred or common share activity.
9. On December 31, 2021, the share structure was; common shares, unlimited authorized, 260,000 shares issued and outstanding. $3 preferred shares, non-cumulative, 1,200 authorized, 800 shares issued and outstanding.
10. The company prepares financial statements in accordance with IFRS and investments in accordance with IFRS 9.
11. The income tax rate is 25%.

Required:

a. Prepare a classified statement of financial position as at December 31, 2021, in good form, including all required disclosures identified in Chapter 4. Adjust the account balances as required based on the additional information presented.

b. Calculate the company's debt ratio and equity ratio and comment on the results.

c. Assume now that accounts receivable is made up of the following:

Accounts with debit balances	$ 580,000
Accounts with credit balances	(250,000)

Discuss whether this change in the accounts will affect the liquidity of this company. Round final ratio answers to the nearest 2 decimal places.

EXERCISE 4–4

Below is the trial balance in no particular order for Hughey Ltd. as at December 31, 2021:

Hughey Ltd.
Trial Balance
As at December 31, 2021

	Debits	Credits
Cash	$ 250,000	
Accounts receivable	1,015,000	
Allowance for doubtful accounts		$ 55,000
Prepaid rent	40,000	
Inventory	1,300,000	
Investments – available for sale (FVOCI)	2,100,000	
Land	530,000	
Building	770,000	
Patents (net)	25,000	
Equipment	2,500,000	
Accumulated depreciation, equipment		1,200,000
Accumulated depreciation, building		300,000
Accounts payable		900,000
Accrued liabilities		300,000
Notes payable		600,000
Bond payable		1,100,000
Common shares		2,500,000
Accumulated other comprehensive income		245,000
Retained earnings		1,330,000
	$8,530,000	$8,530,000

Additional information as at December 31, 2021:

1. The inventory has a net realizable value of $1,350,000. The company uses FIFO method of inventory valuation.
2. Investments in available for sale securities (FVOCI) have a fair value of $2,250,000.
3. The company purchased patents of $60,000 on January 1, 2015.
4. Bonds are 8%, 25-year and pay interest annually each January 1, and are due December 31, 2030.
5. The 7%, notes payable represent bank loans that are secured by investments in available for sale securities (FVOCI) with a carrying value of $800,000. Interest is paid each December 31 and no principal is due until its maturity on April 30, 2022.
6. The capital structure for the common shares are # of authorized, 100,000 shares; issued and outstanding, 80,000 shares.

Required:

a. Prepare a classified statement of financial position as at December 31, 2021, in good form, including all required disclosures identified in Chapter 4.

b. Calculate the annual amortization for the patent.

c. Does this company follow IFRS or ASPE? Explain your answer.

EXERCISE 4–5

Below is a list of independent transactions. For each transaction, identify which section of the statement of cash flows it is to be reported and indicate if it is a cash in-flow (a positive number) or cash out-flow (negative number). (Hint: recall the use of the accounting equation $A = L + E$ to help determine if an amount is a positive or negative number.)

Description	Section	Amount
Issue of bonds payable of $500 cash		
Sale of land and building of $60,000 cash		
Retirement of bonds payable of $20,000 cash		
Current portion of long-term debt changed from $56,000 to $50,000		
Repurchase of company's own shares of $120,000 cash		
Issuance of common shares of $80,000 cash		
Payment of cash dividend of $25,000 recorded to retained earnings		
Purchase of land of $60,000 cash and a $100,000 note		
Cash dividends received from a trading investment of $5,000		
Interest income received in cash from an investment of $2,000		
Interest and finance charges paid of $15,000		
Purchase of equipment for $32,000		
Increase in accounts receivable of $75,000		
Decrease in a short-term note payable of $10,000		
Increase in income taxes payable of $3,000		
Purchase of equipment in exchange for a $14,000 long-term note		

EXERCISE 4–6

Below is the unclassified balance sheet for Carmel Corp. as at December 31, 2020:

Carmel Corp.
Balance Sheet
As at December 31, 2020

Cash	$ 84,000	Accounts payable	$ 146,000
Accounts receivable (net)	89,040	Mortgage payable	172,200
Investments – trading (FVNI)	134,400	Common shares	400,000
Buildings (net)	340,200	Retained earnings	297,440
Equipment (net)	168,000		$1,015,640
Land	200,000		
	$1,015,640		

The net income for the year ended December 31, 2021, was broken down as follows:

Revenues	$1,000,000
Gain	2,200
Total revenue	1,002,200
Expenses	
Operating expenses	809,200
Interest expenses	35,000
Depreciation expense – building	28,000
Depreciation expense – equipment	20,000
Loss	5,000
	897,200
Net income	$ 105,000

The following events occurred during 2021:

1. Investments in traded securities are short-term securities and the entire portfolio was sold for cash at a gain of $2,200. No new investments were purchased in 2021.
2. A building with a carrying value of $225,000 was sold for cash at a loss of $5,000.
3. The cash proceeds from the sale of the building were used to purchase additional land for investment purposes.
4. On December 31, 2021, specialized equipment was purchased in exchange for issuing an additional $50,000 in common shares.
5. An additional $20,000 in common shares were issued and sold for cash.
6. Dividends of $8,000 were declared and paid in cash to the shareholders.
7. The cash payments for the mortgage payable during 2021 included principal of $30,000 and interest of $35,000. For 2022, the cash payments will consist of $32,000 for the principal portion and $33,000 for the interest.
8. All sales to customers and purchases from suppliers for operating expenses were on account. During 2021, collections from customers were $980,000 and cash payments to suppliers were $900,000.
9. Ignore income taxes for purposes of simplicity.

Required:

a. Prepare a classified SFP/BS in good form as at December 31, 2021. Identify which required disclosures discussed in Chapter 4 were missed due to lack of information?

b. Prepare a statement of cash flows in good form with all required disclosures for the year ended December 31, 2021. The company prepares this statement using the indirect method.

c. Calculate the company's free cash flow and discuss the company's cash flow pattern including details about sources and uses of cash.

d. How can the information from the SFP/BS and statement of cash flows be beneficial to the company stakeholders (e.g., creditors, investors, management and others)?

EXERCISE 4–7

Below is the comparative balance sheet for Lambrinetta Industries Ltd.:

Lambrinetta Industries Ltd.
Balance Sheet

	December 31 2021	December 31 2020
Assets:		
Cash	$ 32,300	$ 40,800
Accounts receivable	79,900	107,100
Investments – trading (FVNI)	88,400	81,600
Land	86,700	49,300
Plant assets	425,000	345,100
Accumulated depreciation – plant assets	(147,900)	(136,000)
Total assets	$ 564,400	$ 487,900
Liabilities and Equity:		
Accounts payable	$ 18,700	$ 6,800
Current portion of long-term note	8,000	10,000
Long-term note payable	119,500	75,000
Common shares	130,900	81,600
Retained earnings	287,300	314,500
Total liabilities and equity	$ 564,400	$ 487,900

Additional information:

1. Net income for the year ended December 31, 2021 was $161,500.
2. Cash dividends were declared and paid during 2021.
3. Plant assets with an original cost of $51,000 and with accumulated depreciation of $13,600 were sold for proceeds equal to book value during 2021.
4. The investments are reported at their fair value on the balance sheet date. During 2021, investments with a cost of $12,000 were purchased. No other investment transactions occurred during the year. Fair value adjustments are reported directly on the income statement.
5. In 2021, land was acquired through the issuance of common shares. The balance of the common shares issued were for cash.

Required: Using the indirect method, prepare the statement of cash flows for the year ended December 31, 2021 in good form including all required disclosures identified in Chapter 4. The company follows ASPE.

EXERCISE 4–8

Below is a comparative statement of financial position for Egglestone Vibe Inc. as at December 31, 2021:

Egglestone Vibe Inc.
Statement of Financial Position

	December 31	
	2021	2020
Assets:		
Cash	$ 84,500	$ 37,700
Accounts receivable	113,100	76,700
Inventory	302,900	235,300
Investments – available for sale (FVOCI)	81,900	109,200
Land	84,500	133,900
Plant assets	507,000	560,000
Accumulated depreciation – plant assets	(152,100)	(111,800)
Goodwill	161,200	224,900
Total assets	$1,183,000	$1,265,900
Liabilities and Equity:		
Accounts payable	$ 38,100	$ 66,300
Dividend payable	19,500	41,600
Notes payable	416,000	565,500
Common shares	322,500	162,500
Retained earnings	374,400	370,200
Accumulated other comprehensive income	12,500	59,800
Total liabilities and equity	$1,183,000	$1,265,900

Additional information:

1. Net income for the 2021 fiscal year was $24,700.
2. During 2021 land was purchased for expansion purposes. Six months later, another section of land with a carrying value of $111,800 was sold for $150,000 cash.
3. On June 15, 2021, notes payable of $160,000 were retired in exchange for the issuance of common shares. On December 31, 2021, notes payable for $10,500 were issued for additional cash flow.
4. Available for sale investments (FVOCI) were purchased during 2021 for $20,000 cash. By year-end, the fair value of this portfolio dropped to $81,900. No investments from this portfolio were sold in 2021.

5. At year-end, plant assets originally costing $53,000 were sold for $27,300, since they were no longer contributing to profits. At the date of the sale, the accumulated depreciation for the asset sold was $15,600.
6. Cash dividends were declared and a portion of those were paid in 2021. Dividends are reported under the financing section.
7. Goodwill impairment loss was recorded in 2021 to reflect a decrease in the recoverable amount of goodwill.

Required:

a. Prepare a statement of cash flows in good form, including all required disclosures identified in Chapter 4. The company uses the indirect method to prepare the statement.

b. Analyze and comment on the results reported in the statement.

Chapter 5

Revenue

Trouble at Tesco

On November 9, 2014, it was reported that several legal firms were considering launching a class action suit against British grocery giant Tesco PLC. The claims were related to revelations made by the company in September that its profits for the first half of the year were overstated by £263 million. In October, the United Kingdom's Serious Fraud Office announced that it was launching its own investigation into the accounting practices at Tesco. This followed the company's suspension of eight senior executives along with the resignation of the CEO.

The issue at Tesco stemmed primarily from a misstatement of a revenue category described as "commercial income." Although the company's primary business is selling groceries to consumers, it also earns a significant amount from suppliers. Manufacturers and suppliers understand that in a grocery store, the location of the product on the shelves can have a significant effect on the level of sales generated. Many of these suppliers will offer rebates or other payments to Tesco in exchange for preferential placement of their products on the shelves. These rebates will often be calculated on a sliding scale, increasing as the level of sales increases.

In Tesco's interim financial statements, many of these rebates would need to be estimated, as the sales level for the entire year would not yet be known. Tesco's auditor, PwC, indicated in its 2014 audit report that the determination of commercial income was an area of audit risk due to the judgment required and possibility of manipulation. Tesco had been experiencing decreasing market share in 2014, and this may have provided an incentive for some degree of earnings management. Some analysts suggested that Tesco might have booked promotional rebates based on historic results rather than current activity.

Problems with revenue recognition have been a source of many accounting errors and frauds over the years. Given the complex nature of some types of business transactions and contracts, the criteria for recognition of revenue may not always be clear. When significant levels of judgment are required to determine the point at which revenue should be recognized, the opportunity for misstatement grows. Given that many of the complex issues surrounding revenue recognition are not always well understood by financial-statement readers, managers may sometimes give in to the temptation to "work" the numbers a little bit.

This chapter will explore some of the issues and judgments required with respect to revenue recognition and some of the problems that companies like Tesco may face.

(Source: Marriage, 2014)

Chapter 5 Learning Objectives

After completing this chapter, you should be able to:

LO 1: Describe the criteria for recognizing revenue and determine if a company has earned revenue in a business transaction.

LO 2: Discuss the problem of measurement uncertainty and alternative accounting treatments for these situations.

LO 3: Prepare journal entries for a number of different types of sales transactions.

LO 4: Apply revenue recognition concepts to the determination of profit from long-term construction contracts.

LO 5: Prepare journal entries for long-term construction contracts.

LO 6: Apply revenue recognition concepts to unprofitable long-term construction contracts.

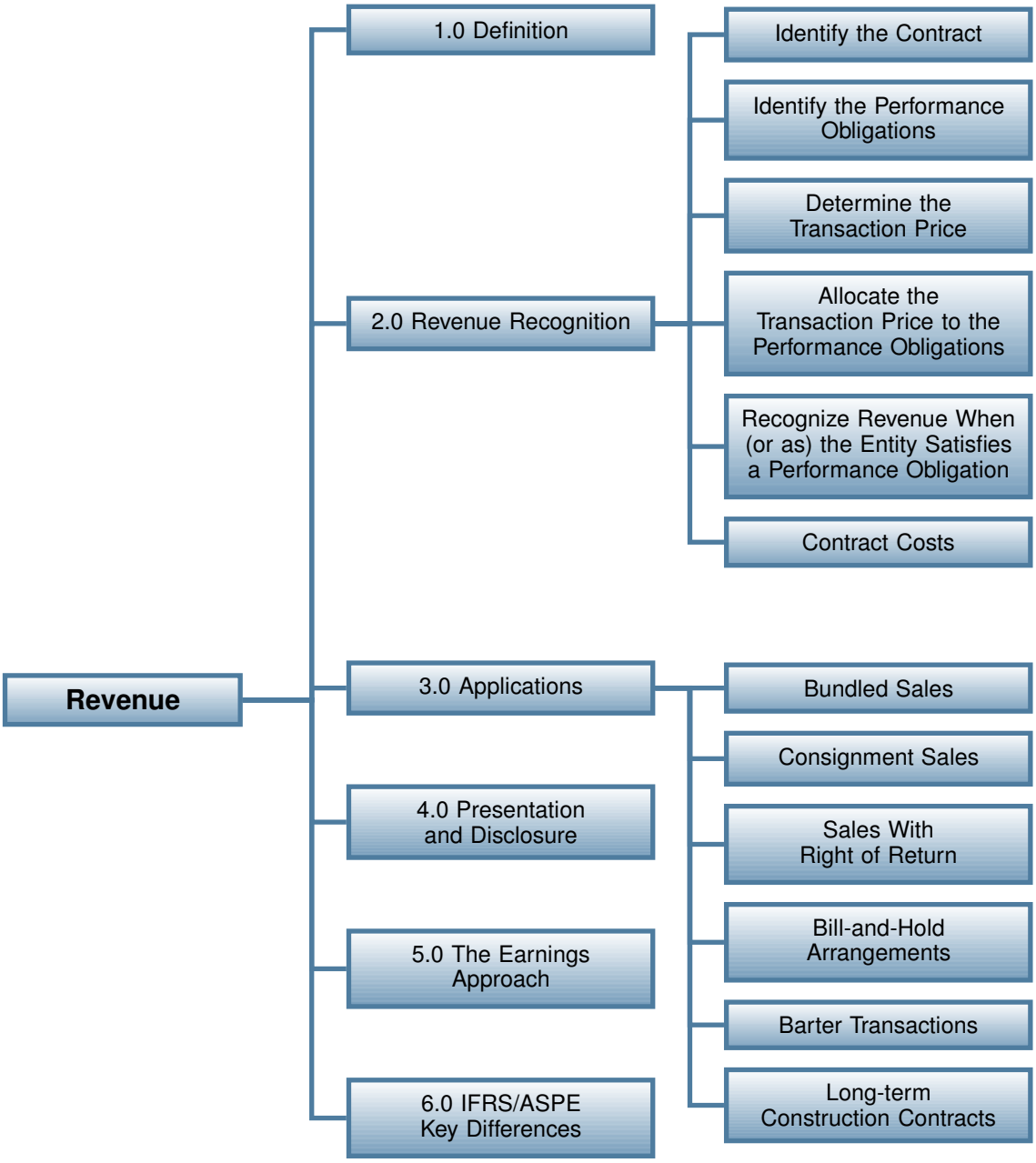
LO 7: Describe presentation and disclosure requirements for revenue-related accounts.

LO 8: Discuss the earnings approach to revenue recognition and compare it to current IFRS requirements.

Introduction

Revenue is the essence of any business. Without revenue, a business cannot exist. The basic concept of revenue is well understood by business people, but complex and important accounting issues complicate the recognition and reporting of revenue. Sometimes, the complexity of these issues can lead to erroneous or inappropriate recognition of revenue. In 2007, Nortel Networks Corporation paid a $35 million settlement in response to a Securities and Exchange Commission (SEC) investigation into its reporting practices. Although several problems were identified, one of the specific issues that the SEC investigated was Nortel's earlier accounting for bill-and-hold transactions. In a separate matter, Nortel was also required to restate its financial statements due to errors in the timing of revenue recognition for bundled sales contracts. In this chapter, we will examine these issues and determine the appropriate accounting treatment for revenues.

Chapter Organization



5.1 Definition

IFRS 15 defines *revenue* as "participants income arising in the course of an entity's ordinary activities." Income is defined as "increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in an

increase in equity, other than those relating to contributions from equity participants." (CPA Canada, 2017, IFRS 15 Appendix A).

ASPE defines *revenue* as "the inflow of cash, receivables or other consideration arising in the course of the ordinary activities of an enterprise, normally from the sale of goods, the rendering of services, and the use by others of enterprise resources yielding interest, royalties and dividends" (CPA Canada, 2017, 3400.03a).

Both definitions refer to the ordinary activities of the entity, which suggests that gains made from incidental activities, such as the sale of surplus assets, cannot be defined as revenue. However, these gains are still considered income, as the Conceptual Framework includes revenue and gains as part of its definition of income. Revenue is **realized** when goods or services are converted to cash. The point when cash is realized is usually easy to identify. In a grocery store, when a customer pays for his or her purchase with cash, the revenue is realized at that moment. In a wholesale business, when goods are sold on credit, the revenue is not realized until the account receivable is collected and cash is deposited in the bank. However, in this case, the revenue would have been **recognized** at some earlier point when the account receivable was created. In accounting, the point at which revenue should be recognized is not always so simple to determine.

5.2 Revenue Recognition

There are two different perspectives on how to recognize revenues:

- The contract-based approach
- The earnings approach

The contract-based approach is the subject of IFRS 15 – *Revenue from Contracts with Customers*. This standard focuses on the contractual rights and obligations of the buyer and the seller. The earnings approach is currently used in ASPE. This approach focuses on the process of adding value to the final product or service that is delivered to the customer, and will be discussed in Section 5.5.

IFRS 15, issued in 2014, is effective for fiscal years beginning on or after January 1, 2018, although early adoption is allowed. The length of this transition period reflects the anticipated effect this standard may have on business results and business processes. This standard was a joint project between IASB and FASB, as both standard-setting bodies were interested in creating more consistency in the application of revenue-recognition principles. The nature and complexity of this standard and the resulting process meant that development time was

lengthy. The project was first added to the IASB agenda in 2002, and the first discussion paper was produced in 2008.

The standard applies to all contractual relationships with customers except for leases, financial instruments, insurance contracts, and those transactions covered by standards that deal with subsidiaries, joint arrangements, joint ventures, and associates. The standard also doesn't apply to non-monetary exchanges between entities in the same line of business to facilitate sales to customers or potential customers. The new standard replaces several existing standards, including IAS 11, IAS 18, IFRIC 13, IFRIC 15, IFRIC 18, and SIC-31.

The standard takes the approach that the essence of the relationship between a business, and its customers can be characterized as one of contractual rights and obligations. To determine the correct accounting treatment for these transactions, the standard applies a five-step model:

1. Identify the contract(s) with a customer.
2. Identify the performance obligations in the contract.
3. Determine the transaction price.
4. Allocate the transaction price to the performance obligations in the contract.
5. Recognize revenue when (or as) the entity satisfies a performance obligation.

The standard provides a significant amount of detail in the application of these steps. We will focus on some of the key elements of each component of the model.

5.2.1 Identify the Contract

The contract must be approved by both parties and must clearly identify both the goods and services that will be transferred and the price to be paid for these goods and services. The contract must be one of commercial substance, and there must be reasonable expectation that the ultimate amount owing from the customer will be collected. This collectability criterion will prevent a situation where revenue is recognized and then a provision is immediately made for an uncollectible account. Under this criterion, the contract cannot be recognized until the collection is probable. If these conditions are not present, the contract can be continually reassessed to see if its status changes. The standard also applies guidance on how to deal with contract modifications. Depending on the circumstances, the modifications may be treated as either a change to the existing contract or as a completely new contract. A new contract would exist if the scope of the contract increases due to the addition of distinct goods or services, and the price of the contract increases by an amount that reflects the entity's stand-alone selling prices of the additional goods or services.

The contract will not exist if each party to the contract has the unilateral, enforceable right to terminate a wholly unperformed contract without compensating the other party. A contract would be considered wholly unperformed if the entity has not yet transferred any of the promised goods or services to the customer, and the entity has not received any consideration or entitlement to consideration. In this situation, there is clearly no revenue to recognize as there has not been any exchange under the contract.

5.2.2 Identify the Performance Obligations

This is a critical step, as the performance obligations will determine when revenue is recognized. The standard requires that the promised performance obligation be identified either as distinct goods and services or as a series of distinct goods and services that are substantially the same and that have the same pattern of transfer to the customer. A performance obligation exists only if there is a transfer of goods or services to a customer. This limitation in the definition means that internal administrative tasks required to manage a contract are not, in themselves, performance obligations.

During the development and implementation of IFRS 15, there was a great deal of discussion around the concept of distinct goods or services. The definition of "distinct" in this context contains two criteria: the customer can benefit from the good or service either on its own or together with other resources that are already available to the customer, and the contract contains a separately identifiable promise to transfer the good or service. It is important to note that both of these criteria must be satisfied to meet the definition of "distinct." For some contracts, the satisfaction of the second criteria may require some analysis. The standard provides further clarification by specifying the following indicators of a combined good or service (i.e., a single performance obligation):

- Significant services in integrating the goods or services with other goods or services are provided in the contract.
- The goods or services provided significantly modify or customize other goods or services provided in the contract.
- The goods or services are highly interdependent.

The standard provides further detailed examples to illustrate these concepts. A common, simple example can also illustrate the idea of "distinct". Consider a customer who wishes to build a brick wall. There are two ways this could be done. The customer could arrange with a local building supply warehouse to deliver all the required materials (bricks, mortar, tools, etc.) The company could then arrange a separate contract with a local mason to build the wall. In this case, there are two separate contracts. In the first contract, the performance obligation is

satisfied when the materials are delivered to the building site. The performance obligation in the second contract will be satisfied when the mason completes construction of the wall.

Now consider a different scenario: the company hires a local contractor to build the wall. The contractor purchases all the materials and arranges to have them delivered to the building site. Although these materials could meet the first criteria (i.e., the customer could benefit from them), the second criteria is not met. The contractor has made a promise for a single good: the completed wall. The contractor is going to provide significant services in integrating the goods (assembling the bricks with the mortar), the service modifies the goods, and the goods and services are interdependent (the skilled labour of the contractor is required to assemble the raw materials). In this case, the delivery of the materials to the building site does not satisfy a performance obligation. The performance obligation is not satisfied until the wall is completed.

To provide further clarity on the nature of performance obligations, the standard provides the following examples of goods and services:

- Sale of goods produced by the entity
- Resale of goods purchased by the entity
- Resale of rights to goods or services purchased by the entity
- Performing a contractually agreed upon task
- Providing a service of standing ready to provide goods or services
- Providing a service of arranging for another party the transfer of goods or services
- Granting rights to goods or services to be provided in the future that the customer can resell
- Constructing, manufacturing, or developing an asset on behalf of a customer
- Granting licenses
- Granting options to purchase additional goods or services

(CPA Handbook – Accounting, IFRS 15.26)

In some of the examples above, it is apparent that the entity would be acting as an agent for the benefit of a principal. In determining whether an agency relationship exists, the key factor to consider is control. If the entity controls the good or service before it is transferred to the customer, then the entity is a principal. If the entity does not control the good or service, the entity would be considered an agent. The main concern from an accounting perspective in these situations is the amount of revenue to recognize. For a principal, the gross amount of consideration expected from the transaction is considered revenue. For an agent, only the fee or commission earned from the transfer of goods or services is reported as revenue.

5.2.3 Determine the Transaction Price

The standard defines the transaction price as the amount of the consideration the entity expects to be entitled in exchange for transferring promised goods or services, excluding amounts collected on behalf of third parties. This consideration may be fixed or variable in nature. As well, there may be an implied financing component present in the consideration. Also, there are certain contracts that may require the payment of non-cash consideration.

Variable consideration can occur when discounts, rebates, refunds, credits, price concessions, or other incentives or penalties exist. When variable consideration is present in a contract, the amount should be estimated using either the expected value (the sum of probability-weighted amounts from a range of possible amounts) or the most likely amount (usually more appropriate when the range contains only a few choices). Variable consideration can be included in the transaction price only if it is highly probable that a significant reversal in the amount cumulative revenue recognized will not occur in the future. The standard does not define what is meant by “highly probable”, but it does provide a list of factors to consider when making this assessment. These situations require professional judgment and analysis of both quantitative and qualitative factors.

In some contracts, the entity may be providing significant financing services, even if these are not explicitly stated in the contract. A simple example would be goods sold which require payment in two years’ time. Although the contract may not state an interest rate, there is clearly a financing component present. The selling entity needs to account for the time value of money in determining the portion of the sale that relates to the goods and the portion that relates to the financing provided. In determining if a significant financing component exists, the entity should consider the difference between the consideration and the cash selling price of the goods or services, the length of time between the transfer of control and the customer’s payment, and prevailing interest rates in the relevant market. The discount rate used should reflect the rate that would be arrived at if the entity and the customer had engaged in a separate financing contract. This rate should reflect current market conditions, as well as the customer’s credit rating, collateral offered, and any other relevant factors. As a practical expedient, the standard allows entities to ignore the financing component if the time from delivery of goods or services to receipt of payment is expected to be one year or less.

When a contract allows non-cash consideration to be paid by a customer, that consideration should be measured at its fair value. In some cases, it may not be possible to determine the fair value of the consideration received. In these cases, the entity should use the stand-alone selling prices of the promised goods or services to determine the transaction price.

5.2.4 Allocate the Transaction Price to the Performance Obligations

Where multiple performance obligations are included in a single-price contract, the price should be allocated based on the relative proportions of the stand-alone selling prices of each component at the contract inception date. Where the stand-alone selling prices cannot be determined, other suitable estimation methods include

- the adjusted market assessment approach,
- the expected cost plus a margin approach, and
- the residual approach (permissible only in limited circumstances).

The application of these approaches may result in the identification of performance obligations that hadn't previously been identified due to the lack of stand-alone prices. If the customer receives a discount from purchasing a bundle of goods or services, this discount would normally be allocated in a proportional manner to the different performance obligations. The standard does, however, allow for discounts to be allocated in a disproportional manner if certain criteria are met. When variable consideration is present in a contract, the standard allows the variable component to be allocated to specific performance obligations if certain criteria are met. Otherwise, the variable consideration would be allocated in a proportional manner, similar to other consideration.

5.2.5 Recognize Revenue When (or as) the Entity Satisfies a Performance Obligation

Revenue should be recognized when the performance obligation has been satisfied. This occurs when the entity has transferred control of an asset to the customer. In this context, an asset includes either goods or services. A service is considered an asset because the customer obtains a benefit from its use, even if only briefly. The performance obligations can be satisfied either at a point in time or over time.

The standard defines control as the ability to direct the use of, and obtain substantially all of the benefits from the asset. (CPA Canada Handbook – Accounting, IFRS 15.33). Benefits are described as future cash flows, and can take the form of either inflows or reductions of outflows. Thus, cash flows can include not only the revenue derived directly from selling the asset, but also savings from using the asset to enhance other assets, or even the settlement of liabilities with the asset.

Many common business transactions result in performance obligations being satisfied at a point in time. This point could also be described as the *critical event*. For example, when you

buy groceries at your local convenience store, the critical event occurs when you exchange cash for possession of the goods. Once you leave the store with the groceries, revenue has been earned by the store. The proprietor no longer has any responsibility for or control over the goods. Other factors that can be considered when determining if control of an asset has been transferred include the transfer of legal title, the transfer of physical possession, the acceptance by the customer of the asset, the entity's entitlement to payment by the customer, and the transfer of significant risks and rewards of ownership. In the example of groceries purchased, the reward is the realization of the cash received from the sale. Prior to the sale, the risk to the vendor is that the food products may pass their sell-by date or may not be saleable due to changes in consumer tastes. Once you have purchased the goods, you are accepting responsibility for consuming the product prior to the sell-by date. Thus, the rewards have been transferred to the seller and the risks have been transferred to the buyer.

Often, the question of control can be answered by looking at a number of the factors identified above. As long as a company possesses the goods and still holds the title to the goods, there is both a risk (i.e., goods could be damaged, stolen, or destroyed) and a reward (i.e., goods can pledged or sold) available to the vendor. Sometimes, a vendor may transfer legal title to the customer but still maintain physical possession of the goods. In late 2000, Nortel Networks Corporation recorded approximately $1 billion of revenue using bill-and-hold transactions. These transactions were recorded as sales, but the company maintained possession of the goods until some later date when the customer requested delivery. In order to promote these types of sales, the company offered several different incentives to its customers. To report these types of transactions, US GAAP required that several conditions be met, including the conditions that the transaction must be requested by the customer and serve some legitimate business purpose. Nortel's actions violated these two conditions, and as such, the company was later required to restate revenues for the fourth quarter by over $1 billion.

The selling of services can create further accounting problems, as there is no longer the obvious transfer of a physical product to indicate completion of the earnings process. When you get a haircut, the service will be completed when you are satisfied with the cut and the barber enters the sale into the cash register. This can still be described as revenue earned at a point in time, as the completion of the haircut can be seen to be a critical event. However, some activities can take longer to complete, and they can even extend over several accounting periods. When a company agrees to provide a service over a period of time that crosses several fiscal years, the problem is to determine in which accounting periods to recognize the revenue. IFRS 15 requires one of three criteria be met to recognize revenue over time:

- The customer simultaneously receives and consumes benefits as the entity performs;
- The entity's performance creates or enhances an asset that the customer controls; or
- The entity's performance does not create an asset with an alternative use to the entity and entity has an enforceable right to payment

(CPA Canada Handbook – Accounting, IFRS 15.35)

When recognizing revenue for a performance obligation that is satisfied over time, it is essential that the entity have a reliable method for measuring progress. These methods should be based on either inputs or outputs. If the entity cannot reasonably measure its progress towards satisfaction of the performance obligation, then revenue should not be recognized. In some cases, although reliable measures of progress are not available, there is still a reasonable expectation that costs incurred will be recovered. In this instance, revenue would be recognized equal to the costs incurred. This is referred to as the **zero-margin method**. Revenue recognition for long term contracts will be discussed further in Section 5.3.6.

Accounting for revenue over time can create further problems when both goods and services are delivered. For example, in 2006, Nortel Networks was required to restate its financial statements due to improper accounting of several "multiple element arrangements." Nortel was engaged in many different types of long-term contracts with customers where installation, network planning, engineering, hardware, software, upgrades, and customer-support features were all included in the contract price. The accounting for these contracts was complicated, and the restatement was required because certain undelivered products and services were not considered separate accounting units, as no fair value could be determined for them.

5.2.6 Contract Costs

IFRS 15 also provides guidance on how to account for costs incurred to obtain and fulfill a contract. When obtaining a contract, any incremental costs incurred should be capitalized as an asset and amortized over the life of the contract. These costs only include those direct costs that would not have been incurred if the contract had not been obtained. A common example would be commissions paid to sales staff. As a practical expedient, the standard allows the costs to be expensed immediately for contracts terms of one year or less. This particular section of the standard has generated some debate, particularly in the telecommunications sector. Common practice in this industry usually involves expensing employee commissions at the time the contract is signed. Some industry representatives have expressed concern that the requirement to capitalize contract costs, along with other aspects of the standard, will result in significant changes and investments in IT systems to properly track the information.

For costs incurred to fulfill a contract, the standard requires capitalization only if the costs relate directly to the contract, the costs generate or enhance resources that will be used to satisfy the performance obligations, and the costs are expected to be recovered. These conditions will generally prevent the capitalization of general and administrative costs that are not explicitly chargeable under a contract or the cost of wasted resources that are not reflected in the price of the contract. However, overhead costs such as project management, supervision, insurance, and depreciation may be eligible for capitalization if they relate directly to the contract.

5.3 Applications

IFRS 15 provides fourteen sections of application guidance which elaborate on certain aspects of the standard as they relate to specific situations. As well, the standard provides sixty-three illustrative examples for further clarity. In this section, we will examine some of the examples and guidance.

5.3.1 Bundled Sales

Telurama Inc. sells mobile telephones with two-year bundled airtime and data plans. The stand-alone selling price of the telephone is $600. The the airtime and data plan does not have an observable stand-alone selling price, but Telurama has used the adjusted market assessment approach to estimate the stand-alone selling price as $1,000. As the mobile telephone business is very competitive, Telurama is required to sell the bundled package for $1,400. Telurama has determined that the discount should be allocated proportionally to the two performance obligations. In this case, the revenue would be recognized as follows:

Component	Calculation	Allocation
Telephone	$[600 \div (600 + 1{,}000)] \times 1{,}400$	$ 525
Airtime and data	$[1{,}000 \div (600 + 1{,}000)] \times 1{,}400$	$ 875
Total		$ 1,400

If the airtime and data plan was sold to different customer groups for a broad range of different prices, Telurama could use the residual approach instead, as the stand-alone selling price for this performance obligation would not be observable. With this approach, the value of the observable stand-alone selling price (the telephone) is subtracted from the total contract value to arrive at the value of the unobservable stand-alone selling price (the airtime and data plan). In this example, Telurama would recognize revenue as follows:

Component	Calculation	Allocation
Telephone	stand-alone price	$ 600
Airtime and data	$1{,}400 - 600$	$ 800
Total		$ 1,400

In either case, revenue will be recorded based on the allocation calculated above. The revenue for the telephone will be recorded immediately upon delivery to the customer, and the remaining amount relating to the airtime and data will be reported as unearned revenue that will be recognized over the term of the contract. The journal entry at the time of sale to record this transaction using the first example would look like this:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts receivable		1,400	
	Sales revenue			525
	Unearned revenue			875

5.3.2 Consignment Sales

Sometimes a retailer may not want to take the risk of purchasing a product for resale. The retailer may not want to tie up working capital or may think the product is too speculative or risky. In these cases, a consignment arrangement may be appropriate. Under this type of arrangement, the manufacturer of the product (*the consignor*) will ship the goods to the retailer (*the consignee*), but the manufacturer will retain legal title to the product. The consignee agrees to take care of the product and make efforts to the sell the product, but no guarantee of performance is made. As well, the agreement will likely require the return of the goods to the consignor after a specified period, if the goods are not sold. Thus, the performance obligation has not been satisfied when the goods are transferred to the consignee, and the consignor cannot recognize revenue at this point. The goods will, thus, remain on the consignor's books as inventory until the consignee sells them. When the consignee actually sells the product, an obligation is now created to reimburse the consignor the amount of the sales proceeds, less any commissions and expenses that are agreed to in the contract for the consignment arrangement. At the time of sale, the consignor can recognize the revenue from the product, and the consignee can recognize the commission revenue.

Assume the following facts: Dali Printmaking Inc. produces fine-art posters. Dali ships 3,000 posters to Magritte Merchandising Ltd. on a consignment basis. The total cost of the posters is $12,000, and Dali pays $550 in shipping costs. Magritte pays $1,200 for advertising costs that will be reimbursed by Dali. During the year, Magritte sells one-half of the posters for $23,000. Magritte informs Dali of this and pays the amount owing. Magritte's commission is 15 percent of the sales price. The accounting for this type of transaction looks like this:

Dali Printmaking Inc. (consignor)

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Inventory on consignment		12,000	
	Finished goods inventory			12,000
	To segregate consignment goods.			
	Inventory on consignment		550	
	Cash			550
	To record freight.			
	Cash		18,350	
	Advertising expense		1,200	
	Commission expense (15% × $23,000)		3,450	
	Consignment revenue			23,000
	To record receipt of net sales.			
	Cost of goods sold		6,275	
	Inventory on consignment			6,275
	To record COGS: [(12,000 + 550) × 50%].			

Magritte Merchandising Ltd. (consignee)

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Account receivable		1,200	
	Cash			1,200
	To record payment of advertising.			
	Cash		23,000	
	Accounts payable			23,000
	To record sales of consigned goods.			
	Accounts payable		23,000	
	Accounts receivable			1,200
	Revenue from consignment sales			3,450
	Cash			18,350
	To record payment to consignor: 15% × $23,000 = $3,450.			

5.3.3 Sales With Right of Return

It is a common practice in the retail sector to allow customers to return products for various reasons, within a certain period of time. When the product is returned, the customer may receive a full refund, a credit to be applied against future purchases, or a replacement product. The accounting issue for the company is whether the full amount of revenue should be recognized at the time of sale, given that a certain number of returns may be expected. The general approach used here is to record revenue only in the amount of consideration expected to be received. In other words, the company needs to make an estimate at the time of sale of the amount of returns expected, and then exclude this amount from reported revenue. This amount should be reported as a refund liability. As well, the company should report an asset equal to the expected amount of product to be returned. The asset would be adjusted against the cost of goods sold in the period of sale. At the end of every accounting period,

the estimates used to arrive at the refund liability and asset should be reviewed and adjusted where necessary. It is expected that most companies should be able to make reasonable estimates of these amounts, using historical, industry, technical, or other data.

Consider the following example. Wyeth Mart sells high quality paintbrushes for use in fine art applications. Each brush costs the company $15 and sells for $25. Wyeth Mart offers a full refund for any unused product that is returned within 30 days of purchase, and the company expects that these returned products can resold for a profit. The company has reviewed historical sales data and estimated that 2% of products sold will be returned for a refund. During the month of May, 1,000 paintbrushes are sold for cash. The journal entries in May would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash (1,000 × $25)		25,000	
	Sales revenue (1,000 × $25 × 98%)			24,500
	Refund liability (1,000 × $25 × 2%)			500
	Cost of goods sold (1,000 × $15 × 98%)		14,700	
	Refund asset (1,000 × $15 × 2%)		300	
	Inventory (1,000 × $15)			15,000

In June, if 20 brushes are returned, the journal entry will be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Refund liability (20 × $25)		500	
	Inventory (20 × $15)		300	
	Cash			500
	Refund asset			300

If the amount returned differs from estimated amount, the refund liability and refund asset will need to be adjusted once the return period expires. This is an ongoing process, as most companies will continue to make new sales during the period. As a practical matter, many companies will only review the balances of the refund liability and refund asset account at the annual reporting date.

5.3.4 Bill-and-Hold Arrangements

There are times when a customer may purchase goods from a company, but not take physical possession of the goods until a later date. Customers may have legitimate reasons for doing this, including a lack of warehouse space, delays in their own productions processes, or the need to secure a supply of a scarce product. When the selling entity is considering whether

to recognize revenue on these types of contracts, it needs to consider if control of the goods has been transferred to the customer. Aside from the normal criteria that are used to evaluate control, an additional three conditions must be satisfied in bill-and-hold transactions:

- The reason for the bill-and-hold transaction must be substantive;
- The product must be identified separately;
- The entity must not have the ability to use or resell the product to another customer.

(CPA Canada Handbook – Accounting, IFRS 15.B81)

Consider the following example. Koenig Ltd. processes rare-earth elements used in certain technological applications. One of these elements forms a critical component of a customer's product. The customer has requested Koenig Ltd. set aside a one-year supply of the element to ensure that its production process is not interrupted. The customer's factory is in close proximity to Koenig's warehouse, and transportation between the two locations is easily facilitated. The customer agrees to pay for the entire one-year supply, as well as a monthly rental fee to cover Koenig's cost of storing the product in its warehouse. The entire payment of $500,000, representing the cost of the element and 12 months of rent, is received on December 29, 2022. Koenig has separately identified and segregated the product in its warehouse, and the contract with the customer specifies that product cannot be sold to another customer. The fair value of the warehouse rental service being provided is $800 per month.

In this case, the revenue from the sale of the product can be recognized on December 29, 2022 because the reason for the bill-and-hold transaction is substantive (the customer requested it), the product has been identified separately, and the contract specifies that the product cannot be resold. Assuming the transaction price has been determined using the fair value of the product and rental service, revenue will be recognized as follows:

$$\text{Revenue related to rental service } (\$800 \times 12) = \$9{,}600$$
$$\text{Revenue related to product } (\$500{,}000 - \$9{,}600) = \$490{,}400$$

Thus, on December 29, 2022, Koenig will recognize revenue of $490,400 and report unearned revenue of $9,600. The $9,600 will be recognized as revenue at the rate of $800 per month over the next year. If the holding period were longer than one year, Koenig would also need to consider the presence of a financing component in the transaction price.

5.3.5 Barter Transactions

When a customer and an entity agree that payment for goods or services can be made using non-cash consideration, the non-cash consideration received should be reported at its fair

value. Assume that an oil-and-gas company wishes to trade a quantity of crude oil for natural gas that is used to power the refinery where the oil is processed. The natural gas will be consumed and will not be held in inventory. As these two products have different uses for the company, this transaction has commercial substance. Assume that the fair value of the natural gas received is $10,000, and the cost of the crude oil traded is $7,000. The journal entry for this transaction would be as follows:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Utility expense		10,000	
	Sales revenue			10,000
	Cost of goods sold		7,000	
	Crude oil inventory			7,000

5.3.6 Long-Term Construction Contracts

Many large construction projects can take several years to complete. With these types of projects, a significant amount of professional judgment is required to determine when to recognize revenue. An obvious approach may be to simply wait until the completion of the project before recognizing revenue. However, this approach would not properly reflect the periodic activities of the business. Although contracts of this nature are usually complex, they do usually establish the right of the contractor to bill for work that is completed throughout the project and result in a transfer of control to the customer. Because the contractor is adding economic value to the product, while at the same time establishing a legal right to collect money for work performed, it is appropriate to recognize revenue on a periodic basis throughout the life of the project. This method of recognizing revenue and related costs is referred to as the **percentage-of-completion method**.

The most difficult part of applying this method is determining the proportion of revenue to recognize at the end of each accounting period. Both *inputs* (labour, materials, etc.) and *outputs* (square footage of a building completed, sections of a bridge, etc.) can be used, but judgment must be applied to determine which approach results in the most accurate measurement of progress on the project. One of the problems with output methods is that the measure may not accurately represent the entity's progress toward satisfying the performance obligation. With input methods, the problem may be that the input measured does not directly correlate to the transfer of control of goods or services to the customer. A common approach that is used by many construction companies is called the **cost-to-cost basis**. This approach uses the dollar value of inputs as the measurement of progress. More precisely, the proportion of costs incurred to date to the current estimate of total project costs is multiplied by the total expected revenue on the project to determine the amount of revenue to recognize. When this method is used, it is assumed that costs incurred do correlate to the transfer of control of goods and services to the customer and that these costs are a reasonable representation of the entity's progress toward satisfying the performance obligation. This approach is illustrated in more detail in the examples below.

Example 1: Profitable Contract

Salty Dog Marine Services Ltd. commenced a $25 million contract on January 1, 2020, to construct an ocean-going freighter. The company expects the project will take three years to complete. The total estimated costs for the project are $20 million. Assume the following data for the completion of this project:

	2020	2021	2022
Costs to date	5,000,000	12,000,000	20,100,000
Estimated costs to complete project	15,000,000	8,050,000	
Progress billings during the year	4,500,000	7,000,000	13,500,000
Cash collected during the year	4,200,000	6,800,000	14,000,000

The amount of revenue and gross profit recognized on this contract would be calculated as follows:

	2020	2021	2022
Costs to date (A)	5,000,000	12,000,000	20,100,000
Estimated costs to complete project	15,000,000	8,050,000	0
Total estimated project costs (B)	20,000,000	20,050,000	20,100,000
Percent complete (C = A ÷ B)	25.00%	59.85%	100.00%
Total contract price (D)	25,000,000	25,000,000	25,000,000
Revenue to date (C × D)	6,250,000	14,962,500	25,000,000
Less previously recognized revenue		(6,250,000)	(14,962,500)
Revenue to recognize in the year	6,250,000	8,712,500	10,037,500
Costs incurred the year	5,000,000	7,000,000	8,100,000
Gross profit for the year	1,250,000	1,712,500	1,937,500

Note that the costs incurred in the year are simply the difference between the current year's costs to date and the previous year's costs to date. The total amount of gross profit recognized over the three-year contract is $4,900,000, which represents the difference between the contract revenue of $25 million and the total project costs of $20.1 million. It is not uncommon for the total project costs to differ from the original estimate. Adjustments to estimated project costs are always captured in the current year only. It is assumed that estimates are based on the best information at the time they are made, so it would be inappropriate to adjust previously recognized profit.

The journal entries to record these transactions in 2020 would look like this:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Construction in progress		5,000,000	
	Materials, payables, cash, etc.			5,000,000
	To record construction costs.			
	Accounts receivable		4,500,000	
	Billings on construction			4,500,000
	To record billings.			
	Cash		4,200,000	
	Accounts receivable			4,200,000
	To record collections.			
	Construction in progress		1,250,000	
	Construction expenses		5,000,000	
	Revenue			6,250,000
	To recognize revenue.			

Construction in progress is a balance sheet account that represents accumulated costs to date on a project plus any recognized profit. **Billings on construction** is also a balance sheet account; it represents total amounts billed to the customer. These two accounts are normally presented on a net basis on the balance sheet, and may sometimes be described as Contract Asset/Liability. If construction in progress exceeds billings on construction, the net balance would be reported as **recognized revenues in excess of billings**. This asset would be reported as either current or noncurrent, depending on the length of the contract. If billings on construction exceeds construction in progress, the net balance would be reported as **billings in excess of recognized revenues**. This liability would also be either current or noncurrent. On the income statement, the company would report the revenues and construction expenses, with the difference being reported as gross profit.

In 2022, once the contract is completed, an additional journal entry is required to close the billings on construction and construction in progress accounts:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Billings on construction		25,000,000	
	Construction in progress			25,000,000
	To record completion.			

 A video is available on the Lyryx site. Click here to watch the video.

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Example 2: Unprofitable Contract

Although it would be ideal if contract costs could always be accurately estimated, most often this is not the case. Unexpected difficulties can occur during the construction process, or costs can rise due to uncontrollable economic factors. Whatever the reason, it is quite likely that the actual total costs on the project will differ from the original estimates. If costs rise during an accounting period, this situation is treated as a change in estimate, as it is presumed that the original estimates were based on the best information available at the time. A change in estimate is always applied on a prospective basis, which means the current period is adjusted for the net effect of the change, and future periods will be accounted for using the new information. There is no need to restate the prior periods when there is a change in estimate. If the revised estimate of costs will still result in the contract earning an overall profit, the only effect of increased cost estimates will be to reverse any previously overaccrued profits into the current year. This may result in a loss for the current year, but the project will still report a total profit over its lifespan.

Sometimes, however, cost estimates may increase so much that the total project becomes unprofitable. That is, the total revised project costs may exceed the total revenue on the project. This situation is referred to as an *onerous contract*, which results in a liability. When the unavoidable costs of fulfilling a contract exceed the economic benefits to be derived from the contract, a conservative approach should be applied, and the total amount of the expected loss should be recorded in the current year. In determining the unavoidable costs on the contract, the entity should consider the least costly option available, even if this means cancelling the contract and paying a penalty. This treatment is required because it is important to alert financial-statement readers of the potential total loss, regardless of the stage of completion, so that they are not misled about the realizable value of assets or income. Onerous contracts will be discussed in a later chapter.

To illustrate this situation, consider our Salty Dog example again, with one change. Assume that in 2021, due to a worldwide iron shortage, the expected costs to complete the project rise from $8,050,000 to $18,000,000. However, in 2022, it turns out that the drastic rise in iron prices was only temporary, and the final tally of costs at the end of the project is $26,500,000. The profit on the project would be calculated as follows:

	2020	2021	2022
Costs to date (A)	5,000,000	12,000,000	26,500,000
Estimated costs to complete project	15,000,000	18,000,000	0
Total estimated project costs (B)	20,000,000	30,000,000	26,500,000
Percent complete (C = A ÷ B)	25.00%	40.00%	100.00%
Total contract price (D)	25,000,000	25,000,000	25,000,000
Revenue to date (C × D)	6,250,000	10,000,000	25,000,000
Less previously recognized revenue	0	(6,250,000)	(10,000,000)
Revenue to recognize for the year	6,250,000	3,750,000	15,000,000
Costs incurred for the year	5,000,000	7,000,000	14,500,000
Gross profit (loss) for the year	1,250,000	(3,250,000)	500,000
Additional loss to recognize[1]		(3,000,000)	3,000,000
Gross profit (loss) for the year		(6,250,000)	3,500,000

Notice that the total loss recognized over the life of the project is $1,500,000, which reconciles with the total project revenue of $25,000,000 minus total project costs of $26,500,000.

 A video is available on the Lyryx site. Click here to watch the video.

Other Considerations

There may be cases where input costs include the purchase of a single, significant asset. The entity may be required to install the asset as part of the contract, but may not have anything to do with the construction of the asset itself. In this case, the use input costs may be a misleading way to measure progress toward satisfaction of the performance obligation, as the entity does not contribute to the construction of the asset.

Consider the following example. Rohe Construction Ltd. signs a contract with a customer to install a distillation tower in an oil refinery. Rohe Construction Ltd. purchases the distillation tower from a supplier for $3,000,000 and delivers it to the work site on November 20, 2022. At this time, the customer obtains control of the tower. The company estimates that it will take six months to install the distillation tower, and that the total project costs, excluding the tower, will be $1,200,000. The total value of the contract is $5,000,000.

The company has determined that using total input costs would be a misleading way to represent its progress toward satisfying the performance obligation. Instead, it will recognize revenue from the distillation tower itself using the **zero-margin method**, and revenue from the installation services using the percentage-of-completion method. Assume that by December

[1]Note: The additional loss to recognize in 2021 represents the loss expected at this point on work not yet completed (i.e., 60% × [25,000,000 − 30,000,000]). This additional loss gets reversed in 2022, because there is no further work to complete once the project is finished. By recognizing this additional amount in 2021, the financial statements will show the total expected loss on the project at this point. In 2021, the additional loss will be journalized by adding it to the total of the construction expenses account recognized.

31, 2022, the company has incurred $300,000 of costs, excluding the purchase of the tower. Revenue would be recognized as follows:

	Tower	Installation	Total
Revenue	3,000,000	500,000	3,500,000
Cost of goods sold	3,000,000	300,000	3,300,000
Gross profit	0	200,000	200,000

NOTE: Installation revenue is calculated as $(\$5{,}000{,}000 - \$3{,}000{,}000) \times (\$300{,}000 \div \$1{,}200{,}000)$

Using this approach, the total profit recorded to date of $200,000 represents 25% of the total expected project profit of $800,000 ($5,000,000 − $3,000,000 − $1,200,000). This makes sense, as the company has incurred 25% of the total expected costs, excluding the tower itself. The company doesn't recognize profit from the tower itself, as the tower's delivery does not represent satisfaction of the company's performance obligation to install the tower.

The zero-margin method can also be applied in situations where it is difficult to measure the outcome of a performance obligation. This could occur, for example, in the early stages of a long-term construction contract where significant progress cannot yet be measured. If the entity believes that costs incurred will ultimately be recoverable under the contract, then the zero-margin method can be applied, and the company will recognize revenue equal to the costs incurred. Once the entity determines that progress is now reliably measurable, it can then start applying the percentage-of-completion method.

5.4 Presentation and Disclosure

IFRS 15 requires the presentation of contract assets or liabilities on the balance sheet once performance of the contract occurs. Contract assets or liabilities should be reported separately from receivables under the contract. Receivables are defined as unconditional rights to consideration. The standard allows for alternate terminology in describing the contract asset/liability, as long is it is clearly distinguishable from the receivable.

The standard has fairly extensive quantitative and qualitative disclosure requirements for contracts with customers. These requirements were designed to address a deficiency in previous standards regarding the level of detail disclosed for revenue transactions. The disclosures provide information about the contracts themselves, the judgments applied in accounting for the contracts, and any assets recognized by creating or fulfilling the contract. Some of the key disclosures include:

- Revenue and impairment losses from contracts with customers

- Sufficient disaggregation of revenue categories to depict how the nature, amount, timing, and uncertainty of revenue amounts are affected by economic factors
- A reconciliation of opening and closing contract asset/liability balances, including an explanation of how satisfaction of performance obligations relates to the timing of customer payments
- A detailed description of performance obligations
- Details of transaction prices allocated to unsatisfied performance obligations
- Details of judgments applied in determining the performance obligations and the allocation of transaction prices to those obligations
- Explanations of methods used to determine the timing of satisfaction of performance obligations over time
- Details of methods, inputs, and assumptions used to determine and allocate transaction prices
- Details of assets recognized from costs to obtain or fulfill a contract
- The application of any practical expedient allowed under the standard

5.5 The Earnings Approach

ASPE uses a different approach to revenue recognition. This approach, often referred to as the **earnings approach**, focuses on how an entity adds value during the completion of a business transaction. While IFRS focuses on the balance sheet (contract assets and liabilities), ASPE focuses more on the processes the entity undertakes to earn revenue. In this sense, it can be thought of as income statement approach to revenue.

With the earnings approach, revenue is recognized when four conditions are met:

- The seller has transferred the significant risks and rewards of ownership to the buyer
- The seller maintains no continuing managerial involvement or control over the goods
- Reasonable assurance exists regarding the measurement of consideration to be received and the extent to which goods can be returned
- Collection of the consideration is reasonably assured

(CPA Canada Handbook – Accounting, ASPE 3400.04 and .05)

Although conceptually this approach appears quite different from the IFRS five-step approach, the results will often be the same when applying the two methods to the same circumstances. The transfer of risks and rewards of ownership under ASPE will often coincide with the satisfaction of a performance obligation under IFRS. There are, however, some situations where the results will be different under the two approaches.

One area where IFRS and ASPE differ is in the treatment of long term contracts. ASPE allows for either the percentage-of-completion method or the **completed contract method** to be used. The choice between methods is based on the accountant's professional judgment as to which method better relates the revenue to the work accomplished. The completed contract method would usually be used when a company is unable to make reasonable estimates of progress or performance of the contract consists of a single act. Under the completed contract method, no revenues or expenses are recognized until the contract is completed. This means the income statement will not reveal any information about the company's progress on the contract, as all costs and billings will simply be accumulated in balance sheet accounts. In the year the contract is completed, all revenue and expenses are recognized. Although this method avoids the problem of estimation error, it does not provide useful information in the interim periods before project completion.

5.6 IFRS/ASPE Key Differences

IFRS	ASPE
Revenue is recognized by applying the five-step process. The focus is on performance obligations and contract assets and liabilities.	Revenue is recognized using the earnings approach. The focus is on the transfer of risks and rewards of ownership.
The percentage-of-completion method should be used for long-term contracts, unless progress is not measurable, in which case the zero-margin method should be used.	Either the percentage-of-completion method or the completed-contract method can be used, depending on which more accurately relates the revenues to the work accomplished. The completed contract method should only be used if progress toward completion of the contract cannot be measured or if performance consists of a single act.
Barter transactions are measured at fair value.	Barter transactions are measured at fair value when the transaction has commercial substance. If there is no commercial substance, the asset acquired is measured at the carrying value of the asset given up, adjusted for any cash consideration.
Specific guidance provided on determination of the appropriate discount rate for payments received over time.	Payments received over time are discounted at the prevailing market rate.
Disclosure requirements are more specific and detailed.	Disclosure requirements are less detailed and indicate only that accounting policies and major categories should be disclosed.

Chapter Summary

LO 1: Describe the criteria for recognizing revenue and determine if a company has earned revenue in a business transaction.

Under IFRS, revenue is recognized using a five-step process: 1) identify the contract, 2) identify the performance obligations, 3) determine the transaction price, 4) allocate the transaction price to the performance obligations, and 5) recognize revenue when a performance obligation is satisfied. Performance obligations must relate to distinct goods or services. Performance obligations can be satisfied over time or at a point in time. The amount of revenue to be

recognized from a performance obligation will depend on whether the entity is acting as a principal or an agent. Incremental costs incurred to obtain or fulfill a contract should be capitalized and amortized over the life of the contract. For long-term contracts, a rational method of recognizing revenue will need to be applied, based on some method of measuring progress.

LO 2: Discuss the problem of measurement uncertainty and alternative accounting treatments for these situations.

Measurement uncertainty can occur when the contract includes variable consideration, an implied financing component, non-cash consideration, or a discount on a bundle of goods and services. The accounting treatment will depend on the nature of the measurement problem. Where sales are bundled, the consideration will normally be allocated based on the relative stand-alone selling prices of each component. Variable consideration should be measured at the expected value or most likely amount. Interest, even if not explicitly stated in the contract, should be identified as a separate performance obligation, unless the contract period is less than one year. Non-cash consideration should be reported at its fair value.

LO 3: Prepare journal entries for a number of different types of sales transactions.

For bundled sales, consideration should be allocated proportionally, based on the stand-alone selling price of each component. The residual value approach would only be appropriate if the stand-alone selling price of a component was not determinable. For consignment sales, inventory first needs to be reclassified. Revenue from consignment sales should not be recorded until the consignee actually sells the goods to a third party. Costs of the transaction also need to be recorded. For sales with a right of return, an accrual of the estimated amount of the refund liability needs to be recorded, along with an estimate of the amount of refund assets expected to be received from customers. For bill-and-hold arrangements, revenue should only be recognized if control has been transferred to the customer. Additional criteria will need to be evaluated in making this determination. For non-monetary exchanges, revenue should be recorded based on the fair value of the goods or services received.

LO 4: Apply revenue recognition concepts to the determination of profit from long-term construction contracts.

For a long-term construction contract, profits should be recognized in some rational manner over the life of the project. To do this, reliable estimates of progress are required. Input or output measures may be used. Many construction companies prefer to use the cost-to-cost

method, which measures progress in terms of the dollar value of inputs. If progress cannot be reliably measured, then profits should be reported using the zero-margin method.

LO 5: Prepare journal entries for long-term construction contracts.

Costs are accumulated a construction-in-progress account. When profit is estimated at the end of the year using the percentage-of-completion method, the revenue and related expense will be recorded, with the net profit being added to the construction-in-progress account. Also, journal entries will record billings to customers and collections of those billings. At the end of the construction contract, the construction-in-progress account will be zeroed out against the billings account. The terms “contract asset” and “contract liability” may also be used in place of the construction-in-progress and billings accounts.

LO 6: Apply revenue recognition concepts to unprofitable long-term construction contracts.

When a construction contract is predicted to be unprofitable, resulting in an onerous contract, the entire projected loss on the contract needs to be recognized immediately. Once the project is completed, this amount will be adjusted so that the actual amount of the project loss is reported. This approach results in inconsistent amounts of profit being reported in each year of the project, but the total profit will be correct over the life of the project.

LO 7: Describe presentation and disclosure requirements for revenue-related accounts.

Contract assets and liabilities should be presented separately from contract receivables on the balance sheet. IFRS 15 contains detailed qualitative and quantitative disclosure requirements, including disaggregation of revenue categories, descriptions and reconciliations of performance obligations, and discussions of methods and judgements applied in determining revenue.

LO 8: Discuss the earnings approach to revenue recognition, and compare it to current IFRS requirements.

The earnings approach is used in ASPE and includes four criteria for revenue recognition: 1) the seller has transferred the risks and rewards of ownership to the buyer, 2) the seller

does not maintain any continuing managerial involvement or control over the goods, 3) there is reasonable assurance regarding measurement of the consideration to be received and the amount of goods that may be returned, and 4) collection of consideration is reasonable assured. In many instances, the earnings approach will arrive at similar results as the contract based approach of IFRS 15. In some cases, however, the results may be different. With long-term construction contracts, the earnings approach allows for the completed contract method to be used if there is no reasonable way to estimate progress or performance of the contract consists of a single act.

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Exercises

EXERCISE 5–1

PhreeWire Phones offers a number of plans to its mobile telephone customers. For example, a customer can receive a free phone when signing a 3-year contract for airtime and data that requires a monthly payment of $80. Alternately, the customer could pay $300 for the telephone when signing a 2-year contract requiring monthly payments of $100.

Required: Determine the amount of revenue to be recognized each year under the two different scenarios. Assume that the fair value of the telephone is $500 and the fair value of the airtime and data is $600 per year.

EXERCISE 5–2

Refer to the previous question.

Required: Determine the amount of revenue to be recognized each year under the two

different scenarios. Assume that the fair value of the telephone is indeterminable and the fair value of the airtime and data is as indicated.

EXERCISE 5–3

Art Attack Ltd. ships merchandise on consignment to The Print Haus, a retailer of fine art prints. The cost of the merchandise is $58,000, and Art Attack pays the freight cost of $2,200 to ship the goods to the retailer. At the end of the accounting period, The Print Haus notifies Art Attack Ltd. that 80% of the merchandise has been sold for $79,000. The Print Haus retains a 10% commission as well as $3,400, which represent advertising costs it paid, and remits the balance owing to Art Attack Ltd.

Required: Complete the journal entries required by each company for the above transactions.

EXERCISE 5–4

Eames Fine Furniture sells high quality, roll-top desks. The company allows customers to return products for a full refund within 90 days of purchase. The desks sell for $3,000 and cost the company $2,000 to manufacture. The company expects that any returned desks can be resold for a profit. The company has reviewed historical financial data and determined that 0.5% of all desks sold are returned for a refund. During the month of January, the company sold 800 desks.

Required:

a. Prepare all the required journal entries to record the January sales.

b. Assume one desk was actually returned by the end of January. Prepare the journal entry required to record the return and describe the appropriate accounting treatment of any further returns.

EXERCISE 5–5

Frank Ledger, a non-designated accountant, has agreed to provide twelve months of bookkeeping services to Digital Dreams Inc. (DDI), a computer equipment and accessories retailer. Mr. Ledger will compile the accounting records of DDI every month and provide an unaudited financial statement. Mr. Ledger has agreed not to invoice DDI during the year, and DDI has agreed to provide Mr. Ledger with a free computer system. The computer would normally sell for $3,000. Mr. Ledger has indicated that he would typically charge approximately $250/month for similar bookkeeping services, although the actual amount invoiced per month would depend on the volume of transactions and a number of other factors.

Required: Assume the contract described above is signed on October 1 and Mr. Ledger's fiscal year end is December 31. Prepare all the required journal entries for Mr. Ledger between these two dates.

EXERCISE 5–6

Suarez Ltd. entered into a contract on January 1, 2020, to construct a small soccer stadium for a local team. The total fixed price for the contract is $35 million. The job was completed in December 2021. Details of the project are as follows:

	2020	2021
Costs incurred in the period	$20,000,000	$11,000,000
Estimated costs to complete the project	10,000,000	-
Customer billings in the period	18,000,000	17,000,000
Cash collected in the period	17,000,000	15,000,000

Required:

a. Calculate the amount of gross profit to be recognized each year using the percentage-of-completion method.

b. Prepare all the required journal entries for both years.

EXERCISE 5–7

In 2021, Gerrard Enterprises Inc. was contracted to build an apartment building for $5.2 million. The project was expected to take three years and Gerrard estimated the costs to be $4.3 million. Actual results from the project are as follows:

	2021	2022	2023
Accumulated costs to date	$1,100,000	$3,400,000	$4,500,000
Estimated costs to complete the project	3,200,000	1,000,000	-
Customer billings to date	1,500,000	3,300,000	5,200,000
Cash collected to date	1,000,000	3,000,000	5,200,000

Required:

a. Calculate the amount of gross profit to be recognized each year using the percentage-of-completion method.

b. Show how the details of this contract would be disclosed on the balance sheet and income statement in 2022.

EXERCISE 5–8

On February 1, 2020, Sterling Structures Ltd. signed a $3.5 million contract to construct an office and warehouse for a small wholesale company. The project was originally expected to be completed in two years, but difficulties in hiring a sufficient pool of skilled workers extended the completion date by an extra year. As well, significant increases in the price of steel in the second year resulted in cost overruns on the project. Sterling was able to negotiate a partial recovery of these costs, and the total contract value was adjusted to $3.8 million in the second year. Additional information from the project is as follows:

	2020	2021	2022
Total contract value	$3,500,000	$3,800,000	$3,800,000
Accumulated costs to date	800,000	2,400,000	3,900,000
Estimated costs to complete the project	2,100,000	1,600,000	-
Customer billings to date	1,000,000	2,100,000	3,800,000
Cash collected to date	1,000,000	2,000,000	3,800,000

Required:

a. Calculate the amount of gross profit to be recognized each year using the percentage-of-completion method.

b. Prepare all the required journal entries for 2021.

EXERCISE 5–9

Take the same set of facts as described in the previous question, except assume that there is no reasonable way to estimate progress on the contract.

Required:

a. Using the zero-margin method (IFRS), determine the amount of revenue and expense to report each year.

b. Using the completed-contract method (ASPE), determine the amount of revenue and expense to report each year.

Chapter 6

Cash and Receivables

Cash Overflows for Apple

In 2013, Apple advised their shareholders that it sold 34M iPhones, up 90% from the same quarter last year, and up 150% from the year before. Along with the increased sales came increased profits (almost double) and increased cash in the bank; about US$ 9.9B in cash flow from operations for a total cash holding of about US$ 100B.

Until that point, Apple was reluctant to pay out dividends to its shareholders as most high-tech companies need large amounts of cash to expand their existing markets and for research and development costs to find new markets. In 2013, Tim Cook, CEO of Apple Inc., convinced Apple's board of directors that it was time to start paying out some periodic cash dividends to its investors; US$ 3.05 per share. Dividend payouts, along with some shares repurchases, totalled about US$ 7.8B paid to investors in the third quarter of 2013. Since Apple is a multinational corporation operating globally, some of this cash stockpile was in foreign funds. This strategy avoids paying the 35% US tax on foreign earnings repatriation. In all, about two-thirds of its cash holdings are in foreign currencies. Even though this cash is not available for dividends, this does not seem to bother Apple, since the company seems to have more than enough US cash for dividends payments and other return of capital. Even so, all this currency, especially foreign currency, is creating a new problem.

At this rate of continued growth, many analysts are predicting a continued piling up of foreign and US cash. The issue then becomes; what to do with all this cash, especially the massive two-thirds portion of foreign cash? It has become a conundrum—to manage all this cash, Apple has had to open about two hundred different bank accounts across different banks to monitor and track cash locations and spending, as well as to track and manage liquidity across the organization on a day-to-day basis.

The risk to their gigantic cash pile sitting in bank accounts is that it may be earning simple interest instead of better rates from investing in higher yielding instruments such as money market funds. For a cash-rich company such as Apple, a centralized cash management system is crucial; it will provide information quickly and efficiently so that Apple's money managers can make critical (and timely) investment decisions. Another benefit of a centralized cash repository is reduced risk of fraudulent access to cash, since cash invested in money market funds and similar alternatives is less accessible than cash sitting in a bank account, or many bank accounts as is the case with Apple.

In Apple's case, a centralized cash treasury will add value by reducing the percentage of

idle cash through streamlining bank accounts and by allowing cash managers to focus on ensuring the right levels of cash with the remainder invested in instruments with better returns.

While some may consider too much cash in too many bank accounts to be an enviable position, it is still a risk that could lead to cash opportunities lost or worse, cash leaking away in inappropriate hands if left unexamined.

(Source: Apple Inc., 2013)

Chapter 6 Learning Objectives

After completing this chapter, you should be able to:

LO 1: Describe cash and receivables, and explain their role in accounting and business.

LO 2: Describe cash and cash equivalents, and explain how they are measured and reported.

- LO 2.1: Explain the purpose and key activities of internal control for cash.

LO 3: Describe receivables, identify the different types of receivables, explain their accounting treatment, and prepare the relevant journal entries.

- LO 3.1: Describe accounts receivable, and explain how they are initially and subsequently measured and reported.
- LO 3.2: Describe notes receivables, and explain how they are initially and subsequently measured and reported.
- LO 3.3: Describe derecognition of receivables and the various strategies businesses use to shorten the credit-to-cash cycle through sales of receivables or borrowings secured by receivables.
- LO 3.4: Describe how receivables are disclosed on the balance sheet and in the notes.

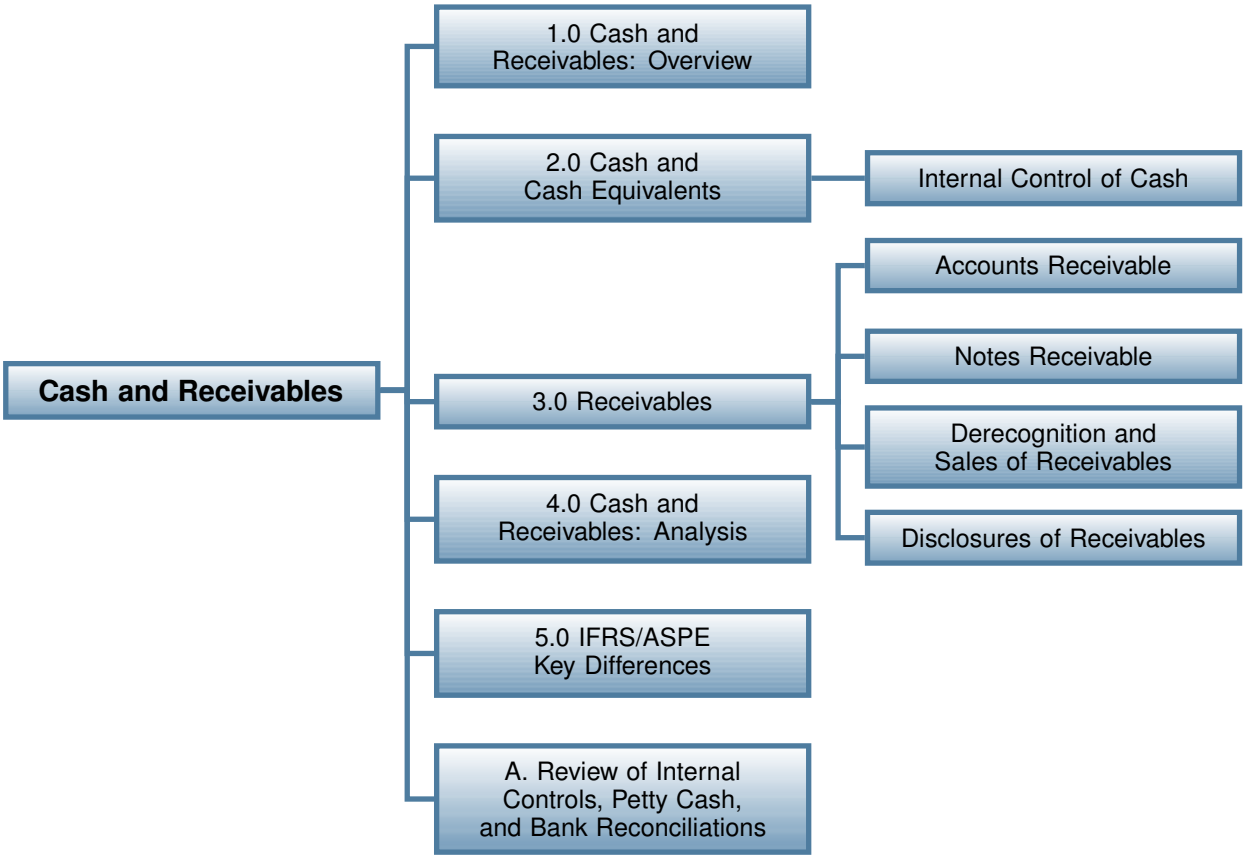
LO 4: Identify the different methods used to analyze cash and receivables.

LO 5: Explain the differences between IFRS and ASPE for recognition, measurement, and reporting for cash and receivables.

Introduction

As the opening story about Apple illustrates, actively managing cash and receivables has important implications for businesses. The time frame required to convert receivables to cash is a cycle that calls for regular monitoring. This chapter addresses how management uses financial reporting to regularly assess both the credit-to-cash cycle and its overall cash position in terms of **liquidity** (the availability of liquid assets to pay short-term obligations as they come due) or **solvency** (the ability to meet all maturing obligations as they come due). This chapter will focus on cash, cash equivalents, accounts receivable, and notes (loans) receivable. Each of these will be discussed in terms of their use in business: their recognition, measurement, reporting, and analysis.

Chapter Organization



6.1 Overview

Cash and receivables are **financial assets**. Specifically, cash, cash equivalents, accounts receivable, and notes receivable are all considered to be financial assets because they are either:

- Cash
- A **contractual right** to receive cash or another financial asset, from another entity (such as accounts and notes receivable).

A financial asset *derives* its value because of a **contractual right**, or **a claim for a** *determinable* **amount**. The physical paper that cash or receivables are printed on has no value by itself. Their real value is based on what they represent. For example, financial assets such as cash include foreign currencies because their value in Canadian dollars is *determinable* by applying the current exchange rate. Receivables result from the sale of goods and services on credit or through lendings, for which the amount has been fixed or known (determinable) at the time of the transaction. In contrast, the cash value is not known in advance for **non-financial assets** such as inventories and fixed assets because their cash value will depend on future market conditions.

Cash and receivables are also **monetary assets** because they represent a claim **to cash** where the amount is **fixed by contract**.

6.2 Cash and Cash Equivalents

Recognition, Measurement, and Disclosure

Cash is the most liquid of the financial assets and is the standard medium of exchange for most business transactions.

Cash is usually classified as a **current asset** and includes *unrestricted*:

- Coins and currency, including petty cash funds
- Bank accounts funds and deposits
- Negotiable instruments such as money orders, certified cheques, cashiers' cheques, personal cheques, bank drafts, and money market funds with chequing privileges.

Cash can be classified as a **long-term asset** if they are designated for specific purposes such as a plant expansion project, or a long-term debt retirement, or as collateral.

Petty cash funds are classified as cash because these funds are used to meet current operating expenses and to pay current liabilities as they come due. Even though petty cash has been set aside for a particular purpose, its balance is not material, so *it is included in the cash balance in the financial statements*.

Excluded from cash are:

- Post-dated cheques from customers and IOUs (informal letters of a promise to pay a debt), which are classified as receivables
- Travel advances granted to employees, which are classified as either receivables or prepaid expenses
- Postage stamps on hand, which are classified as either office supplies (asset) or prepaid expenses (asset)

Restricted Cash and Compensating Balances

Restricted cash and compensating balances are reported separately from regular cash if the amount is material. Any legally restricted cash balances are to be separately disclosed and reported as either a current asset or a long-term asset, depending on the length of time the cash is restricted and whether the restricted cash offsets a current or a long-term liability. In practice, many companies do not segregate restricted cash but disclose the restrictions through note disclosures.

A **compensating balance** is a minimum cash balance in a company's chequing or savings account as support for a loan borrowed from a bank (or other lending institution). By requiring a compensating balance, the bank can use the restricted funds that must remain on deposit to invest elsewhere resulting in a better rate of return to the bank than the stated interest rate (also called a face rate) of the loan itself.

Foreign Currencies

Many companies have bank accounts in other countries, especially if they are doing a lot of business in those countries. A company's foreign currency is reported in Canadian dollars at the exchange rate at the date of the balance sheet.

For example, if a company had cash holdings of US $85,000 during the year at a time when the exchange rate was US $1.00 = Cdn $1.05, at the end of the year when the exchange rate

had changed to US $1.00 = Cdn $1.11, the US cash balance would be reported on the balance sheet in Canadian funds as $94,350 ($85,000 $\times$ $1.11). Since the original transaction would have been recorded at Cdn $1.05, the adjusting entry would be for the difference in exchange rates since that time, or $5,100 ($85,000 $\times$ ($1.11 $-$ $1.05)):

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		5,100	
	Gain on foreign exchange			5,100
	(US $85,000 $\times$ ($1.11 $-$ $1.05))			

Usually, this cash is included in current assets. However, if the cash flow out of the country is restricted, the cash is treated in the accounts as restricted and reported separately.

Bank Overdrafts

Bank overdrafts (a negative bank balance) can be netted and reported with cash on the balance sheet if the overdraft is repayable on demand and there are other positive bank balances in the same bank for which the bank has legal right of access to settle the overdraft. Otherwise, bank overdrafts are to be reported separately as a current liability.

Cash Equivalents

Cash equivalents are short-term, highly liquid assets that can readily be converted into known amounts of cash and with little risk of price fluctuations. An example of a short-term cash equivalent asset would be one that matures in three months or less from the acquisition date. They may be considered as “near-cash,” but are not treated as cash because they can include a penalty to convert back to cash before they mature. Examples are treasury bills (T-bills), money market funds, short-term notes receivable, and guaranteed investment certificates (GICs). For companies using ASPE, equities investments are usually not reported as cash equivalents. For IFRS, preferred shares that are *acquired within three months of their specified redemption date* can be included as cash equivalents.

Disclosures of Cash and Cash Equivalents

Cash equivalents can be reported at their fair value, together with cash on the balance sheet. Fair value will be their cost at acquisition plus accrued interest to the date of the balance sheet.

Below is a partial balance sheet from **Orange Inc.** that shows cash and cash equivalents as at December 31, 2020 along with the corresponding notes:

CONSOLIDATED BALANCE SHEETS
(in millions)

	December 31 2020	December 31 2019
ASSETS:		
Current assets:		
Cash and cash equivalents	$ 18,050	$ 12,652
Short-term marketable securities	36,800	27,000

Financial Instruments

Cash Equivalents and Marketable Securities

All highly liquid investments with maturities of three months or less at the date of purchase are classified as cash equivalents and are combined and reported with Cash. Management determines the appropriate classification of its investments at the time of purchase and reevaluates the designations at each balance sheet date. For example, the Company classifies its marketable debt securities as either short term or long term based on each instrument's underlying contractual maturity date. If they have maturities of 12 months or less, they are classified as short term. Marketable debt securities with maturities greater than 12 months are classified as long term. The Company classifies its marketable equity securities, including mutual funds, as either short term or long term based on the nature of each security and its availability for use in current operations. The Company's marketable debt and equity securities are carried at fair value, with the unrealized gains and losses, reported either as net income or, net of taxes, as a component of shareholders' equity (IFRS 9). The cost of securities sold is based on the specific identification model. This will be discussed in more detail in Chapter 8, Investments.

Effective cash management includes strong internal controls and a strategy to invest any excess cash into short-term instruments that will provide a reasonable return in interest income but still be quickly convertible back into cash, if required.

Summary of Cash, Cash Equivalents, and Other Negotiable Instruments	
Asset Classification	**Description and Examples**
Cash (current asset)	Unrestricted: coins, currency, foreign currencies, petty cash, bank funds, money orders, cheques, and bank drafts
Cash equivalent (current asset)	Short-term commercial paper, maturing three months or less at acquisition, such as T-bills, money market funds, short-term notes receivable, GICs
Cash (long-term asset)	Cash funding set aside for plant expansion, or long-term debt retirement, or collateral

Cash (current or long-term asset)	Separate reporting for legally restricted cash and compensating bank balances
Receivables (current or long-term asset)	Post-dated cheques, IOUs, travel advances
Office supplies inventory (current asset)	Postage on hand
Bank indebtedness (current liability)	Bank overdraft accounts not offset by same bank positive balances

6.2.1 Internal Control of Cash

A key part of effective cash management is the internal control of cash. This topic was introduced in the introductory accounting course. Below are some highlights regarding internal control.

The purpose of effective financial controls is to:

- Protect assets
- Ensure reliable recognition, measurement, and reporting
- Promote efficient operations
- Encourage compliance with company policies and practices

The control of cash includes implementing internal controls over:

- The physical custody of cash on hand, including adequate levels of authority required for all cash-based transactions and activities
- The separation of duties regarding cash
- Maintaining adequate cash records, including petty cash and the preparation of regular bank reconciliations.

Controlling the physical custody of cash plays a key role in effective cash management. In the opening story, Apple consolidated its bank accounts to a more manageable number, converted its idle cash into less accessible commercial paper that earned interest, and implemented a robust financial reporting system that would provide reliable and timely information about its cash position.

Refer to 6.6 Appendix A: for a review of internal controls, petty cash, and bank reconciliations taken from an introductory financial accounting textbook.

6.3 Receivables

Receivables are asset accounts applicable to all amounts owing, unsettled transactions, or other monetary obligations owed to a company by its credit customers or debtors. These are contractual rights that have future benefits such as future cash flows to the company. These accounts can be classified as either a current asset, if the company expects them to be realized within one year or as a long-term asset, if longer than one year.

Typical receivable-related categories include:

- **Accounts (trade) receivable**—amounts owed by customers for goods or services sold by a company on credit in the normal course of business. The transaction document is typically called an **invoice**.
- **Notes receivable**—more formal, unconditional written promises to pay a specified amount of money on a specified future date or on demand. The transaction document is usually referred to as a **promissory note**.
- **Non-trade receivable**—arise from any number of other sources such as income tax refunds, GST/HST taxes receivable, amounts due from the sale of assets, insurance claims, advances to employees, amounts due from officers, and dividends receivable. These are generally classified and reported as separate items in the balance sheet or in a note that is cross-referenced to the balance sheet statement.

The illustration below shows a portion of the balance sheet for cash and cash equivalents and various receivables on the financial statements:

Consolidated Balance Sheet
As of December 31, 2020 and 2019
(In millions of dollars except share amounts)

	2020	2019
ASSETS		
Cash and cash equivalents	3,500	4,200
Marketable securities	1,500	1,400
Receivables from affiliates	30	60
Trade accounts and notes receivables (net)	3,800	3,800
Financing receivables (net)	25,500	22,200
Financing receivables, securitized (net)	4,200	3,200
Other receivables	1,000	1,500
Operating leases receivables (net)	3,000	2,500

Receivables Management

It is important to consider carefully how to manage and control accounts receivable balances. If credit policies are too restrictive, potential sales could be lost to competitors. If credit policies are too flexible, more sales to higher risk customers may occur, resulting in more uncollectible accounts. The bottom line is that receivables management is about finding the right level of receivables to maintain when implementing the company's credit policies.

As part of a credit assessment process, companies will initially assess the individual creditworthiness of new customers and grant them a credit limit consistent with the level of assessed **credit risk**. After the initial assessment, a customer's payment history will affect whether their credit limit will change or be revoked.

To lessen the risk of uncollectible accounts and improve cash flows, some companies will adopt a policy that offers:

- Cash discounts to encourage cash sales
- Sales discounts to encourage faster payments of amounts owing on credit
- Late payment interest charges for any overdue accounts

Other management strategies can be implemented to shorten the receivables to cash cycle. In addition to the discounts or late payment fees listed above, small- and medium-sized companies may decide to sell their accounts receivable to financial intermediaries (factors). This will convert the receivables into cash more quickly than if they waited for customers to pay. Larger companies may rely on another way of selling receivables, called **securitization**. This will be discussed later in this chapter.

Receivables management involves developing sound business practices for overall monitoring as well as early detection of potential uncollectible accounts. Key activities include:

- Regular analysis of aged accounts receivable
- Regularly scheduled assessments and follow up on overdue accounts

6.3.1 Accounts Receivable

Recognition and Measurement of Accounts Receivable

Accounts receivable result from credit sales in the normal course of business (called trade receivables) that are expected to be collected within one year. For this reason, they are

classified as current receivables on the balance sheet and initially measured at the time of the credit sale at their net realizable value (NRV). **Net realizable value (NRV)** is the amount expected to be received from the customer. IFRS and ASPE standards both allow NRV to approximate the fair value, since the interest component is immaterial when determining the present value of cash flows for short-term accounts receivable. In subsequent accounting periods, accounts receivable are to be measured at their amortized cost which is the same as cost, since there is no present value interest component to recognize. For long-term notes and loans receivable that have an interest component, the asset's carrying amount is measured at amortized cost which will be described later in this chapter.

The valuation of the account receivable is also affected by:

- Trade and sales discounts
- Sales returns and allowances

Trade Discounts

Manufacturers and wholesalers publish catalogues with inventory and sales prices to assist purchasers with their purchases. Catalogues are expensive to publish, so this is only done from time to time. Sellers often offer **trade discounts** to customers to adjust the sales prices of items listed in the catalogue. This can be an incentive to purchase larger quantities, as a benefit of being a preferred customer or because costs to produce the items for sale have changed.

Since the catalogue, or list, price is not intended to reflect the actual selling price, the seller records the net amount after the trade discount is applied. For example, if a plumbing manufacturer has a catalogue or list price of $1000 for a bathtub and sells it to a plumbing retailer for list price less a 20% trade discount, the sale and corresponding account receivable recorded by the manufacturer is $800 per bathtub.

Sales Discounts

Sales discounts can be part of the credit terms for customers and are offered to encourage faster payment of the account. The credit term *1.5/10, n/30* means there is a 1.5% discount if the invoice is paid within ten days with the total amount owed due in thirty days.

Companies purchasing goods and services that do not take advantage of the sales discounts are usually not using their cash as effectively as they could. For example, a purchaser who fails to take the 1.5% reduction offered for payment within ten days for an account due in thirty days is equivalent to missing a stated annual interest rate return on their cash for 27.38%

(365 days ÷ 20 days × 1.5%). For this reason, companies usually pay within the discount period unless their available cash is insufficient to take advantage of the opportunity.

IFRS 15.53 – the term *variable consideration*, discussed in Chapter 5, Revenue, would also include sales discounts because it is uncertain how many customers will actually take the sales discount. For this reason, IFRS states that an estimate of "highly probable" sales discounts expected to be taken by customers, needs to be determined and included at the time of the sale. Given the high rate of return identified in the preceding paragraph, recording the estimate immediately upon sale is conceptually sound and is consistent with the net method described below. The standard suggests using either the expected value (a weighted average of probabilities), or the "most likely amount" to estimate sales discounts, perhaps based on past history.

To illustrate the net method, assume that Cramer Plumbing sells fifty bathtubs to a reseller for $800 each, for a total sale of $40,000, with credit terms of 1.5/10, n/30. Using the net method, Cramer expects that the sales discount will be taken by the purchaser; therefore, Cramer Plumbing will record the following entry:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts receivable		39,400	
	Sales revenue			39,400
	($800 × 50 units × 98.5)			

Note the reduction due to the sales discount is immediately recorded upon the sale. This results in the accounts receivable being valued at its net realizable value and based on Cramer's "more likely than not" estimate of sales discounts expected to be taken, which is consistent with IFRS 15.53.

If $10,000 of the account receivable is collected from the reseller within the ten-day discount period (for a cash amount of $9,850), the entry would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		9,850	
	Accounts receivable			9,850
	($10,000 × 1.5%)			

The entry for collection of the remaining amount owing for $30,000 after the discount period is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		30,000	
	Sales discounts forfeited			450
	Accounts receivable			29,550
	For Sales discount forfeited: ($30,000 × 1.5%)			

As can be seen above, the net method records and values the accounts receivable at its lowest, or net realizable value of $39,400, or gross sales for $40,000 less the 1.5% discount.

The gross method is much easier and ASPE can choose either method. For the **gross method**, sales are recorded at the gross amount with no discount taken. If the customer pays within the discount period, the applicable discount taken is recorded to a sales discounts account. Any payments made after the discount period are simply the cash amount collected and no calculation for the sales discounts forfeited is required.

Using the same example, assume that Cramer Plumbing sells fifty bathtubs for $800 each, with credit terms of 1.5/10, n/30. Using the gross method, the entry for the sale is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts receivable		40,000	
	Sales revenue			40,000
	($800 × 50 units)			

The entry on collection of $10,000 within the ten-day discount period is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		9,850	
	Sales discounts		150	
	Accounts receivable			10,000
	For Sales discounts (a contra sales revenue account): ($10,000 × 1.5%)			

The entry on collection of the remaining $30,000 after the discount period is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		30,000	
	Accounts receivable			30,000

Note how the accounts receivable would not be reported at its net realizable value with this method. If discounts are significant, this would overstate accounts receivable and sales in

the financial statements. For this reason, if the gross method is used and it is expected that significant cash discounts are likely to be taken by customers in the fiscal year, an **asset valuation account and an adjusting entry** is required to ensure that accounts receivable, net of the valuation account, will reflect its net realizable value.

At year-end, assume that $6 million of Cramer's accounts receivable all have terms of 1.5/10, n/30, and management expects that 60% of these accounts will be collected within the discount period, which it deems to be significant. The unadjusted balance in the **allowance for sales discounts** account (a contra account to accounts receivable) is $3,000 credit balance. The year-end adjusting entry to update the accounts receivable allowance account with the *estimated* sales discounts would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Sales discounts		51,000	
	Allowance for sales discounts			51,000
	(($6,000,000 × 1.5% × 60%) − $3,000). (Allowance for sales discounts is a contra accounts receivable account)			

Throughout the following year, the allowance account can be directly debited each time customers take the discounts and is adjusted up or down at the end of each reporting period.

 A video is available on the Lyryx site. Click here to watch the video.

Sales Returns and Allowances

Many ASPE companies have policies that allow for the return of goods under certain circumstances and will refund all or a partial amount of the returned item's cost.

Assuming that returns for this company are insignificant, the entry for a $1,000 sales return on account (with a cost $800) returned to inventory, for a company using a perpetual inventory system, would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Inventory		800	
	COGS			800
	Sales returns and allowances		1,000	
	Accounts receivable.....			1,000
	(Sales returns and allowances is a contra sales revenue account)			

Sales allowances are reductions in the selling price for goods sold to customers, perhaps due to damaged goods that the customer is willing to keep if the sales price is reduced sufficiently.

For example, if a sales allowance of $2,000 is granted due to damaged goods that the customer chose to keep, the entry, assuming sales allowances for this company are insignificant, would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Sales returns and allowances		2,000	
	Accounts receivable or cash			2,000
	(Sales returns and allowances is a contra sales revenue account)			

As was done with sales discounts, sales returns and allowances should be recognized in the period of the sale to avoid overstating accounts receivable and sales. Sales returns and allowances are therefore estimated and adjusted at the end of each reporting period. If the amount of returns and allowances is not material a year-end adjusting entry is not required and the entries shown above would be sufficient, provided that it is handled consistently from year to year. If returns and allowances are significant, an **allowance for sales returns and allowances** account, which is an asset valuation account contra to accounts receivable, is used to record the estimates.

For example, management estimates the total sales returns and allowances to be $51,500, which it deems to be significant. If the company follows ASPE, and the unadjusted balance in the **allowance for sales returns and allowances** account is $5,000 credit balance, the year-end adjusting entry would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Sales returns and allowances		46,500	
	Allowance for sales returns and allowances ($51,500 − $5,000) (Sales returns and allowances is a contra sales revenue account and Allowance for sales returns and allowances is a contra accounts receivable account)			46,500

Note how another contra account, the **sales returns and allowances** account, is used to record the debit entry for the previous two journal entries above. Its purpose is to track returns and allowances transactions separately, as opposed to directly recording them as a debit to sales. If amounts in this contra account become too high, it could indicate to management the possibility of future sales lost due to unsatisfied customers.

During the reporting period, the **allowance for sales returns and allowances** asset valuation account can be directly debited each time customers are granted returns or allowances. This

asset valuation account will subsequently be adjusted up or down at the end of each reporting period.

Sales with right of return under IFRS has been discussed in Section 5.3.3, Sales With Right of Return, where a detailed example is presented.

Estimating Allowance for Uncollectible Accounts

When accounts receivables exist, some amounts of uncollectible receivables are inevitable due to **credit risk**. This risk is the likelihood of loss due to customers not paying their amounts owing. If the uncollectible amounts are both likely and can be estimated, an amount for uncollectible accounts must be estimated and recognized in the accounts to ensure that accounts receivable and net income are not overstated over the lifetime of the accounts receivable (IFRS 9; lifetime expected credit losses). The allowance account, called the allowance for doubtful accounts (AFDA), is an asset valuation account (contra account to accounts receivable), which is used the same way as the Allowance for Sales Discounts discussed earlier.

Many companies set their credit policies to allow for a certain percentage of uncollectible accounts. This is to ensure that the credit policy is not too restrictive or liberal, as explained in the opening paragraph of the Receivables Management section of this chapter.

Measuring uncollectible amounts at the end of each reporting period involves estimates that can be calculated using several methods:

- Percentage of accounts receivable method
- Accounts receivable aging method
- Credit sales method
- Mix of methods

The first three methods were covered in the introductory accounting course. Below is a review of these methods. The mix of methods is perhaps a more realistic view of how companies estimate bad debt expense over a reporting period.

For each method above, management estimates a percentage that will represent the likelihood of collectability. The estimated total amount of uncollectible accounts is calculated and usually recorded to the AFDA allowance account, with the offsetting entry to **bad debt** expense. The net amount for accounts receivable and its contra account, the AFDA, reflects the **net realizable value of the accounts receivable at the reporting date**.

Percentage of Accounts Receivable Method

For this method, the accounts receivable closing balance is multiplied by the percentage that management estimates is uncollectible. This method is based on the premise that some portion of *accounts receivable* will be uncollectible, and management uses reasonably available and supportable information (IFRS 9) regarding past experiences, current economic conditions, and expected future conditions as a guide to the percentage used. For this reason, the estimated amount of uncollectible accounts is to be *equal to the adjusted ending balance of the AFDA*. The adjusting entry amount must therefore be the amount required that results in that ending balance of the AFDA.

For example, assume that accounts receivable and the AFDA ending balances were $200,000 debit and $2,500 credit balances respectively at December 31, and the uncollectible accounts is estimated to be 4% of accounts receivable. This means that the AFDA adjusted ending *balance* is estimated to be the amount equal to 4% of $200,000, or $8,000. The adjusting entry to achieve the correct AFDA adjusted ending balance of $8,000 would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Bad debt expense		5,500	
	Allowance for doubtful accounts			5,500
	(($200,000 × 4%) − $2,500)			

The AFDA ending balance after the adjusting entry would correctly be $8,000 ($2,500 unadjusted balance + $5,500 adjusting entry).

Sometimes the AFDA ending balance can be in a temporary debit balance due to a write-off of an uncollectible account during the period. If this is the case, care must be taken to make the correct calculations for the adjusting entry. For the example above, if the unadjusted AFDA balance was a $300 debit balance, then the adjusting entry for uncollectible accounts would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Bad debt expense		8,300	
	Allowance for doubtful accounts			8,300
	(($200,000 × 4%) + 300)			

The AFDA ending balance after the adjusting entry would correctly be $8,000 ($300 debit + $8,300 credit).

Notice that the AFDA ending balance of $8,000 is the same for both examples when applying the percentage of accounts receivable method. This is because the calculation is intended to be an estimate of the AFDA *ending balance*, so the adjustment amount is whatever is required to result in that ending balance.

Accounts Receivable Aging Method

Typically, the older the uncollected account, the more likely it is to be uncollectible. Following this premise, the accounts receivable are grouped into categories based on the length of time they have been outstanding.

Just as was done for the percentage of accounts receivable method above, companies will use past experience to estimate the percentage of their outstanding receivables that will become uncollectible for each aged group, such as the four aging groups identified in the schedule below. The sum of all the estimated uncollectible amounts by group represents the total estimated uncollectible accounts. Just like the percentage of accounts receivable method previously discussed, the estimated amount of uncollectible accounts using this method is to be equal to the *ending balance of the AFDA account*. The adjusting entry amount must therefore be whatever amount is required to result in this ending balance.

Aging schedules are also a good indicator of which accounts may need additional attention by management, due to their higher credit risk group, such as the length of time the account has been outstanding or overdue.

Below is an example of an accounts receivable aging schedule:

Taylor and Company
Aging Schedule
As at December 31, 2020

Customer	Balance Dec 31, 2020	Under 60 days	61–90 days	91–120 days	Over 120 days
Abigail Holdings	$3,500	$1,500	$2,000		
Beaver Industries Inc.	45,000	25,000	8,500	$6,500	$5,000
Cambridge Instruments Co.	18,000				18,000
Dereck Station Ltd.	25,000	25,000			
Falling Gate Repair	6,840		6,840		
Gladstone Walkways Corp.	26,000	26,000			
⋮		⋮	⋮		⋮
Tremsol Cladding Inc.	15,000	10,000	4,000	1,000	
Warbling Water Pond Installations	6,480	1,480			5,000
	$186,480	$124,050	$22,300	$22,130	$18,000
Percent estimated uncollectible		5%	10%	15%	35%
Total Allowance for uncollectible accounts ending balance	$18,053	$6,203	$2,230	$3,320	$6,300

The analysis above indicates that Taylor and Company expects to receive $186,480 less $18,053, or $168,427 net cash receipts from the December 31 amounts owed. The $168,427 represents the company's estimated **net realizable value** of its accounts receivable and this amount would be reported as the net accounts receivable in the balance sheet as at December 31.

Assuming the data above for Taylor and Company and an unadjusted AFDA credit balance as

at December 31 of $2,500, the adjusting entry for uncollectible accounts would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Bad debt expense		15,553	
	Allowance for doubtful accounts			15,553
	($18,053 − $2,500)			

As was illustrated for the percentage of accounts receivable method above, the calculation of the adjusting entry amount must consider whether the unadjusted AFDA balance is a **debit** or **credit amount**.

Credit Sales Method

This is the easiest method to apply. The amount of credit sales (or total sales, if credit sales are not determinable) is multiplied by the percentage that management estimates is uncollectible. Factors to consider when determining the percentage amount to use will be trends resulting from amounts of uncollectible accounts in proportion to credit sales experienced in the past. The resulting amount is credited to the AFDA account and debited to bad debt expense.

Note that for this method, the previous balance in the AFDA account is *not* taken into consideration. This is because the credit sales method is intended to calculate the bad debt expense that will be reported in the income statement. This is a fast and simple way to estimate bad debt expense because the amount of sales (or preferably credit sales) is known and readily available. This method also illustrates proper matching of expenses with revenues earned over that reporting period.

For example, if credit sales were $325,000 at the end of the period and the uncollectible accounts was estimated to be 3% of credit sales, the entry would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Bad debt expense		9,750	
	Allowance for doubtful accounts			9,750
	($325,000 × 3%) (Allowance for doubtful accounts is a contra accounts receivable account)			

Mix of Methods

Often companies will use the percentage of credit sales method to adjust the net accounts receivables for interim (monthly) financial reporting purposes because it is easy to apply. At the end of the year, either the percentage of accounts receivable or aging accounts receivable method is used for purposes of preparing the year-end financial statements so that the AFDA account is adjusted accordingly, and reported on the balance sheet.

Below is a partial balance sheet for Taylor and Company using the data from the Accounts Receivable Aging Method section above:

Taylor and Company
Balance Sheet
December 31, 2020

Current assets:	
Accounts receivable	$186,480
Less: Allowance for doubtful accounts	18,053
	$168,427

To summarize, the $186,480 represents the total amount of trade accounts receivables owing from all the credit customers at the reporting date of December 31, 2020. The $18,053 represents the estimated amount of uncollectible accounts calculated using the allowance method, the percentage of sales method, or a mix of methods. The $168,427 represents the net realizable value (NRV) of the receivable at the reporting date.

 A video is available on the Lyryx site. Click here to watch the video.

Write-offs and Collections

Write-off of an Actual Uncollectible Account

Management may deem that a customer's account is uncollectible and may wish to remove the account balance from accounts receivable with the offsetting entry to the allowance for doubtful accounts. For example, using the data for Taylor and Company shown under the accounts receivable aging method, assume that management wishes to remove the account for Cambridge Instruments Co. of $18,000 because it remains unpaid despite efforts to collect the account. The entry to remove the account from the accounting records is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Allowance for doubtful accounts		18,000	
	Accounts receivable			18,000

Because the AFDA is a contra account to accounts receivable, and both have been reduced by identical amounts, there is no effect on the net accounts receivable (NRV) on the balance sheet. This treatment and entry makes sense because the estimate for uncollectible accounts adjusting entry (with a debit to bad debt expense) had already been done using one of the allowance methods discussed earlier. The purpose of the write-off entry is to simply remove the account from the accounting records.

Collection of a Previously Written-off Account

Even though management at Taylor and Company thinks that the collection of the $18,000 account has become unlikely, this does not mean that the company will make no further efforts to collect the amount outstanding from the purchaser. During the tough economic times in 2009 and onward, many companies were in such financial distress that they were simply unable to pay their amounts owing. Many of their accounts had to be written-off by suppliers during that time as companies struggled to survive the crisis. Some of these companies recovered through good management, and cash flows returned. It is important for these companies to rebuild their relationships with suppliers they had previously not paid. So, it is not uncommon for these companies, after recovery, to make efforts to pay bills that the supplier had previously written-off.

As a result, a supplier may be fortunate enough to receive some or all of a previously written-off account from a customer. When this happens, a two-step process accounts for the payment:

1. Reinstate the account receivable amount being paid by reversing the previous write-off entry for an amount equal to the payment now received.
2. Record the cash received as a collection of the accounts receivable amount reinstated in the first entry.

If Cambridge Instruments Co. pays $5,000 cash and indicates that this is all that the company can pay of the original $18,000, the entry would be:

Step 1: Reinstate the account receivable upon receipt of cash (reversing a portion of the write-off entry):

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Accounts receivable		5,000	
	Allowance for doubtful accounts			5,000

Step 2: Record the receipt of cash on account from Cambridge Instruments:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		5,000	
	Accounts receivable			5,000

Summary of Transactions and Adjusting Entries

An understanding of the relationships between the accounts receivable and the AFDA accounts and the types of transactions that affect them are important for sound accounts analysis. Below is an overview of some of the types of transactions that affect these accounts:

Transaction or Adjusting Entry:		Accounts Receivable			Allowance for Doubtful Accounts	
		Debit	Credit		Debit	Credit
Opening balance, assuming accounts have normal balances	1)	$$		1)		$$
Sale on account	2)	$$		2)		
Cash receipts	3)		$$	3)		
Customer account written-off	4)		$$	4)	$$	
Reinstatement of account previously written-off	5)	$$		5)		$$
Subtotal						
End of period adjustment for uncollectible accounts (debit to bad debt expense)	6)			6)		$$
Closing balance, end of period		$$				$$

Direct Write-off of Uncollectible Accounts

Some smaller companies may only have a few credit sales transactions and small accounts receivable balances. These companies usually use the simpler direct write-off method because the amount of uncollectible accounts is deemed to be immaterial. This means that when a specific customer account is determined to be uncollectible, the account receivable for that customer account is written-off with the debit entry recorded to bad debt expense as shown in the following entry:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Bad debt expense		$$	
	Accounts receivable, S. Smith			$$

If the uncollectible account written-off is subsequently collected at some later date, the entry would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		$$	
	Bad debt expense or uncollectible amount recovered, S. Smith (Income statement)			$$

If the uncollectible amounts were material, it would not be appropriate to use the direct write-off method, for many reasons:

- Without an estimate for uncollectible accounts, net account receivables would be reported at an amount higher than their net realizable value.
- The write-off of the uncollectible account will likely occur in a different year than the sale, which will create over- and under-statements of net income over the affected years resulting in non-compliance of the matching principle.
- Direct write-off creates an opportunity to manipulate asset amounts and net income. For example, management might delay a direct write-off to keep net income high artificially if this will favourably affect a bonus payment.

This section of the chapter is intended to be a summary overview of the methods and entries used to estimate and write-off uncollectible accounts originally covered in detail in the introductory accounting course. Students may wish to review those learning concepts from that course.

6.3.2 Notes Receivable

Recognition and Measurement of Notes Receivable

A note receivable is an unconditional written promise to pay a specific sum of money on demand or on a defined future date and is supported by a formal written promissory note. For this reason, notes are **negotiable instruments** the same as cheques and bank drafts.

Notes receivable can arise due to loans, advances to employees, or from higher-risk customers who need to extend the payment period of an outstanding account receivable. Notes can also be used for sales of property, plant, and equipment or for exchanges of long-term assets. Notes arising from loans usually identify collateral security in the form of assets of the borrower that the lender can seize if the note is not paid at the maturity date.

Notes may be referred to as interest-bearing or non-interest-bearing:

- Interest-bearing notes have a stated rate of interest that is payable in addition to the face value of the note.
- Notes with stated rates below the market rates or zero- or non-interest-bearing notes may or may not have a stated rate of interest. This is usually done to encourage sales. However, there is always an *interest component* embedded in the note, and that amount will be equal to the difference between the amount that was borrowed and the amount that will be repaid.

Notes may also be classified as short-term (current) assets or long-term assets on the balance sheet:

- Current assets: short-term notes that become due within the next twelve months (or within the business's operating cycle if greater than twelve months);
- Long-term assets: notes are notes with due dates greater than one year.

Cash payments can be interest-only with the principal portion payable at the end or a mix of interest and principal throughout the term of the note.

Notes receivable are initially recognized at the fair value on the date that the note is legally executed (usually upon signing). Subsequent valuation is measured at amortized cost.

Transaction Costs

It is common for notes to incur transactions costs, especially if the note receivable is acquired using a broker, who will charge a commission for their services. For a company using either ASPE or IFRS, the transaction costs associated with financial assets such as notes receivable that are carried at amortized cost are to be *capitalized* which means that the costs are to be added to the asset's fair value of the note at acquisition and subsequently included with any discount or premium and amortized over the term of the note.

Short-Term Notes Receivable

When notes receivable have terms of less than one year, accounting for short-term notes is relatively straight forward as discussed below.

Calculating the Maturity Date

Knowing the correct maturity date will have an impact on when to record the entry for the note and how to calculate the correct interest amount throughout the note's life. For example, to calculate the maturity date of a ninety-day note dated March 14, 2020:

Total days in March	31
Minus date of note	14
Days in March	17
Days in April	30
Days in May	31
Days in June to equal 90 days	12
Period of note	90

Maturity date is June 12, 2020

For example, assume that on March 14, 2020, Ripple Stream Co. accepted a ninety-day, 8% note of $5,000 in exchange for extending the payment period of an outstanding account receivable of the same value. Ripple's entry to record the acceptance of the note that will replace the accounts receivable is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Mar 14	Notes receivable		5,000	
	Accounts receivable			5,000

The entry for payment of the note ninety days at maturity on June 12 would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jun 12	Cash		5,098.63	
	Notes receivable			5,000.00
	Interest income			98.63
	For Interest income: ($5,000 × .08 × 90 ÷ 365)			

In the example above, if financial statements are prepared during the time that the note receivable is outstanding, interest will be accrued to the reporting date of the balance sheet. For example, if Ripple's year-end were April 30, the entry to accrue interest from March 14 to April 30 would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Apr 30	Interest receivable		51.51	
	Interest income			51.51
	($5,000 × .08 × 47 ÷ 365) (Mar 31 − 14 = 17 days + Apr = 30 days)			

When the cash payment occurs at maturity on June 12, the entry would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jun 12	Cash		5,098.63	
	Interest receivable			51.51
	Notes receivable			5,000.00
	Interest income			47.12
	For Interest income: (($5,000 × .08 × 90 ÷ 365) − $51.51)			

The interest calculation will differ slightly had the note been stated in months instead of days. For example, assume that on January 1, Ripple Stream accepted a **three-month (instead of a ninety-day)**, 8%, note in exchange for the outstanding accounts receivable. If Ripple's year-end was March 31, the interest accrual would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Mar 31	Interest receivable		100.00	
	Interest income			100.00
	($5,000 × .08 × 3 ÷ 12)			

Note the difference in the interest calculation between the ninety-day and the three-month notes recorded above. The interest amounts differ slightly between the two calculations because the ninety-day note uses a 90/365 ratio (or 24.6575% for a total amount of $98.63) while the three-month note uses a 3/12 ratio (or 25% for a total of $100.00).

Receivables, Interest, and the Time Value of Money

All financial assets are to be measured initially at their fair value which is calculated as the **present value** amount of future cash receipts. But what is present value? It is a **discounted cash flow** concept, which is explained next.

It is common knowledge that money deposited in a savings account will earn interest, or money borrowed from a bank will accrue interest payable to the bank. The present value of a note receivable is therefore the amount that you would need to deposit *today*, at a given rate of interest, which will result in a specified future amount at maturity. The cash flow is discounted to a lesser sum that eliminates the interest component—hence the term *discounted* cash flow.

The future amount can be a single payment at the date of maturity or a series of payments over future time periods or some combination of both. Put into context for receivables, if a company must wait until a future date to receive the payment for its receivable, the receivable's face value at maturity will not be an exact measure of its fair value on the date the note is legally executed because of the embedded interest component.

For example, assume that a company makes a sale on account for $5,000 and receives a $5,000, six-month note receivable in exchange. The face value of the note is therefore $5,000. If the market rate of interest is 9%, or its value without the interest component, is $4,780.79 and not $5,000. The $4,780.79 is the amount that if deposited today at an interest rate of 9% would equal $5,000 at the end of six months. Using an equation, the note can be expressed as:

(0 PMT, .75% I/Y, 6 N, 5000 FV)

Where I/Y is interest of .75% each month (9%/12 months) for six months.

N is for interest compounded each month for six months.

FV is the payment at the end of six months' time (future value) of $5,000.

To summarize, the discounted amount of $4,780.79 is the fair value of the $5,000 note at the time of the sale, and the additional amount received after the sale of $219.21 ($5,000.00 − $4,780.79) is interest income earned over the term of the note (six months). However, for any receivables due in less than one year, this interest income component is usually insignificant. For this reason, both IFRS and ASPE allow **net realizable value** (the net amount expected to be received in cash) to approximate the fair value for short-term notes receivables that mature within one year. So, in the example above, the $5,000 face value of the six-month note will be equivalent to the fair value and will be the amount reported, net of any estimated uncollectability (i.e. net realizable value), on the balance sheet until payment is received. However, for notes with maturity dates greater than one year, fair values are to be determined at their discounted cash flow or present value, which will be discussed next.

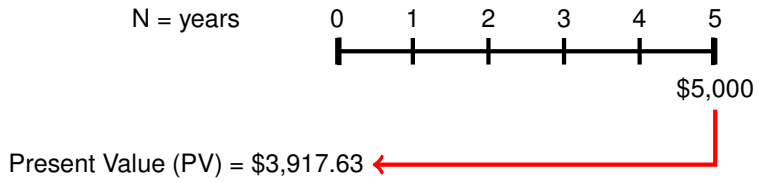
Long-Term Notes Receivable

The difference between a short-term note and a long-term note is the length of time to maturity. As the length of time to maturity of the note increases, the interest component becomes increasingly more significant. As a result, any notes receivable that are greater than one year to maturity are classified as long-term notes and require the use of **present values** to estimate their fair value at the time of issuance. After issuance, long-term notes receivable are measured at **amortized cost**. Determining present values requires an analysis of cash flows using interest rates and time lines, as illustrated next.

Present Values and Time Lines

The following timelines will illustrate how present value using discounted cash flows works. Below are three different scenarios:

1. Assume that on January 1, Maxwell lends some money in exchange for a $5,000, five-year note, payable as a lump-sum at the end of five years. The market rate of interest is 5%. Maxwell's year-end is December 31. The first step is to identify the amount(s) and timing of all the cash flows as illustrated below on the timeline. The amount of money that Maxwell would be willing to lend the borrower using the present value calculation of the cash flows would be $3,917.63 as follows:

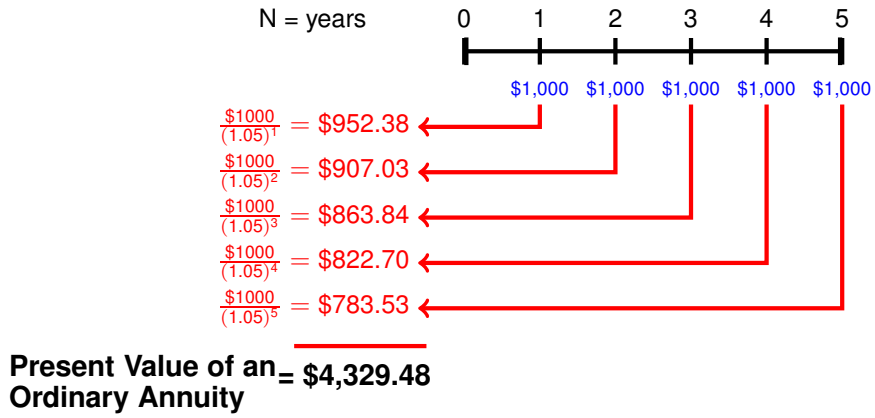


PV = (0 PMT, 5 I/Y, 5 N, 5000 FV)
where I/Y is interest
N is # of periods
FV is future value

In this case, Maxwell will be willing to lend $3,917.63 today in exchange for a payment of $5,000 at the end of five years at an interest rate of 5% per annum. The entry for the note receivable at the date of issuance would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 1	Notes receivable		3,917.63	
	Cash			3,917.63

2. Now assume that on January 1, Maxwell lends an amount of money in exchange for a $5,000, five-year note. The market rate of interest is 5%. The repayment of the note is payments of $1,000 **at the end of each year** for the next five years (present value of an **ordinary annuity**). The amount of money that Maxwell would be willing to lend the borrower using the present value calculation of the cash flows would be $4,329.48 as follows:



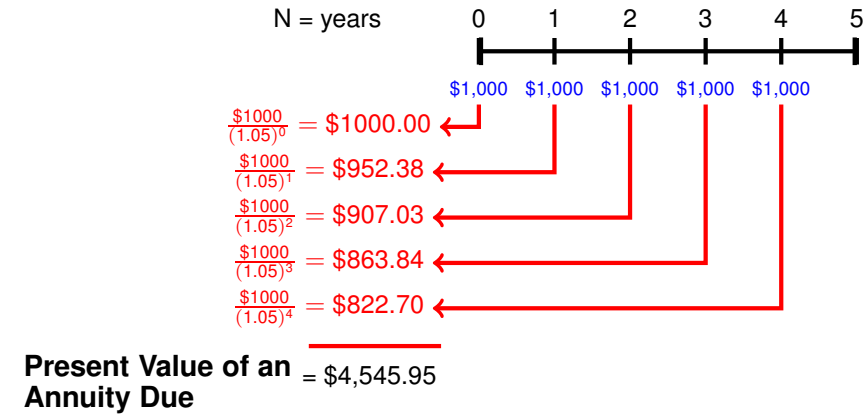
PV = (1000 PMT, 5 I/Y, 5 N, 0 FV)
where PMT is the payment amount
I/Y is the interest
N is the # of periods
FV is the single payment at maturity.

The entry for the note receivable would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 1	Notes receivable		4,329.48	
	Cash			4,329.48

Note that Maxwell is willing to lend more money ($4,329.48 compared to $3,917.63) to the borrower in this example. Another way of looking at it is that the interest component embedded in the note is less for this example. This makes sense because the principal amount of the note is being reduced over its five-year life because of the yearly payments of $1,000.

3. How would the amount of the loan and the entries above differ if Maxwell received five equal payments of $1,000 **at the beginning of each year** (present value of an **annuity due**) instead of at the end of each year as shown in scenario 2 above? The amount of money that Maxwell would be willing to lend using the present value calculation of the cash flows would be $4,545.95 as follows:



PV = (1000 P/AD, 5 I/Y, 5 N, 0 FV)
where P/AD is the payment at the beginning of the period
I/Y is interest
N is # of periods
FV is a single payment at maturity.

The entry for the note receivable would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 1	Notes receivable		4,545.95	
	Cash			4,545.95

Again, the interest component will be less because a payment is paid immediately upon execution of the note, which causes the principal amount to be reduced sooner than a payment made at the end of each year.

Below is a comparison of the three scenarios:

	Scenario 1 Single payment at maturity	Scenario 2 Five payments of $1,000 at the end of each month	Scenario 3 Five payments of $1,000 at the beginning of each month
Face value of the note	$5,000	$5,000	$5,000
Less: present value of the note	3,918	4,329	4,546
Interest component	$1,082	$671	$454

Note that the interest component decreases for each of the scenarios even though the total cash repaid is $5,000 in each case. This is due to the *timing* of the cash flows as discussed earlier. In scenario 1, the principal is not reduced until maturity and interest would accrue over the full five years of the note. For scenario 2, the principal is being reduced on an annual

basis, but the payment is not made until the end of each year. For scenario 3, there is an immediate reduction of principal due to the first payment of $1,000 upon issuance of the note. The remaining four payments are made at the beginning instead of at the end of each year. This results in a reduction in the principal amount owing upon which the interest is calculated.

This is the same concept as a mortgage owing for a house, where it is commonly stated by financial advisors that a mortgage payment split and paid every half-month instead of a single payment once per month will result in a significant reduction in interest costs over the term of the mortgage. The bottom line is: If there is less principal amount owing at any time over the life of a note, there will be less interest charged.

Present Values with Unknown Variables

As is the case with any algebraic equation, if all variables except one are known, the final unknown variable can be determined. For present value calculations, if any four of the five variables in the following equation

PV = (PMT, I/Y, N, FV)

are known, the fifth "unknown" variable amount can be determined using a business calculator or an Excel net present value function. For example, if the interest rate (I/Y) is not known, it can be derived if all the other variables in the equation are known. This will be illustrated when non-interest-bearing long-term notes receivable are discussed later in this chapter.

Present Values when Stated Interest Rates are Different than Effective (Market) Interest Rates

Differences between the stated interest rate (or face rate) and the effective (or market) rate at the time a note is issued can have accounting consequences as follows:

- If the stated interest rate of the note (which is the interest rate that the note pays) is 10% at a time when the effective interest rate (also called the market rate, or yield) is 10% for notes with similar characteristics and risk, the note is initially recognized as:

  face value = fair value = present value of the note

  This makes intuitive sense since the stated rate of 10% is equal to the market rate of 10%.

- If the stated interest rate is 10% and the market rate is 11%, the stated rate is **lower** than the market rate and the note is trading at a **discount**.

  If stated rate **lower than market** ⟶ Present value **lower** ⟶ Difference is a **discount**

- If the stated interest rate is 10% and the market rate is 9%, the stated rate is **higher** than the market rate and the note is trading at a **premium**.

If stated rate **higher than market** ⟶ Present value **higher** ⟶ Difference is a **premium**

The premium or discount amount is to be amortized over the term of the note. Below are the acceptable methods to amortize discounts or premiums:

- If a company follows IFRS, the **effective interest method** of amortization is required (discussed in the next section).
- If a company follows ASPE, the amortization method is not specified, so either straight-line amortization or the effective interest method is appropriate as an accounting policy choice.

Long-Term Notes, Subsequent Measurement

Under IFRS and ASPE, long-term notes receivable that are held for their cash flows of principal and interest are subsequently accounted for at amortized cost, which is calculated as:

- Amount recognized when initially acquired (present value) including any transaction costs such as commissions or fees
- Plus interest and minus any principal collections/receipts. Payments can also be blended interest and principal.
- Plus amortization of discount or minus amortization of premium
- Minus write-downs for impairment, if applicable

Below are some examples with journal entries involving various stated rates compared to market rates.

1. Notes Issued at Face Value

Assume that on January 1, Carpe Diem Ltd. lends $10,000 to Fascination Co. in exchange for a $10,000, three-year note bearing interest at 10% payable annually at the end of each year (ordinary annuity). The market rate of interest for a note of similar risk is also 10%. The note's present value is calculated as:

Face value of the note	$ 10,000
Present value of the note principal and interest:	
Interest = $10,000 × 10% = $1,000 PMT	
PV = (1000 PMT, 10 I/Y, 3 N, 10000 FV)	10,000
Difference	$ 0

In this case, the note's face value and present value (fair value) are the same ($10,000) because the effective (market) and stated interest rates are the same. Carpe Diem's entry on the date of issuance is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 1	Notes receivable		10,000	
	Cash			10,000

If Carpe Diem's year-end was December 31, the interest income recognized each year would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Dec 31	Cash		1,000	
	Interest income			1,000
	(10,000 × 10%)			

2. Stated Rate Lower than Market Rate: A Discount

Assume that Anchor Ltd. makes a loan to Sizzle Corp. in exchange for a $10,000, three-year note bearing interest at 10% payable annually. The market rate of interest for a note of similar risk is 12%. Recall that the stated rate of 10% determines the amount of the cash received for interest; however, the present value uses the **effective (market) rate** to discount all cash flows to determine the amount to record as the note's value at the time of issuance. The note's present value is calculated as:

Face value of the note	$ 10,000
Present value of the note principal and interest:	
Interest = $10,000 × 10% = $1,000 PMT	
PV = (1000 PMT, 12 I/Y, 3 N, 10000 FV)	9,520
Difference	$ 480

As shown above, the note's market rate (12%) is higher than the stated rate (10%), so the note is issued at a discount.

Anchor's entry to record the issuance of the note receivable:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 1	Notes receivable		9,520	
	Cash			9,520

Even though the face value of the note is $10,000, the amount of money lent to Sizzle would only be $9,520, which is net of the discount amount and is the difference between the stated and market interest rates discussed earlier. In return, Anchor will receive an annual cash payment of $1,000 for three years plus a lump sum payment of $10,000 at the end of the third year, when the note matures. The total cash payments received will be $13,000 over the term of the note, and the interest component of the note would be:

Cash received	$13,000	
Present value (fair value)	9,520	
Interest income component	3,480	(over the three-year life)

As mentioned earlier, if Anchor used IFRS the $480 discount amount would be amortized using the effective interest method. If Anchor used ASPE, there would be a choice between the effective interest method and the straight-line method.

Below is a schedule that calculates the cash received, interest income, discount amortization, and the carrying amount (book value) of the note at the end of each year using the effective interest method:

$10,000 Note Receivable Payment and Amortization Schedule
Effective Interest Method
Stated rate of 10% and market rate of 12%

	Cash Received	Interest Income @12%	Amortized Discount	Carrying Amount
Date of issue				$9,520
End of year 1	$1,000	$1,142*	$142	9,662
End of year 2	1,000	1,159	159	9,821
End of year 3	1,000	1,179	179	10,000
End of year 3 final payment	10,000	-	-	0
	$13,000	$3,480	$480	

* $9,520 $\times$ 12% $=$ $1,142

The total discount $480 amortized in the schedule is equal to the difference between the face value of the note of $10,000 and the present value of the note principal and interest of $9,250. The amortized discount is **added** to the note's carrying value each year, thereby increasing its carrying amount until it reaches its maturity value of $10,000. As a result, the carrying amount at the end of each period is always equal to the present value of the note's remaining cash flows discounted at the 12% market rate. This is consistent with the accounting standards for the subsequent measurement of long-term notes receivable at *amortized* **cost**.

If Anchor's year-end was the same date as the note's interest collected, at the end of year 1 using the schedule above, Anchor's entry would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
End of year 1	Cash		1,000	
	Note receivable (discount amortized amount)		142	
	Interest income			1,142
	For Interest income: (9,520 × 12%)			

Alternatively, if Anchor used ASPE the straight-line method of amortizing the discount is simple to apply. The total discount of $480 is amortized over the three-year term of the note in equal amounts. The annual amortization of the discount is $160 ($480 ÷ 3 years) for each of the three years as shown in the following entry:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
End of year 1	Cash		1,000	
	Note receivable (discount amortized amount)		160	
	Interest income			1,160

Comparing the three years' entries for both the effective interest and straight-line methods shows the following pattern for the discount amortization of the note receivable:

	Effective Interest	Straight-Line
End of year 1	$142	$160
End of year 2	159	160
End of year 3	179	160
	$480	$480

The amortization of the discount using the effective interest method results in increasing amounts of interest income that will be recorded in the adjusting entry (decreasing amounts of interest income for amortizing a premium) compared to the equal amounts of interest income using the straight-line method. The straight-line method is easier to apply but its shortcoming is that the interest rate (yield) for the note is not held constant at the 12% market rate as is the case when the effective interest method is used. This is because the amortization of the discount is in equal amounts and does not take into consideration what the carrying amount of the note was at any given period of time. At the end of year 3, the notes receivable balance is $10,000 for both methods, so the same entry is recorded for the receipt of the cash.

General Journal				
Date	Account/Explanation	PR	Debit	Credit
End of year 3	Cash		10,000	
	Note receivable			10,000

3. Stated Rate More than Market Rate: A Premium

Had the note's stated rate of 10% been greater than a market rate of 9%, the present value would be greater than the face value of the note due to the premium. The same types of calculations and entries as shown in the previous illustration regarding a discount would be used. Note that the premium amortized each year would **decrease** the carrying amount of the note at the end of each year until it reaches its face value amount of $10,000.

$10,000 Note Receivable Payment and Amortization Schedule
Effective Interest Method
Stated rate of 10% and market rate of 9%

	Cash Received	Interest Income @9%	Amortized Premium	Carrying Amount
Date of issue				$10,253
End of year 1	$1,000	$923*	$77	10,176
End of year 2	1,000	916	84	10,091
End of year 3	1,000	908	92	10,000
End of year 3 final payment	10,000	-	-	0
	$13,000	$2,747	$253	

* $\$10{,}253 \times 9\% = \$923$

Anchor's entry on the note's issuance date is for the present value amount (fair value):

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 1	Notes receivable		10,253	
	Cash			10,253

If the company's year-end was the same date as the note's interest collected, at the end of year 1 using the schedule above, the entry would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
End of year 1	Cash		1,000	
	Note receivable (premium amortized amount)			77
	Interest income			923
	For Interest income: (10,253 × 9%)			

The entry when paid at maturity would be:

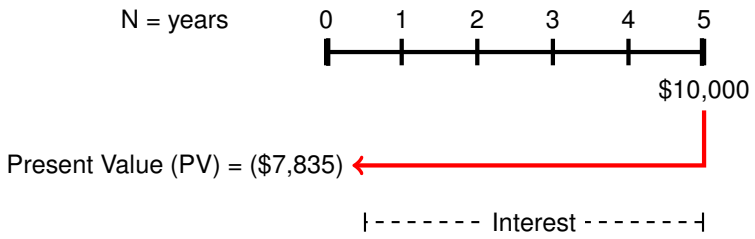
General Journal				
Date	Account/Explanation	PR	Debit	Credit
End of year 3	Cash		10,000	
	Note receivable			10,000

 A video is available on the Lyryx site. Click here to watch the video.

4. Zero-Interest Bearing Notes

Some companies will issue zero-interest-bearing notes as a sales incentive. The notes do not state an interest rate but the term "zero-interest" is inaccurate because financial instruments always include an interest component that is equal to the difference between the *cash lent* and the higher amount of *cash repaid* at maturity. Even though the interest rate is not stated, the *implied* interest rate can be derived because the cash values lent and received are both known. In most cases, the transaction between the issuer and acquirer of the note is at arm's length, so the implicit interest rate would be a reasonable estimate of the market rate.

Assume that on January 1, Eclipse Corp. received a five-year, $10,000 zero-interest bearing note. The amount of cash lent to the issuer (which is equal to the present value) is $7,835 (rounded). Eclipse's year-end is December 31. Looking at the cash flows and the time line:



I/Y = (+/- 7835 PV, 0 PMT, 5 N, 10000 FV)
where I/Y is interest
PV is the amount of cash lent
N is # of periods
FV is the future cash received

Interest = 5% (rounded), or $2,165

Notice that the sign for the $7,835 PV is preceded by the +/- symbol, meaning that the PV amount is to have the opposite symbol to the $10,000 FV amount, shown as a positive value. This is because the FV is the cash received at maturity or cash **inflow** (positive value), while the PV is the cash lent or a cash **outflow** (opposite or negative value). Many business calculators require the use of a +/- sign for one value and no sign (or a positive value) for the other to calculate imputed interest rates correctly. Consult your calculator manual for further instructions regarding zero-interest note calculations.

The implied interest rate is calculated to be 5% and the note's interest component (rounded) is $2,165 ($10,000 − $7,835), which is the difference between the cash lent and the higher amount of cash repaid at maturity. Below is the schedule for the interest and amortization calculations using the effective interest method.

Non-Interest-Bearing Note Receivable Payment and Amortization Schedule Effective Interest Method				
	Cash Received	Interest Income @5%	Amortized Discount	Carrying Amount
Date of issue				$7,835.26
End of year 1	$0	$391.76*	$391.76	8,227.02
End of year 2	0	411.35	411.35	8,638.37
End of year 3	0	431.92	431.92	9,070.29
End of year 4	0	453.51	453.51	9,523.81
End of year 5	0	476.19	476.19	10,000.00
End of year 5 payment	10,000			0
		$2,164.74	$2,164.74	

* $\$7{,}835.26 \times 5\% = \$391.76$

The entry for the note receivable when issued would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jan 1	Notes receivable		7,835.26	
	Cash			7,835.26

At Eclipse's year-end of December 31, the interest income at the end of the first year using the effective interest method would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Dec 31	Note receivable (discount amortized amount)		391.76	
	Interest income			391.76
	(7,835.26 × 5%)			

At maturity when the cash interest is received, the entry would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
End of year 5	Cash		10,000	
	Note receivable			10,000

If Eclipse used ASPE instead of IFRS, the entry using straight-line method for amortizing the discount is calculated as the total discount of $2,164.74, amortized over the five-year term of the note resulting in equal amounts each year. Therefore, the annual amortization is $432.95 ($2,164.74 ÷ 5 years) each year is recorded as:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
End of year 1	Note receivable (discount amortized amount) . .		432.95	
	Interest income			432.95

5. Notes Receivable in Exchange for Property, Goods, or Services

When property, goods, or services are exchanged for a note, and the market rate and the timing and amounts of cash received are all known, the present value of the note can be determined. For example, assume that on May 1, Hudson Inc. receives a $200,000, five-year note in exchange for land originally costing $120,000. The market rate for a note with similar characteristics and risks is 8%. The present value is calculated as follows:

PV = (0 PMT, 8 I/Y, 5 N, 200000 FV)

PV = $136,117

The entry upon issuance of the note and sale of the land would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
May 1	Notes receivable		136,117	
	Gain on sale of land.			16,117
	Land.			120,000

However, if the market rate is not known, either of following two approaches can be used to determine the fair value of the note:

a. **Determine the fair value of the property, goods, or services given up.** As was discussed for zero-interest bearing notes where the interest rate was not known, the implicit interest rate can still be derived because the cash amount lent, and the timing and amount of the cash flows received from the issuer are both known. In this case the amount lent is the fair value of the property, goods, or services **given up**. Once the interest is calculated, the effective interest method can be applied.[1]

   For example, on June 1, Mayflower Consulting Ltd. receives a $40,000, three-year note in exchange for some land. The market rate cannot be accurately determined due to

[1]Source: http://www.iasplus.com/en/standards/ifrs/ifrs13 *IFRS 13 Fair Value Measurement* applies to IFRSes that require or permit fair value measurements or disclosures and provides a single IFRS framework for measuring fair value and requires disclosures about fair value measurement. The Standard defines fair value on the basis of an "exit price" notion and uses a "fair value hierarchy," which results in a market-based, rather than entity-specific, measurement. IFRS 13 was originally issued in May 2011 and applies to annual periods beginning on or after 1 January 2013 and is beyond the scope of this course. For simplicity, the fair value of the property, goods or services given up as explained in the chapter material assumes that IFRS 13 assumptions and hierarchy to determine fair values have been appropriately considered.

credit risks regarding the issuer. The land cost and fair value is $31,750. The interest rate is calculated as follows:

I/Y = (+/-31750 PV, 0 PMT, 3 N, 40000 FV)

I/Y = 8%; the interest income component is $8,250 over three years ($40,000 − $31,750)

The entry upon issuance of the note would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jun 1	Notes receivable		31,750	
	Land			31,750

b. **Determine an imputed interest rate.** An imputed interest rate is an estimated interest rate used for a note with comparable terms, conditions, and risks between an independent borrower and lender.

On June 1, Edmunds Co. receives a $30,000, three-year note in exchange for some swampland. The land has a historic cost of $5,000 but neither the market rate nor the fair value of the land can be determined. In this case, a market rate must be imputed and used to determine the note's present value. The rate will be estimated based on interest rates currently in effect for companies with similar characteristics and credit risk as the company issuing the note. For IFRS companies, the "evaluation hierarchy" identified in IFRS 13 Fair Value Measurement would be used to determine the fair value of the land and the imputed interest rate. In this case, the imputed rate is determined to be 7%. The present value is calculated as follows:

PV = (7 I/Y, 3 N, 30000 FV)

PV = $24,489

The entry upon issuance of the note would be:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Jun 1	Notes receivable		24,489	
	Gain on sale of land			19,489
	Land			5,000

Loans to employees

In cases where there are non-interest-bearing long-term loans to company employees, the fair value is determined by using the market rate for loans with similar characteristics, and the present value is calculated on that basis. The amount loaned to the employee invariably will be higher than the present value using the market rate because the loan is intended as a reward or incentive. This difference would be deemed as additional compensation and recorded as Compensation expense.

Impairment of notes receivable

Just as was the case with accounts receivable, there is a possibility that the holder of the note receivable will not be able to collect some or all of the amounts owing. If this happens, the receivable is considered **impaired**. When the investment in a note receivable becomes impaired for any reason, the receivable is re-measured at the present value of the currently expected cash flows at the loan's **original effective interest rate**.

The impairment amount is recorded as a debit to bad debt expense and as a credit either to an allowance for uncollectible notes account (a contra account to notes receivable) or directly as a reduction to the asset account.

6.3.3 Derecognition and Sale of Receivables: Shortening the Credit-to-Cash Cycle

Derecognition is the removal of a previously recognized receivable from the company's balance sheet. In the normal course of business, receivables arise from credit sales and, once paid, are removed (derecognized) from the books. However, this takes valuable time and resources to turn receivables into cash. As someone once said, "turnover is vanity, profit is sanity, but cash is king"[2]. Simply put, a business can report all the profits possible, but profits do not mean cash resources. Sound cash flow management has always been important but, since the economic downturn in 2008, it has become the key to survival for many struggling businesses. As a result, companies are always looking for ways to shorten the credit-to-cash cycle to maximize their cash resources. Two such ways are secured borrowings and sales of receivables, discussed next.

Secured Borrowings

Companies often use receivables as collateral for a loan or a bank line of credit. The receivables are pledged as security for the loan, but the control and collection often remain with the company, so the receivables are left on the company's books. The company records the proceeds of the loan received from the finance company as a liability with the loan interest and any other finance charges recorded as expenses. If a company defaults on its loan, the finance company can seize the secured receivables and directly collect the cash from the receivables as payment against the defaulted loan. This will be illustrated in the section on factoring, below.

Sales of Receivables

What is the accounting treatment if a company's receivables are transferred (sold) to a third party (factor)? Certain industry sectors, such as auto dealerships and almost all small- and medium-sized businesses selling high-cost goods (e.g., gym equipment retailers) make exten-

[2] "Cash is king" is a catch phrase for "cash is most important." While a firm can generate a profit, if it cannot be converted to cash fast enough to pay the liabilities as they are due, then the company runs the risk of failing.

sive use of third-party financing arrangements with their customers to speed up the credit-to-cash cycle. Whether a receivable is transferred to a factor (sale) or held as security for a loan (borrowing) depends on the criteria set out in IFRS and ASPE which are discussed next.

Conditions for Treatment as a Sale

For accounting purposes, the receivables should be derecognized as a sale when they meet the following criteria:

IFRS—substantially **all of the risks and rewards have been transferred** to the factor. The evidence for this is that the contractual rights to receive the cash flows have been transferred (or the company continues to collect and forward all the cash it collects without delay) to the factor. As well, the company cannot sell or pledge any of these receivables to any third parties other than to the factor.

ASPE—control of the receivables has been surrendered by the transferor. This is evidenced when the following three conditions are *all* met:

a. The transferred assets have been isolated from the transferor.

b. The factor has obtained the right to pledge or to sell the transferred assets.

c. The transferor does not maintain effective control of the transferred assets through a repurchase agreement.

If the conditions for either IFRS or ASPE are not met, the receivables remain in the accounts and the transaction is treated as a secured borrowing (recorded as a liability) with the receivables as security for the loan. The accounting treatment regarding the sale of receivables using either standard is a complex topic; the discussion in this section is intended as a basic overview.

Below are some different examples of sales of receivables; such as **factoring** and **securitization**.

Factoring

Factoring is when individual accounts receivable are sold or transferred to a recipient or factor, usually a financial institution, in exchange for cash minus a fee called a discount. The seller does not usually have any subsequent involvement with the receivable and the factor collects directly from the customer. (Companies selling fitness equipment exclusively use this method for all their credit sales to customers.)

The downside to this strategy is that factoring is expensive. Factors typically charge a 2% to 3% fee when they buy the right to collect payments from customers. A 2% discount for an

invoice due in thirty days is the equivalent of a substantial 25% a year, and 3% is over 36% per year compared to the much lower interest rates charged by banks and finance companies. Most companies are better off borrowing from their bank, if it is possible to do so.

However, factors will often advance funds when more traditional banks will not. Even with only a prospective order in hand from a customer, a business can turn to a factor to see if it will assume or share the risk of the receivable. Without the factoring arrangement, the business must take time to secure and collect the receivable; the factor offers a reduction in additional effort and aggravation that may be worth the price of the fee paid to the factor.

There are risks associated with factoring receivables. Companies that intend to sell their receivables to a factor need to check out the bank and customer references of any factor. There have been cases where a factor has gone out of business, still owing the company substantial amounts of money held back in reserve from receivables already paid up.

Factoring versus Borrowing: A Comparison

The difference between factoring and borrowing can be significant for a company that wants to sell some or all of its receivables. Consider the following example:

Assume that on June 1, Cromwell Co. has $100,000 accounts receivable it wants to sell to a factor that charges 10% as a financing fee. Below is the transaction recorded as a sale of receivables compared to a secured note payable arrangement, starting with some opening balances:

Cromwell Co. Balance Sheet – Opening Balances	
Cash	$ 10,000
Accounts receivable	150,000
Property, plant, and equipment	200,000
Total assets	$360,000
Accounts payable	$ 70,000
Note payable	0
Equity	290,000
Total liabilities and equity	$360,000
Debt-to-total assets ratio	19%

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		90,000	
	Loss on sale of receivables		10,000	
	Accounts receivable			100,000
	Cromwell Co. – Sale of Receivables. Loss on sale: ($100,000 × 10%)			

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Cash		90,000	
	Discount on note payable**		10,000	
	Note payable			100,000
	Cromwell Co. – Note Payable. **Discount shown separately from notes payable for comparability. Discount will be amortized to interest expense over the term of the note.			

Below is the balance sheet after the transaction:

Cromwell Co. Balance Sheet – Sale of Receivables	
Cash	$100,000
Accounts receivable	50,000
Property, plant, and equipment	200,000
Total assets	$350,000
Accounts payable	$ 70,000
Note payable	0
Equity	280,000
Total liabilities and equity	$350,000
Debt-to-total assets ratio	20%

Cromwell Co. Balance Sheet – Note Payable	
Cash	$100,000
Accounts receivable	150,000
Property, plant, and equipment	200,000
Total assets	$450,000
Accounts payable	$ 70,000
Note payable	90,000
Equity	290,000
Total liabilities and equity	$450,000
Debt-to-total assets ratio	36%

Note that the entry for a sale is straightforward with the receivables of $100,000 derecognized from the accounts and a decrease in retained earnings due to the loss reported in net income. However, for a secured borrowing, a note payable of $90,000 is added to the accounts as a liability, and the accounts receivable of $100,000 remains in the accounts as security for the note payable. Referring to the journal entry above, in both cases cash flow increased by $90,000, but for the secured borrowing, there is added debt of $90,000, affecting Cromwell's debt ratio and negatively impacting any restrictive covenants Cromwell might have with other creditors. After the transaction, the debt-to-total assets ratio for Cromwell is 20% if the accounts receivable transaction meets the criteria for a sale. The debt ratio worsens to 36% if

the transaction does not meet the criteria for a sale and is treated as a secured borrowing. This impact could motivate managers to choose a sale for their receivables to shorten the credit-to-cash cycle, rather than the borrowing alternative.

Sales without Recourse

For sales without recourse, all the risks and rewards (IFRS) as well as the control (ASPE) have been transferred to the factor, and the company no longer has any involvement.

For example, assume that on August 1, Ashton Industries Ltd. factors $200,000 of accounts receivable with Savoy Trust Co., the factor, on a without-recourse basis. All the risks, rewards, and control are transferred to the finance company, which charges an 8% fee and withholds a further 4% of the accounts receivables for estimated returns and allowances. The entry for Ashton is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Aug 1	Cash		176,000	
	Due from factor		8,000	
	Loss on sale of receivables		16,000	
	Accounts receivable			200,000
	For Due from factor: ($200,000 × 4%), for Loss on sale of receivables: ($200,000 × 8%)			

The accounting treatment will be the same for IFRS and ASPE since both sets of conditions (risks and rewards and control) have been met. If no returns and allowances are given to customers owing the receivables, Ashton will recoup the $8,000 from the factor. In turn, Savoy's net income will be the $16,000 revenue reduced by any uncollectible receivables, since it now has assumed the risks/rewards and control of these receivables.

Sales with Recourse

In this case, Ashton guarantees payment to Savoy for any uncollectible receivables (recourse obligation). Under IFRS, the guarantee means that the risks and rewards have **not** been transferred to the factor, and the accounting treatment would be as a secured borrowing as illustrated above in Cromwell—Note Payable. Under ASPE, if all three conditions for treatment as a sale as described previously are met, the transaction can be treated as a sale.

Continuing with the example for Ashton, assume that the receivables are sold with recourse, the company uses ASPE, and that all three conditions have been met. In addition to the 8% fee and 4% withholding allowance, Savoy estimates that the recourse obligation has a fair value of $5,000. The entry for Ashton, including the estimated recourse obligation is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
Aug 1	Cash		176,000	
	Due from factor		8,000	
	Loss on sale of receivables		21,000	
	Accounts receivable			200,000
	Recourse liability			5,000
	For Due from factor: ($200,000 × 4%), for Loss on sale of receivables: ($16,000 + $5,000)			

You will see that the recourse liability to Savoy results in an increase in the loss on sale of receivables by the recourse liability amount of $5,000. If there were no uncollectible receivables, Ashton will eliminate the recourse liability amount and decrease the loss. Savoy's net income will be the finance fee of $16,000 with no reductions in revenue due to uncollectible accounts, since these are being guaranteed and assumed by Ashton.

 A video is available on the Lyryx site. Click here to watch the video.

Securitization

Securitization is a financing transaction that gives companies an alternative way to raise funds other than by issuing debt, such as a corporate bond or note. The process is extremely complex and the description below is a simplified version.

The receivables are sold to a holding company called a Special Purpose Entity (SPE), which is sponsored by a financial intermediary. This is similar to factoring without recourse, but is done on a much larger scale. This sale of receivables and their removal from the accounting records by the company holding the receivables is an example of **off-balance sheet accounting**. In its most basic form, the securitization process involves two steps:

Step 1: A company (the asset originator) with receivables (e.g., auto loans, credit card debt), identifies the receivables (assets) it wants to sell and remove from its balance sheet. The company divides these into bundles, called **tranches**, each containing a group of receivables with similar credit risks. Some bundles will contain the lowest risk receivables (senior tranches) while other bundles will have the highest risk receivables (junior tranches).

The company sells this portfolio of receivable bundles to a special purpose entity (SPE) that was created by a financial intermediary specifically to purchase these types of portfolio assets. Once purchased, the originating company (seller) derecognizes the receivables and the SPE accounts for the portfolio assets in its own accounting records. In many cases, the company that originally sold the portfolio of receivables to the SPE continues to service the receivables in the portfolio, collects payments from the original borrowers and passes them on—less a servicing fee—directly to the SPE. In other cases, the originating company is no longer involved and the SPE engages a bank or financial intermediary to collect the receivables as a

collecting agent.

Step 2: The SPE (issuing agent) finances the purchase of the receivables portfolio from the originating company by issuing tradeable interest-bearing securities that are secured or backed by the receivables portfolio it now holds in its own accounting records as stated in Step 1—hence the name **asset-backed securities (ABS)**. These interest-bearing ABS securities are sold to capital market investors who receive fixed or floating rate payments from the SPE, funded by the cash flows generated by the portfolio collections. To summarize, securitization represents an alternative and diversified source of financing based on the transfer of credit risk (and possibly also interest rate and currency risk) from the originating company and ultimately to the capital market investors.

The Downside of Securitization

Securitization is inherently complex, yet it has grown exponentially. The resulting highly competitive securitization markets with multiple securitizers (financial institutions and SPEs), increase the risk that underwriting standards for the asset-backed securities could decline and cause sharp drops in the bundled or tranched securities' market values. This is because both the investment return (principal and interest repayment) and losses are allocated among the various bundles according to their level of risk. The least risky bundles, for example, have first call on the income generated by the underlying receivables assets, while the riskiest bundles have last claim on that income, but receive the highest return.

Typically, investors with securities linked to the lowest-risk bundles would have little expectation of portfolio losses. However, because investors often finance their investment purchase by borrowing, they are very sensitive to changes in underlying receivables assets' quality. This sensitivity was the initial source of the problems experienced in the sub-prime mortgage market (derivatives) meltdown in 2008. At that time, repayment issues surfaced in the riskiest bundles due to the weakened underwriting standards, and lack of confidence spread to investors holding even the lowest risk bundles, which caused panic among investors and a flight into safer assets, resulting in a fire sale of securitized debt of the SPEs.

In the future, securitized products are likely to become simpler. After years of posting virtually no capital reserves against high-risk securitized debt, SPEs will soon be faced with regulatory changes that will require higher capital charges and more comprehensive valuations. Reviving securitization transactions and restoring investor confidence might also require SPEs to retain an interest in the performance of securitized assets at each level of risk (Jobst, 2008).

6.3.4 Disclosures of Receivables

The standards for receivables reporting and disclosures have been in a constant state of change. IFRS 7 (IFRS, 2015) and IAS 1 (IAS, 2003) include significant disclosure requirements that provide information based on significance and the nature and extent of risks.

The *Significance* of Financial Instruments

IFRS 7 and IAS 1 specify the separate reporting categories based on significance such as the following:

- Trade accounts, amounts owing from related parties, prepayments, tax refunds, and other significant amounts
- Current amounts from non-current amounts
- Any impaired balances and amount of any allowance for credit risk and a reconciliation of the changes in the allowance account during the accounting period
- Disclosure on the income statement of the amounts of interest income, impairment losses, and any reversals associated with impairment losses
- Net losses on sales of receivables (IFRS, 2015, 7.20 a, iv).

For each receivables category above, the following disclosures are required:

- The carrying amounts such as amortized cost/cost and fair values (including methods used to estimate fair value) with details of any amounts reclassified from one category to another or changes in fair values
- Carrying amount and terms and conditions regarding financial assets pledged as collateral or any financial assets held as collateral
- An indication of the amounts and, where practicable, the maturity dates of accounts with a maturity of more than one year
- For IFRS, extensive disclosures of major terms regarding the securitization or transfers of receivables, whether these have been derecognized in their entirety or not. Some of these disclosures include the characteristics of the securitization, the fair value measurements and methods used and cash flows, as well as the nature of the servicing requirements and associated risks.

The *Nature and Extent of Risks* Arising from Financial Instruments

Stakeholders, such as investors and creditors, want to know about the various transactions that hold risks. Basic types of risks and related disclosures are:

- Credit risk—the risk that one party to a financial instrument will default on its debt obligation. Disclosures include an analysis of the age of financial assets that are past

due as at the end of the reporting period but not impaired and an analysis of financial assets that are individually determined to be impaired as at the end of the reporting period, including the factors the entity considered in determining that they are impaired (IFRS 2015, 7.37 a, b).

- Liquidity risk—the risk that an entity will have difficulties in paying its financial liabilities.
- Market risk—the risk that the fair value or cash flows of a receivable will fluctuate due to changes in market prices which are affected by interest rate risk, currency risk, and other price risks. Disclosures include a sensitivity analysis for each type of market risk to which the entity is exposed at the end of the reporting period, showing how profit or loss and equity would have been affected by changes in the relevant risk variable that were reasonably possible at that date (IFRS 2015, 7.40 a).

In addition, information about company policies for managing risk, including quantitative and qualitative data, is to be disclosed. ASPE disclosure requirements are much the same as IFRS, though perhaps requiring slightly less information about risk exposures and fair values than IFRS (CPA Canada, 2016, Part II, Section 3856.38–42).

6.4 Cash and Receivables: Analysis

The most common analytical tool regarding cash is the **statement of cash flows**. This statement reveals how a company spends its money (cash outflows) and where the money comes from (cash inflows). It is well known that a company's profitability, as shown by its net income, is an important performance evaluator. Although accrual accounting provides a basis for matching revenues and expenses, this system does not actually reflect the amount of *cash* that the company has received from its profits. This can be a crucial distinction as discussed earlier in this chapter. The statement of cash flows was discussed in Chapter 4.

For receivables analysis, three key financial tools are:

- An accounts receivable aging report
- Trendline analysis
- Ratio analysis

Accounts Receivable Aging Report

One of the easiest methods for analyzing the state of a company's accounts receivable is to print an accounts receivable aging report, which is a standard report available in any

accounting software package. As was discussed earlier in this chapter, this report divides the age of the accounts receivable into various groups according to the amount of time uncollected. Any invoices uncollected for greater than 30 days are cause for increased vigilance, especially if they drop into the oldest time grouping.

There are several issues to be aware of when analyzing accounts receivables based on an aging report.

Individual credit terms—Management may have authorized unusually long credit terms to specific customers, or for specific types of invoices. If so, these items may appear to be severely overdue for payment when they are, in fact, not yet due for payment at all.

Distance from billing date—In many companies, most of the invoices are billed at the end of the month. If an aging report is run a few days later as part of the month-end analysis, it will likely still show outstanding accounts receivable from one month ago for which payment is about to arrive, as well as the full amount of all the receivables that were just billed a few days ago. In total, it appears that receivables are in a bad state. However, if you were to run the report just prior to the month-end billing activities, there would be far fewer accounts receivable in the report, and there may appear to be very little cash coming from uncollected receivables.

Time grouping size—The groupings should approximate the duration regarding the company's credit terms. For example, if credit terms are just ten days and the first time grouping spans 30 days, nearly all invoices will appear to be current.

Trendline Analysis

Another accounts receivable analysis tool is the trendline. If the outstanding accounts receivable balance at the end of each month for the past year is graphed, it can be used to predict the amount of receivables that should be outstanding in the near future. This is a particularly valuable tool when sales are seasonal, since you can apply seasonal variability to estimates of future sales levels.

Trendline analysis is also useful for comparing the percentage of bad debts to sales over time. If there is a strong recurring trend in this percentage, management will likely take action. As was discussed earlier, if the percentage of bad debt is increasing, management will likely authorize tighter credit terms to customers. Conversely, if the bad debt percentage is extremely low, management may elect to loosen credit terms to expand sales to somewhat more risky customers. Their philosophy will be that not all customers in the riskier categories will default on paying their debts to suppliers so there should be a net benefit from increasing sales. The bottom line is that the credit terms need to strike a balance between the two opposites. Trendline analysis is a particularly useful tool when you run the bad debt percentage analysis for individual customers, since it can spotlight problems that may indicate the possible bankruptcy of a customer.

There are two issues to be aware of when you use trendline analysis:

- **Change in credit policy**. If management has authorized a change in the credit policy, it can lead to sudden changes in accounts receivable or bad debt levels.
- **Change in products or business lines**. If a company adds to or deletes from its mix of products or business lines, it may cause profound changes in the trend of accounts receivable.

An interesting analysis related to accounts receivable is a trendline of the proportion of customer sales that are paid at the time of sale, noting the payment type used. Changes in a company's selling procedures and policies may shift sales toward or away from up-front payments, which therefore has an impact on the amount and characteristics of accounts receivable.

Ratio Analysis

A third type of accounts receivable analysis is ratio analysis. Ratios, on their own, do not really tell the whole story. Ratios compared to a benchmark, such as an industry sector or previous period trends will be more meaningful. Some of the more common ratios that include cash and accounts receivable are:

- Quick or acid-test ratio, which measures immediate debt-paying ability
- Accounts receivable turnover, which measures how quickly the receivables are converted into cash
- Days' sales uncollected, which measures the number of days that receivables remain uncollected

These are examples of *liquidity ratios* which measure a company's ability to pay its debts as they come due. Below is selected financial data for Best Coffee and Donuts:

Best Coffee and Donuts Inc.
Excerpts from the Consolidated Balance sheet
(in thousands of Canadian dollars)
(Unaudited)

	As at December 29, 2021	As at December 30, 2020
Current assets		
Cash and cash equivalents	$ 50,414	$ 120,139
Restricted cash and cash equivalents	155,006	150,574
Accounts receivable, net (includes royalties and franchise fees receivable)	210,664	171,605
Notes receivable, net	4,631	7,531
Deferred income taxes	10,165	7,142
Inventories and other, net	104,326	107,000
Advertising fund restricted assets	39,783	45,337
Total current assets	$ 574,989	$ 609,328
Current liabilities		
Accounts payable	$ 204,514	$ 169,762
Accrued liabilities	274,008	227,739
Deferred income taxes	-	197
Advertising fund liabilities	59,912	44,893
Short-term borrowings	30,000	-
Current portion of long-term obligations	17,782	20,781
Total current liabilities	$ 586,216	$ 463,372

Best Coffee and Donuts Inc.
Excerpts from the Consolidated Statement of Operations
(in thousands of Canadian dollars, except share and per share data)
(Unaudited)

	Year ended December 29, 2021	Year ended December 30, 2020
REVENUES		
Sales	$ 2,265,884	$ 2,225,659
Franchise revenues		
Rents and royalties	821,221	780,992
Franchise fees	168,428	113,853
	989,649	894,845
TOTAL REVENUES	$ 3,255,533	$ 3,120,504

Quick ratio

The quick or acid-test ratio, measures only the most liquid current assets available to cover its current liabilities. The quick ratio is more conservative than the current ratio which includes

all current assets and current liabilities because it excludes inventory and any other current assets that are not highly liquid.

Formula:

$$\text{Quick Ratio} = \frac{\text{Cash \& cash equivalents} + \text{short-term investments} + \text{current receivables}}{\text{Current liabilities}}$$

Calculation:

	2021	2020
Quick Ratio =	$\frac{\$50{,}414+\$210{,}664+\$4{,}631}{\$586{,}216} = .45$	$\frac{\$120{,}139+\$171{,}605+\$7{,}531}{\$463{,}372} = .65$

As of December 31, 2021, with amounts expressed in thousands, Best Coffee and Donuts' quick current assets amounted to $265,709, while current liabilities amounted to $586,216. The resulting ratio produced is .45. This means that there is $.45 of the most liquid current assets available for each $1.00 of current liabilities. If a quick ratio of greater than $1.00 is a reasonable measure of liquidity, this means that Best Coffee and Donuts' ability to cover its current liabilities as they mature is at risk. Moreover, this ratio has weakened compared to the previous year of .65 or $.65 for each $1.00 in current liabilities.

Variations

In practice, some presentations of the quick ratio calculate quick assets (the formula's numerator) as simply the total current assets minus the inventory account. This is quicker and easier to calculate. By excluding a relatively less-liquid account such as inventory, it is thought that the remaining current assets will be of the more-liquid variety.

Using Best Coffee and Donuts as an example, for 2021, the quick ratio using the shorter calculation would be:

$$\text{Quick ratio} = \frac{\$574{,}989 - \$104{,}326}{\$586{,}216} = .80$$

It is clear from the comparative calculations that .80 is significantly higher than the previously calculated .45 ratio. Restricted cash, prepaid expenses, and deferred income taxes do not pass the test of truly liquid assets. Thus, using the shorter calculation artificially overstates Best Coffee and Donuts more-liquid current assets and inflates its quick ratio. For this reason, it is not advisable to rely on this abbreviated version of the quick ratio.

Another type of analysis is to compare the quick ratio with its corresponding current ratio. If the current ratio is significantly higher, it is a clear indication that the company's current assets are

dependent on inventory and other “less than liquid” current assets, such as legally restricted cash balances.

Even though the quick ratio is a more conservative measure of liquidity than the current ratio, they both share the same problems regarding the time it takes to convert accounts receivables to cash in that they assume a liquidation of accounts receivable as the basis for measuring liquidity. In truth, a company must focus on *the time it takes to convert its working capital assets to cash*—that is the true measure of liquidity. This is the credit-to-cash cycle emphasized throughout this chapter. So, if a company’s accounts receivable, has a much longer conversion time than a typical credit policy of thirty days, the quickness attribute of this ratio becomes a focal point. For this reason, investors and creditors need to be aware that relying solely on the current and quick ratios as indicators of a company’s liquidity can be misleading. The “quickness” attribute will be discussed next.

Accounts Receivable Turnover Ratio

The accounts receivable turnover ratio measures the number of times per year on average that it takes to collect a company’s receivables. When using this ratio for analysis, the following issues must be considered:

- *Credit* sales, rather than all sales, would be the better measure to use for the numerator, but this information can be more difficult to obtain by third parties such as prospective investors and creditors, so total sales are often used in practice.
- Typically, average receivables outstanding are usually calculated from the beginning and ending balances. However, if a business has significant seasonal cycles, calculating a series of turnover averages throughout the fiscal year, such as semi-annually or quarterly, will likely provide better results.
- Companies can choose to sell their receivables making comparability with other companies not suitable.
- Net accounts receivable includes the allowance for doubtful accounts (AFDA), so the choice of what method and rates to use when estimating uncollectible accounts can vary significantly between companies, resulting in invalid comparisons.

The key consideration is to ensure *comparability and consistency* when interpreting ratio analysis, since ratios are used to determine favourable or unfavourable trends resulting from comparison to other factors. Using Best Coffee and Donuts data, we calculate the following:

Formula:

$$\text{A/R turnover} = \frac{\text{Net credit sales (or net sales, if unavailable)}}{\text{Average net accounts receivable}}$$

Calculation for 2021:

$$\begin{aligned}\text{A/R turnover} &= \frac{\$3{,}255{,}533}{(\$210{,}664 + 171{,}605) \div 2} \\ &= 17.03 \text{ times or every 21.43 days on average (365/17.03 = 21.43)}\end{aligned}$$

If the industry standard or the company credit policy is n/30 days, an accounts receivable turnover of every twenty-one days on average would be a favourable outcome compared to the thirty-day due date set by the company's credit policy. Aging schedules would provide further information about the quality of specific receivables and would highlight any customer accounts that were overdue and requiring immediate attention.

Days' sales uncollected

This ratio estimates how many days it takes to collect on the **current** receivables outstanding.

Formula:

$$\text{Days' sales uncollected} = \left(\frac{\text{Accounts receivable (net)}}{\text{Net sales}}\right) \times 365$$

Calculation for 2021:

$$\text{Days' sales uncollected} = \left(\frac{\$210{,}664}{\$3{,}255{,}533}\right) \times 365 = 23.62 \text{ days}$$

Note that the average receivables are not used in this calculation. This means that the ratio measures the collectability of the **current** accounts receivables instead of the average accounts receivable. If a guideline for this ratio is that it should not exceed 1.33 times its credit period when no discount is offered (or the discount period if a discount is offered), 23.62 days compared to the benchmark of forty days (30 days $\times$ 1.33) means that the ratio is favourable.

The best way to analyze accounts receivable is to use all three techniques. The accounts receivable collection period can be used to get a general idea of the ability of a company to collect its accounts receivable, add an analysis of the aging report to determine exactly which invoices are causing collection problems, and add trend analysis to see if these problems have been changing over time.

6.5 IFRS/ASPE Key Differences

Item	ASPE	IFRS
Cash equivalents	Equity investments are excluded from this classification.	Preferred shares can be included if there is a specified redemption date and are acquired close to their maturity date.
Accounts receivable—initial measurement	Initially measured at **net realizable value** (net of trade discounts and sales discounts, returns and allowances) in lieu of fair value given their short-term nature (there is no significant interest component).	Same as ASPE
Accounts receivable—subsequent measurement	**Cost** in lieu of amortized cost since there is no significant interest component.	Same as ASPE
Accounts receivable—impairment	Impairment is determined by estimating uncollectible accounts using either accounts receivable or credit sales as the basis. Direct write-off of uncollectible accounts directly to bad debt expense is only used under limited circumstances.	Same as ASPE
Short-term notes receivable—initial and subsequent measurement	In lieu of fair value, measured at NRV:	Same as ASPE
	face value plus stated rate of interest for interest-bearing notes and **face value** which includes interest for non-interest-bearing notes.	
Long-term notes receivable—initial measurement	At fair value: Interest bearing: Present value of the expected cash flows discounted at the market rate of interest.	Same as ASPE

	Non-interest bearing: Present value of the expected cash flows discounted at the market rate of interest. The interest component is the difference between the proceeds (the present value set by the lender) and the repayment amount.	
Long-term notes receivable—subsequent measurement	Measured at amortized cost using either the straight-line method or the effective interest method for interest, discounts, or premiums.	Measured at amortized cost using the effective interest rate method for interest, discounts, or premiums.
Long-term notes receivable—impairment	If impaired, the receivable is re-measured at the present value of the expected cash flows at the current market interest rate.	If impaired, the receivable is remeasured at the present value of the expected cash flows at the loan's original effective interest rate.
Long-term notes receivable—transaction costs	Capitalized at acquisition and added to discount or premium to be amortized over life of note.	Same as ASPE
Derecognition of receivables	When the entity has **given up the control** of the receivables by meeting **all three conditions**: • The transferred assets are isolated in the books. • The company does not have a repurchase agreement. • The receiver (factor) has the right to pledge or sell the assets.	When substantially all of the **risks and rewards have been transferred**: • The contractual rights to receive the cash flows is transferred or collected and immediately passed on to the recipient. • The company cannot sell or pledge any of these receivables to any third parties other than to the factor.
Derecognition of receivables—sale without recourse	If all three conditions met, treat as a sale, otherwise as a secured borrowing.	If condition met, treat as a sale, otherwise as a secured borrowing.
Derecognition of receivables—sale with recourse	If all three conditions met, treat as a sale, otherwise as a secured borrowing.	Treat as a secured borrowing.

Disclosure of receivables	Are to provide information about: • the **significance** of financial instruments • the **nature and extent of risks** arising from financial instruments Less disclosure requirements than IFRS.	Are to provide information about: • the **significance** of financial instruments • the **nature and extent of risks** arising from financial instruments More information required than ASPE, including a reconciliation of any changes in the allowance account and extensive disclosures regarding securitization transactions.
Analysis of receivables	Three financial tools: • An accounts receivable aging report • Trendline analysis • Ratio analysis	Same as ASPE

6.6 Appendix A: Review of Internal Controls, Petty Cash, and Bank Reconciliations

Internal Control

Assets are the lifeblood of a company and must be protected. This duty falls to managers of a company. The policies and procedures implemented by management to protect assets are collectively referred to as **internal controls**. An effective internal control program not only protects assets, but also aids in accurate record-keeping, produces financial statement information in a timely manner, ensures compliance with laws and regulations, and promotes efficient operations. Effective internal control procedures ensure that adequate records are maintained, transactions are authorized, duties among employees are divided between record-keeping functions and control of assets, and employees' work is checked by others. The use of electronic recordkeeping systems does not decrease the need for good internal controls.

The effectiveness of internal controls is limited by human error and fraud. Human error can

occur because of negligence or mistakes. Fraud is the intentional decision to circumvent internal control systems for personal gain. Sometimes, employees cooperate with each other to avoid internal controls. This *collusion* is often difficult to detect, but fortunately, it is not a common occurrence when adequate controls are in place.

Internal controls take many forms. Some are broadly based, like mandatory employee drug testing, video surveillance, and scrutiny of company email systems. Others are specific to an asset type or process. For instance, internal controls need to be applied to a company's accounting system to ensure that transactions are processed efficiently and correctly to produce reliable records in a timely manner. Procedures should be documented to promote good recordkeeping, and employees need to be trained in the application of internal control procedures.

Financial statements prepared according to generally accepted accounting principles are useful not only to external users in evaluating the financial performance and financial position of the company, but also for internal decision making. There are various internal control mechanisms that aid in the production of timely and useful financial information. For instance, using a chart of accounts is necessary to ensure transactions are recorded in the appropriate account. As an example, expenses are classified and recorded in applicable expense accounts, then summarized and evaluated against those of a prior year.

The design of accounting records and documents is another important means to provide financial information. Financial data is entered and summarized in records and transmitted by documents. A good system of internal control requires that these records and documents be prepared at the time a transaction takes place or as soon as possible afterwards, since they become less credible and the possibility of error increases with the passage of time. The documents should also be consecutively pre-numbered, to indicate whether there may be missing documents.

Internal control also promotes the protection of assets. Cash is particularly vulnerable to misuse. A good system of internal control for cash should provide adequate procedures for protecting cash receipts and cash payments (commonly referred to as cash disbursements). Procedures to achieve control over cash vary from company to company and depend upon such variables as company size, number of employees, and cash sources. However, effective cash control generally requires the following:

- Separation of duties: People responsible for handling cash should not be responsible for maintaining cash records. By separating the custodial and record-keeping duties, theft of cash is less likely.
- Same-day deposits: All cash receipts should be deposited daily in the company's bank account. This prevents theft and personal use of the money before deposit.
- Payments made using non-cash means: Cheques or electronic funds transfer (EFT) provide a separate external record to verify cash disbursements. For example, many

businesses pay their employees using electronic funds transfer because it is more secure and efficient than using cash or even cheques.

Two forms of internal control over cash will be discussed in this chapter: the use of a petty cash account and the preparation of bank reconciliations.

Petty Cash

The payment of small amounts by cheque may be inconvenient and costly. For example, using cash to pay for postage on an incoming package might be less than the total processing cost of a cheque. A small amount of cash kept on hand to pay for small, infrequent expenses is referred to as a **petty cash fund**.

Establishing and Reimbursing the Petty Cash Fund

To set up the petty cash fund, a cheque is issued for the amount needed. The custodian of the fund cashes the cheque and places the coins and currency in a locked box. Responsibility for the petty cash fund should be delegated to only one person, who should be held accountable for its contents. Cash payments are made by this petty cash custodian out of the fund as required when supported by receipts. When the amount of cash has been reduced to a predetermined level, the receipts are compiled and submitted for entry into the accounting system. A cheque is issued to reimburse the petty cash fund. At any given time, the petty cash amount should consist of cash and supporting receipts, that total to the petty cash fund amount. To demonstrate the management of a petty cash fund, assume that a $200 cheque is issued to establish a petty cash fund.

The journal entry is:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Petty Cash		200	
	Cash			200
	To establish the $200 petty cash fund.			

Petty Cash is a current asset account and is reported with Cash as one amount.

Assume the petty cash custodian has receipts totalling $190 and $10 in coin and currency remaining in the petty cash box. The receipts consist of the following: delivery charges $100, $35 for postage, and office supplies of $55. The petty cash custodian submits the receipts to the accountant who records the following entry and issues a cheque for $190.

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Delivery Expense		100	
	Postage Expense		35	
	Office Supplies Expense[3]		55	
	Cash			190
	To reimburse the petty cash fund.			

The petty cash receipts should be cancelled at the time of reimbursement to prevent their reuse for duplicate reimbursements. The petty cash custodian cashes the $190 cheque. The $190 plus the $10 of coin and currency in the locked box immediately prior to reimbursement equals the $200 total required in the petty cash fund.

Sometimes, the receipts plus the coin and currency in the petty cash locked box do not equal the required petty cash balance. To demonstrate, assume the same information above except that the coin and currency remaining in the petty cash locked box was $8. This amount plus the receipts for $190 equals $198 and not $200, indicating a shortage in the petty cash box. The entry at the time of reimbursement reflects the shortage and is recorded as:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Delivery Expense		100	
	Postage Expense		35	
	Office Supplies Expense		55	
	Cash Over/Short Expense		2	
	Cash			192
	To reimburse the petty cash fund and account for the $2.00 shortage.			

The $192 credit to Cash plus the $8 of coin and currency remaining in the petty cash box immediately prior to reimbursement equals the $200 required total in the petty cash fund.

Assume, instead, that the coin and currency in the petty cash locked box was $14. This amount plus the receipts for $190 equals $204 and not $200, indicating an overage in the petty cash box. The entry at the time of reimbursement reflects the overage and is recorded as:

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Delivery Expense		100	
	Postage Expense		35	
	Office Supplies Expense		55	
	Cash Over/Short Expense			4
	Cash			186
	To reimburse the petty cash fund and account for the $4.00 overage.			

[3] An expense is debited instead of Office Supplies, an asset, because the need to purchase supplies through petty cash assumes the immediate use of the items.

The $186 credit to Cash plus the $14 of coin and currency remaining in the petty cash box immediately prior to reimbursement equals the $200 required total in the petty cash fund.

What happens if the petty cash custodian finds that the fund is rarely used? In such a case, the size of the fund should be decreased to reduce the risk of theft. To demonstrate, assume the petty cash custodian has receipts totalling $110 and $90 in coin and currency remaining in the petty cash box. The receipts consist of the following: delivery charges $80 and postage $30. The petty cash custodian submits the receipts to the accountant and requests that the petty cash fund be reduced by $75. The following entry is recorded and a cheque for $35 is issued.

General Journal				
Date	Account/Explanation	PR	Debit	Credit
	Delivery Expense		80	
	Postage Expense		30	
	Petty Cash			75
	Cash			35
	To reimburse the petty cash fund and reduce it by $75.			

The $35 credit to Cash plus the $90 of coin and currency remaining in the petty cash box immediately prior to reimbursement equals the $125 new balance in the petty cash fund ($200 original balance less the $75 reduction).

In cases when the size of the petty cash fund is too small, the petty cash custodian could request an increase in the size of the petty cash fund at the time of reimbursement. Care should be taken to ensure that the size of the petty cash fund is not so large as to become a potential theft issue. Additionally, if a petty cash fund is too large, it may be an indicator that transactions that should be paid by cheque are not being processed in accordance with company policy. Remember that the purpose of the petty cash fund is to pay for infrequent expenses; day-to-day items should not go through petty cash.

Cash Collections and Payments

The widespread use of banks facilitates cash transactions between entities and provides a safeguard for the cash assets being exchanged. This involvement of banks as intermediaries between entities has accounting implications. At any point in time, the cash balance in the accounting records of a company usually differs from the bank cash balance. The difference is usually because some cash transactions recorded in the accounting records have not yet been recorded by the bank and, conversely, some cash transactions recorded by the bank have not yet been recorded in the company's accounting records.

The use of a bank reconciliation is one method of internal control over cash. The reconciliation

process brings into agreement the company's accounting records for cash and the **bank statement** issued by the company's bank. A bank reconciliation explains the difference between the balances reported by the company and by the bank on a given date.

A bank reconciliation proves the accuracy of both the company's and the bank's records, and reveals any errors made by either party. The bank reconciliation is a tool that can help detect attempts at theft and manipulation of records. The preparation of a bank reconciliation is discussed in the following section.

The Bank Reconciliation Process

The bank reconciliation is a report prepared by a company at a point in time. It identifies discrepancies between the cash balance reported on the bank statement and the cash balance reported in a business's Cash account in the general ledger, more commonly referred to as the *books*. These discrepancies are known as *reconciling items* and are added or subtracted to either the book balance or bank balance of cash. Each of the reconciling items is added or subtracted to the business's cash balance. The business's cash balance will change as a result of the reconciling items. The cash balance prior to reconciliation is called the *unreconciled* cash balance. The balance after adding and subtracting the reconciling items is called the *reconciled* cash balance. The following is a list of potential reconciling items and their impact on the bank reconciliation.

Book reconciling items	*Bank reconciling items*
Collection of notes receivable (added)	Outstanding deposits (added)
NSF cheques (subtracted)	Outstanding cheques (subtracted)
Bank charges (subtracted)	
Book errors (added or subtracted, depending on the nature of the error	Bank errors (added or subtracted, depending on the nature of the error)

Book Reconciling Items

The collection of notes receivable may be made by a bank on behalf of the company. These collections are often unknown to the company until they appear as an addition on the bank statement, and so cause the general ledger cash account to be understated. As a result, the collection of a notes receivable is added to the unreconciled book balance of cash on the bank reconciliation.

Cheques returned to the bank because there were not sufficient funds (NSF) to cover them appear on the bank statement as a reduction of cash. The company must then request that the customer pay the amount again. As a result, the general ledger cash account is overstated by the amount of the NSF cheque. NSF cheques must therefore be subtracted from the unreconciled book balance of cash on the bank reconciliation to reconcile cash.

Cheques received by a company and deposited into its bank account may be returned by the customer's bank for many reasons (e.g., the cheque was issued too long ago, known as a stale-dated cheque, an unsigned or illegible cheque, or the cheque shows the wrong account number). Returned cheques cause the general ledger cash account to be overstated. These cheques are therefore subtracted on the bank statement, and must be deducted from the unreconciled book balance of cash on the bank reconciliation.

Bank service charges are deducted from the customer's bank account. Since the service charges have not yet been recorded by the company, the general ledger cash account is overstated. Therefore, service charges are subtracted from the unreconciled book balance of cash on the bank reconciliation.

A business may incorrectly record journal entries involving cash. For instance, a deposit or cheque may be recorded for the wrong amount in the company records. These errors are often detected when amounts recorded by the company are compared to the bank statement. Depending on the nature of the error, it will be either added to or subtracted from the unreconciled book balance of cash on the bank reconciliation. For example, if the company recorded a cheque as $520 when the correct amount of the cheque was $250, the $270 difference would be added to the unreconciled book balance of cash on the bank reconciliation. Why? Because the cash balance reported on the books is understated by $270 because of the error. As another example, if the company recorded a deposit as $520 when the correct amount of the deposit was $250, the $270 difference would be subtracted from the unreconciled book balance of cash on the bank reconciliation. Why? Because the cash balance reported on the books is overstated by $270 because of the error. Each error requires careful analysis to determine whether it will be added or subtracted in the unreconciled book balance of cash on the bank reconciliation.

Bank Reconciling Items

Cash receipts are recorded as an increase of cash in the company's accounting records when they are received. These cash receipts are deposited by the company into its bank. The bank records an increase in cash only when these amounts are actually deposited with the bank. Since not all cash receipts recorded by the company will have been recorded by the bank when the bank statement is prepared, there will be outstanding deposits, also known as **deposits in transit**. Outstanding deposits cause the bank statement cash balance to be understated. Therefore, outstanding deposits are a reconciling item that must be added to the unreconciled bank balance of cash on the bank reconciliation.

On the date that a cheque is prepared by a company, it is recorded as a reduction of cash in a company's books. A bank statement will not record a cash reduction until a cheque is presented and accepted for payment (or *clears* the bank). Cheques that are recorded in the company's books but are not paid out of its bank account when the bank statement is prepared are referred to as **outstanding cheques**. Outstanding cheques mean that the bank statement

cash balance is overstated. Therefore, outstanding cheques are a reconciling item that must be subtracted from the unreconciled bank balance of cash on the bank reconciliation.

Bank errors sometimes occur and are not revealed until the transactions on the bank statement are compared to the company's accounting records. When an error is identified, the company notifies the bank to have it corrected. Depending on the nature of the error, it is either added to or subtracted from the unreconciled bank balance of cash on the bank reconciliation. For example, if the bank cleared a cheque as $520 that was correctly written for $250, the $270 difference would be added to the unreconciled bank balance of cash on the bank reconciliation. Why? Because the cash balance reported on the bank statement is understated by $270 as a result of this error. As another example, if the bank recorded a deposit as $520 when the correct amount was $250, the $270 difference would be subtracted from the unreconciled bank balance of cash on the bank reconciliation. Why? Because the cash balance reported on the bank statement is overstated by $270 because of this specific error. Each error must be carefully analyzed to determine how it will be treated on the bank reconciliation.

Illustrative Problem—Bank Reconciliation

Assume that a bank reconciliation is prepared by Big Dog Carworks Corp. (BDCC) at April 30. At this date, the Cash account in the general ledger shows a balance of $21,929 and includes the cash receipts and payments shown in Figure 6.1.

Cash — Acct. No. 101

Date		Description	Debit	Credit	DR/CR	Balance
2020						
Mar.	31	Balance			DR	20673 -
Apr.	30	April cash receipts	9482 -		DR	30155 -
	30	April cash payments		8226 -	DR	21929 -

Remember, 'DR' (debit) denotes a positive cash balance in the far right-hand column of the general ledger.

Figure 6.1: Big Dog's General Ledger 'Cash' Account at April 30

Extracts from BDCC's accounting records are reproduced with the bank statement for April in Figure 6.2.

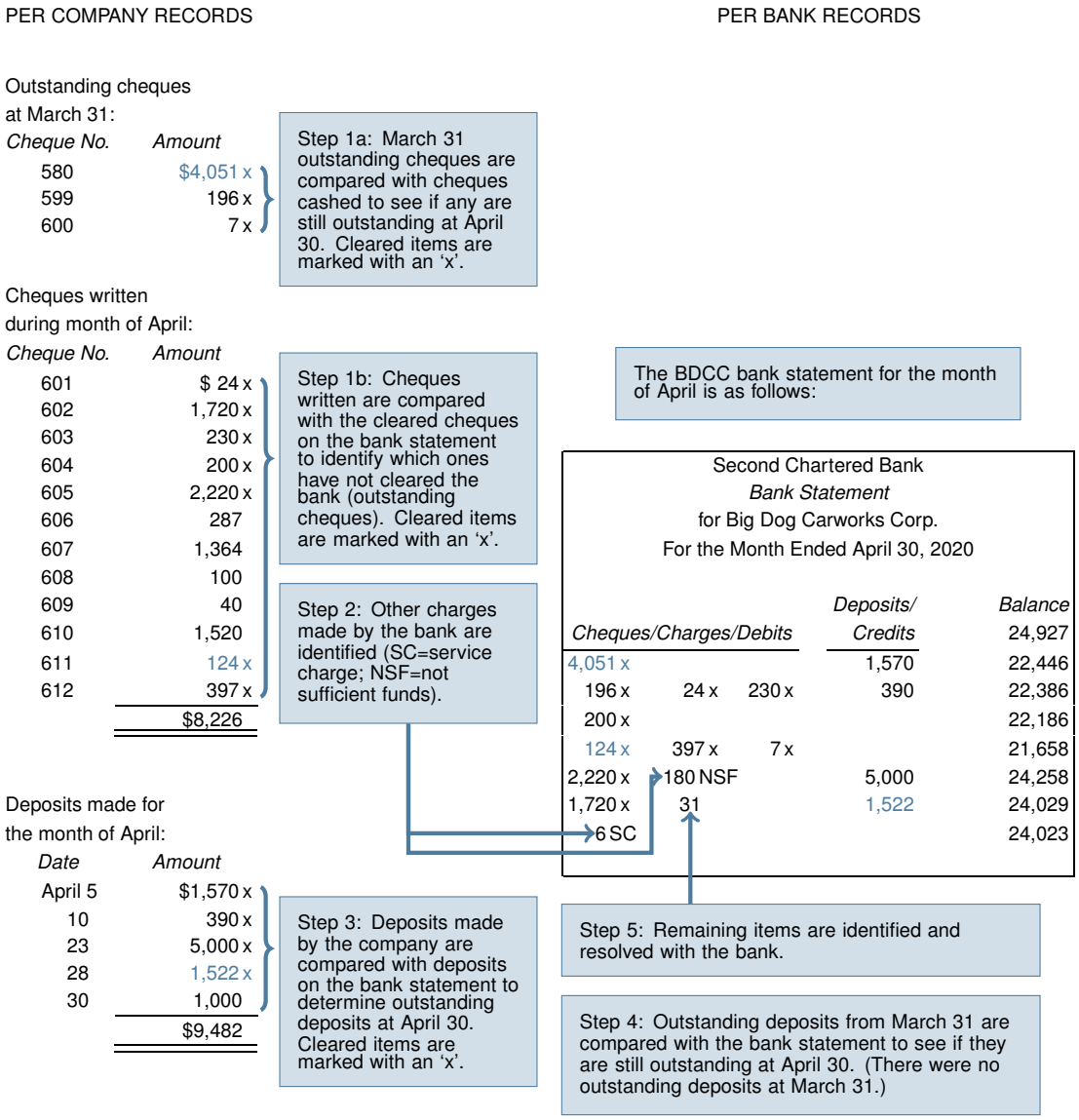


Figure 6.2: The Bank Reconciliation Process

For each entry in BDCC's general ledger Cash account, there should be a matching entry on its bank statement. Items in the general ledger Cash account but not on the bank statement must be reported as a reconciling item on the bank reconciliation. For each entry on the bank statement, there should be a matching entry in BDCC's general ledger Cash account. Items on the bank statement but not in the general ledger Cash account must be reported as a reconciling item on the bank reconciliation.

There are nine steps to follow in preparing a bank reconciliation for BDCC at April 30, 2020:

Step 1

Identify the ending general ledger cash balance ($21,929 from Figure 6.1) and list it on the bank reconciliation as the book balance on April 30 as shown in Figure 6.3. This represents the unreconciled book balance.

Step 2

Identify the ending cash balance on the bank statement ($24,023 from Figure 6.2) and list it on the bank reconciliation as the bank statement balance on April 30 as shown in Figure 6.3. This represents the unreconciled bank balance.

Step 3

Cheques written that have cleared the bank are returned with the bank statement. These cheques are said to be *cancelled* because, once cleared, the bank marks them to prevent them from being used again. Cancelled cheques are compared to the company's list of cash payments. Outstanding cheques are identified using two steps:

a. Any outstanding cheques listed on the BDCC's March 31 bank reconciliation are compared to the cheques listed on the April 30 bank statement.

   For BDCC, all of the March outstanding cheques (nos. 580, 599, and 600) were paid by the bank in April. Therefore, there are no reconciling items to include in the April 30 bank reconciliation. If one of the March outstanding cheques had not been paid by the bank in April, it would be subtracted as an outstanding cheque from the unreconciled bank balance on the bank reconciliation.

b. The cash payments listed in BDCC's accounting records are compared to the cheques on the bank statement. This comparison indicates that the following cheques are outstanding.

Cheque No.	*Amount*
606	$ 287
607	1,364
608	100
609	40
610	1,520

   Outstanding cheques must be deducted from the bank statement's unreconciled ending cash balance of $24,023 as shown in Figure 6.3.

Step 4

Other payments made by the bank are identified on the bank statement and subtracted from the unreconciled book balance on the bank reconciliation.

a. An examination of the April bank statement shows that the bank had deducted the NSF cheque of John Donne for $180. This is deducted from the unreconciled book balance on the bank reconciliation as shown in Figure 6.3.

b. An examination of the April 30 bank statement shows that the bank had also deducted a service charge of $6 during April. This amount is deducted from the unreconciled book balance on the bank reconciliation as shown in Figure 6.3.

Step 5

Last month's bank reconciliation is reviewed for outstanding deposits at March 31. There were no outstanding deposits at March 31. If there had been, the amount would have been added to the unreconciled bank balance on the bank reconciliation.

Step 6

The deposits shown on the bank statement are compared with the amounts recorded in the company records. This comparison indicates that the April 30 cash receipt amounting to $1,000 was deposited but it is not included in the bank statement. The outstanding deposit is added to the unreconciled bank balance on the bank reconciliation as shown in Figure 6.3.

Step 7

Any errors in the company's records or in the bank statement must be identified and reported on the bank reconciliation.

An examination of the April bank statement shows that the bank deducted a cheque issued by another company for $31 from the BDCC bank account in error. Assume that when notified, the bank indicated it would make a correction in May's bank statement.

The cheque deducted in error must be added to the bank statement balance on the bank reconciliation as shown in Figure 6.3.

Step 8

Total both sides of the bank reconciliation. The result must be that the book balance and the bank statement balance are equal or reconciled. These balances represent the adjusted balance.

The bank reconciliation in Figure 6.3 is the result of completing the preceding eight steps.

Big Dog Carworks Corp.
Bank Reconciliation
At April 30, 2020

Book balance at Apr. 30		$21,929	Bank statement balance at Apr. 30		$24,023
			Add: Outstanding deposit		1,000
			Cheque deducted in error		31
					25,054
Less: Bank charges	$6		Less: Outstanding cheques		
NSF Cheque – J. Donne	180	186	*Cheque No.*	*Amount*	
			606	$287	
			607	1,364	
			608	100	
			609	40	
			610	1,520	3,311
Adjusted book balance at Apr. 30		$21,743	Adjusted bank balance at Apr. 30		$21,743

These balances must agree.

Reconciling items in this section require journal entries to be made in the general journal to correct the unreconciled Cash balance of $21,929 in the general ledger to the reconciled balance of $21,743.

Reconciling items in this section do not require journal entries because the outstanding deposits and cheques should clear the bank next month, in May. Additionally, the other reconciling items (e.g., the $31 cheque deducted in error) must be reported to the bank so it can make the necessary corrections to Big Dog's account in the next month.

Figure 6.3: BDCC's April Bank Reconciliation

Step 9

For the adjusted balance calculated in the bank reconciliation to appear in the accounting records, an adjusting entry(s) must be prepared.

The adjusting entry(s) is based on the reconciling item(s) used to calculate the adjusted book balance. The book balance side of BDCC's April 30 bank reconciliation is copied to the left below to clarify the source of the following April 30 adjustments.

Book balance at Apr. 30		$21,929
Less: Bank charges	$ 6	
NSF Cheque – J. Donne	180	186
Adjusted book balance at Apr. 30		$21,743

Bank Service Charges Expense 6
Cash 6
To record service charges from April 30 bank reconciliation.

Accounts Receivable – J. Donne 180
Cash 180
To record NSF cheque from April 30 bank reconciliation.

It is common practice to use one compound entry to record the adjustments resulting from a bank reconciliation as shown below for BDCC.

Once the adjustment is posted, the Cash general ledger account is up to date, as illustrated in Figure 6.4.

Bank Service Charges Expense 6
Accounts Receivable – J. Donne 180
Cash 186

To record reconciling items from April 30 bank reconciliation.

Cash — Acct. No. 101

Date		Description	Debit	Credit	DR/CR	Balance
2020						
Mar.	31	Balance			DR	20673 -
Apr.	30	April cash receipts	9482 -		DR	30155 -
	30	April cash payments		8226 -	DR	21929 -
	30	Bank charge expense		6 -	DR	21923 -
	30	NSF cheque		180 -	DR	21743 -

This adjusted cash balance now agrees with the bank reconciliation.

Figure 6.4: Updated Cash Account in the General Ledger

Note that the balance of $21,743 in the general ledger Cash account is the same as the adjusted book balance of $21,743 on the bank reconciliation. Big Dog does not make any adjusting entries for the reconciling items on the bank side of the bank reconciliation since these will eventually clear the bank and appear on a later bank statement. Bank errors will be corrected by the bank.

Chapter Summary

LO 1: Describe cash and receivables, and explain their role in accounting and business.

Companies usually have significant amounts of accounts receivable and the time frame and effort required to convert receivables to cash is a cycle that calls for regular monitoring for which financial reporting plays a significant role. Cash and receivables are financial assets defined as cash or a contractual right to receive cash or another financial asset from another entity. Cash and receivables are also monetary assets because they represent a claim to cash where the amount is fixed by contract.

Cash and receivables need to be kept in balance for the company to be financially stable. Too many accounts receivable may mean a substandard credit policy, resulting in significant uncollectible accounts. Too few accounts receivable could be an indication that the company's credit policy is too restrictive, resulting in missed sales opportunities. Effective cash management is essential to ensure that any surplus cash is invested appropriately to maximize interest income and to minimize any bank loans and other borrowings.

LO 2: Describe cash and cash equivalents, and explain how they are measured and reported.

Cash is the most liquid asset and if unrestricted is usually classified as a current asset. Cash consists of coins, currency, bank accounts and petty cash funds, and negotiable instruments such as money orders, cheques, and bank drafts. Temporary **same-bank overdrafts** are usually netted with the current cash balance. Foreign currencies are reported in Canadian dollars as at the balance sheet date. Cash balances set aside for long-term purposes, such as a plant expansion project or long-term debt retirement, are classified long-term assets. Legally restricted or compensating balances are reported separately as current or non-current assets depending on the classification of the account it is supporting.

Cash equivalents are short-term, highly liquid assets with maturities no longer than three months (or ninety days) at acquisition that can be converted into known amounts of cash. Cash equivalents are usually combined with cash and reported in a single cash and cash equivalents account on the balance sheet. Examples are treasury bills, money market funds, short-term notes receivable, and guaranteed investment certificates (GICs).

LO 3: Describe receivables, identify the different types of receivables, explain their accounting treatment, and prepare the relevant journal entries.

Receivables are claims held against customers and debtors that are contractual rights with a legal claim to receive cash or other financial assets. They can be classified as current or long-term and are initially reported at their fair value. Subsequently they are measured at amortized cost. Categories include trade (accounts) receivable, notes receivable, and non-trade receivables.

Accounts receivable are usually collected within one year, so the interest component is not significant. Measurement in lieu of fair value is **net realizable value**. This is equivalent to the transaction value on the date the credit sale initially occurred and adjusted by any trade or sales discounts, sales returns, and allowances. Subsequent measurement is at cost (in lieu of amortized cost, since there is no interest component to amortize). Accounts receivable are affected by credit risk which may result in impairment of the accounts thereby reducing their net realizable value. This requires estimating an amount for uncollectible accounts that can be recorded to a valuation account called an allowance for doubtful accounts (AFDA). The AFDA is a contra account to accounts receivable and the net of the two accounts is intended to reflect the accounts receivable's net realizable value. The calculations to estimate uncollectible accounts will be completed at each reporting date using either a percentage of accounts receivable, percentages applied to the accounts receivable aging report, a percentage of credit sales, or a mix of these methods. Whenever an actual account is deemed uncollectible, it is written-off by removing it from the accounts receivables and AFDA accounts.

Notes receivable are a written promise to pay a specific sum of money on demand or on a defined future date. Payments can be a single lump sum at maturity, a series of payments, or a combination of both. Notes may be referred to as interest bearing or non-interest-bearing, even though there is always an interest component that must be recognized. For interest-bearing notes, the interest paid is equal to the stated interest rate on the note. For non-interest-bearing notes, the interest paid is the difference between the amount lent (proceeds) and the (higher) amount paid at maturity. Notes may be classified as short-term (less than twelve months) or long-term. Notes are initially measured at their fair value including transaction fees on the date that the note is legally executed. For short-term notes, since the effects of the discounted cash flows are insignificant, the net realizable value is used to approximate fair value. For long-term notes, fair value is equal to the present value of the expected future cash flows discounted by the market rate at the time of note issuance. After issuance, long-term notes receivable are measured at amortized cost, which allocates the interest income and discount or premium, if any, over the term of the note. For ASPE, either the effective interest rate method or the straight-line method can be used for amortization purposes. For IFRS, the effective interest rate method is to be used.

Non-trade receivables are amounts due for item such as income tax refunds, GST/HST receivable, amounts due from the sale of assets, insurance claims, advances to employees, amounts due from officers of the company, or dividends receivable.

To shorten the cycle of receivables to cash, companies can arrange for a borrowing (loan) from a financial institution (using the receivables as collateral) or as a sale of the receivables to another entity for cash. Sales can be either factoring or securitization. Factoring involves a financial intermediary (factor), such as a finance company that purchases the receivables and collects from the customers. Securitization is more complex; it involves a special purpose entity or vehicle (SPV) set up by a financial institution that purchases the receivables from the transferor using proceeds obtained from selling debt instruments to investors. These debt instruments are secured by the receivables received from the transferor. Companies selling receivables may or may not have continuing involvement regarding the transferred receivables. The issue becomes whether the transfer should be treated as a secured borrowing or a sale. For IFRS, receivables are treated as a sale if the risks and rewards have substantially been transferred. This is evidenced by the contractual rights to cash flows being transferred or the company continues to collect but immediately passes the proceeds on to the entity that purchased the receivables. As well, the company cannot sell or pledge the receivables to any other party. For ASPE, the focus is on control of the receivables. Three conditions must be met for control to occur and for receivables to be treated as a sale.

IFRS disclosures of receivables involve levels of significance and the nature and extent of the risks arising from them and how these risks are managed. Separate reporting is required for:

- trade accounts receivable from non-trade accounts
- current accounts receivable from non-current
- disclosures of any impairments or reversals of impairments
- details regarding any allowance accounts.

Other disclosures require details about the carrying amounts such as fair values, amortized costs or costs where applicable, and methods used for estimating uncollectible accounts. For long-term receivables, the amounts and maturity dates are to be disclosed. Information about any assets pledged or held as collateral is to be disclosed. Extensive disclosures are required for any securitization or transfers of receivables. Various types of risks such as credit, liquidity and market risks are to be disclosed. Companies following ASPE require less disclosure than IFRS companies.

LO 4: Identify the different methods used to analyze cash and receivables.

Cash and receivables are analyzed using various techniques to determine the levels of risk for uncollectible accounts as well as the company's overall liquidity or solvency. The statement of cash flows provides information about the sources and uses of cash. Receivables can be analyzed using accounts receivable aging reports, trendline analysis, and various ratio

analyses such as quick and current ratios, accounts receivable turnover ratios, and days' sales uncollected.

LO 5: Explain the differences between IFRS and ASPE for recognition, measurement, and reporting for cash and receivables.

For the most part, the IFRS and ASPE standards are similar. The differences between IFRS and ASPE arise regarding: 1) what is recognized as cash equivalents; 2) the method used to amortize interest, premiums, or discounts for long-term receivables; 3) the criteria needed for treatment as either a sale of receivables or as a secured borrowing; and 4) both the nature and extent of disclosing requirements for cash and receivables on the balance sheet.

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Exercises

EXERCISE 6–1

Below is a list of various items. For each item, determine the amount that should be reported as cash or cash equivalent. For all other items, identify the proper disclosure.

a. Chequing account balance $600,000

b. Short-term (60-day) treasury bills $22,000

c. Cash advance received from a customer $2,670

d. Cash advance of $5,000 to company executive, payable on demand

e. Refundable deposit of $13,000 paid to developer to guarantee performance on a construction contract

f. Cash restricted for future plant expansion $545,000

g. Certificate of deposit $575,000, maturing in nine months

h. Utility deposit paid to utility company $500

i. Cash advance to subsidiary $100,000

j. Post-dated cheque from customer $30,000

k. Cash restricted to maintain compensating balance requirement $115,000, considered to be significant

l. Certified cheque from customer $13,000

m. Postage stamps on hand $1,115

n. Savings account balance $545,000 and overdraft in special chequing account at same bank as normal chequing account $25,000

o. Cash held in non-current bond sinking fund $150,000

p. Petty cash fund $1,200

q. Cash on hand $13,000

r. Money-market balance at mutual fund with chequing privileges $75,400

s. NSF cheque received from the bank for a customer $8,000

EXERCISE 6–2

Below is financial information for Overachiever Ltd. The company's year-end is December 31.

i. A commercial savings account with $575,000 and a commercial chequing account with $450,000 are held at First Royal Bank. There is also a bank overdraft of $150,000 in a chequing account at the Lemon Bank. It is the only account held at the Lemon Bank.

ii. The company must maintain a minimum cash balance of $175,000 with First Royal Bank in order to retain its overdraft privileges.

iii. A separate cash fund for $2 million is restricted for the retirement of long-term debt.

iv. There are five cash floats for retail operation cash registers for $250 each.

v. Currency and coin on hand amount to $15,000.

vi. The petty cash fund has $1,500.

vii. The company has received a cheque dated January 18, 2021, in the amount of $12,500 from a customer for an amount owing as at December 31.

viii. The company has received a cheque dated January 12, 2021, in the amount of $1,800 from a customer as payment in advance for an order placed on December 27. Goods will be delivered FOB destination on January 20, 2021.

ix. There are cash advances for $15,000 paid for executive travel to occur in the first quarter of next year. These travel advances will be recovered from the travel expense reports after they travel.

x. An employee owes $2,300 that was borrowed from the company and will be withheld from his salary in January 2021.

xi. The company has invested $2.5 million in money market funds (with chequing privileges) maturing in 2 months at the Commercial Bank of British Columbia.

xii. The company has a 180-day treasury bill for $50,000. It was purchased on November 22.

xiii. The company has a 60-day treasury bill for $18,000. It was purchased on December 15.

xiv. The company holds commercial paper for $1.56 million from Ace Furniture Co., which is due in 145 days.

xv. The company acquired 1,000 shares of Highland Ltd. for $3 per share on July 31 and is holding them for trading. The shares are still on hand as at December 31 have a fair value of $4.06 per share on December 31, 2020.

Required:

a. Prepare a partial statement of financial position (balance sheet) as at December 31, 2020, reporting any cash balances.

b. For any items not reported in (a) above, indicate the proper way to disclose them.

EXERCISE 6–3

Amy Glitters Ltd. provides you with the following information about its accounts receivable at December 31, 2020:

Due from customers, of which $30,000 has been pledged as security for a bank loan	$275,000
Instalment accounts due after December 31, 2021	50,000
Advances to employees	2,500
Advances to a related party (originated in 2015)	30,000
Overpayments made to a supplier	6,000

Required: Prepare a partial classified balance sheet at December 31, which is their year-end. Make the required disclosures in parentheses after the line item account.

EXERCISE 6–4

From July 1 to August 30, 2020, Busy Beaver Ltd. completed the following transactions:

On July 1, Busy Beaver sold 40 computers at a unit price of $3,000 to Heintoch Corp., terms 1/15, n/30. Average cost for these computers was $1,500. Busy Beaver also paid the freight costs of $3,200 cash. On July 5, Heintoch Corp. returned for full credit three damaged computers from the July 1 shipment. These were not returned to inventory. Heintoch agreed to pay the $240 freight cost to return the computers to Busy Beaver. On July 10, Busy Beaver received payment from Heintoch for the full amount owed from the July transactions. On July 14, Busy Beaver purchased 50 computers on account from Correl Computers Ltd. for $1,500 per unit plus freight for $4,000. On July 17, Busy Beaver sold $224,000 in computers and peripherals to Perkins Store, terms 1.5/10, n/30. Cost for these computers was $112,000. On July 26, Perkins Store paid Busy Beaver for half of its July purchases. On August 30, Perkins Store paid Busy Beaver for the remaining half of its July purchases. Busy Beaver uses the perpetual inventory system.

Required:

a. Prepare the entries for Busy Beaver Computers Ltd., assuming the gross method is used to record sales and sales discounts.

b. Assume that Heintoch has access to a bank line of credit facility at a rate of 8%. Is it a good idea to pay within the discount period? Explain your answer using data from the question.

c. Prepare the entries for July and August, assuming Busy Beaver is an IFRS company that uses the net method to record sales and sales discounts. Also assume that on August

30 year-end, Busy Beaver estimates sales returns and allowances to be $44,000 for the year just ended, which it considers to be significant. The unadjusted balance of its refund liability account prior to the July and August transactions was $23,000 credit.

EXERCISE 6–5

The following information is available for Inverness Ltd.'s second year in business:

- Opening merchandise inventory is $35,000.
- Goods are marked to sell at 35% above cost.
- Merchandise purchased totalled $600,000.
- Collections from customers are $420,000.
- Ending merchandise inventory is $225,000.
- Opening accounts receivable balance is $0.
- Ending accounts receivable balance is $85,000.

Required:

a. Estimate the ending accounts receivable that should appear in the ledger. Calculate any shortages, if any. Assume that all sales are made on account.

b. What controls can be put in place to prevent theft?

EXERCISE 6–6

The trial balance before adjustment of Cyncrewd Inc. shows the following balances:

	Dr.	Cr.
Accounts receivable	$225,000	
Allowance for doubtful accounts (AFDA)	2,340	
Credit sales		375,000
Sales returns	35,000	

Required:

a. Give the entry for bad debt expense for the current year assuming:

- The allowance should be 4% of gross accounts receivable.
- Historical records indicate that based on accounts receivable aging the following statistics apply:

	Balance	Percentage Estimated to be Uncollectible
0–30 days outstanding	$141,000	1%
31–60 days outstanding	53,500	3%
61–90 days outstanding	10,500	8%
Over 90 days outstanding	20,000	14%

- Allowance for doubtful accounts is $2,340, but it is a credit balance, and the allowance should be 2% of gross accounts receivable.

b. What could account for the unadjusted debit balance in the AFDA account for $2,340?

EXERCISE 6–7

At January 1, 2020, the credit balance of Reimer Corp.'s allowance for doubtful accounts was $575,000. During 2020, the bad debt expense entry was based on a percentage of net credit sales. Net sales for 2020 were $16 million, of which 75% were on account. Based on the information available at the time, the 2020 bad debt expense was estimated to be 1% of net credit sales. During 2020, uncollectible receivables amounting to $40,000 were written off against the allowance for doubtful accounts. The company has estimated that at December 31, 2020, based on a review of the aged accounts receivable, the allowance for doubtful accounts would be properly measured at $500,000.

Required:

a. Prepare a schedule calculating the balance in Reimer Corp.'s allowance for doubtful accounts at December 31, 2020. Prepare any necessary journal entry at year-end to adjust the allowance for doubtful accounts to the required balance.

b. If accounts receivable balance at December 31 was $50,950,000, prepare a partial classified balance sheet at December 31, 2020 for Reimer. What is the net accounts receivable balance intended to measure?

c. Under what conditions is using the direct write-off method justified?

EXERCISE 6–8

On May 1, 2020, Effix Ltd. provided services to Harper Inc. in exchange for Harper's $336,000, five-year, zero-interest-bearing note. The implied interest is 8%. Effix's year-end is December 31.

Required:

a. Prepare Effix's entries for the note, the interest entries over the five years and the collection of the note at maturity.

b. Using present value calculations prove that the note yields 8%.

c. Prepare a partial classified balance sheet as at December 31, 2021. What would be the unamortized discount/premium, if any? How would the classification of the note receivable differ on the partial classified balance sheet as at December 31, 2024?

d. If an appropriate market rate of interest for the note receivable is not known, how should the transaction be valued and recorded on December 31, 2020?

EXERCISE 6–9

Below are three unrelated scenarios:

i. On July 1, a one-year note for $120,000 was accepted in exchange for an unpaid accounts receivable for $120,000. Interest for 5% would be payable at maturity.

ii. On July 1, a one-year non-interest-bearing note for $110,250 was accepted in exchange for an unpaid accounts receivable for $105,000. The market rate of interest at that time was 5%.

iii. On July 1, a one-year 10% note for $115,000 was accepted in exchange for unpaid accounts receivable $104,545 from a higher-risk customer. The customer's borrowing interest rate at that time was 10%.

Required:

a. Prepare the entries to recognize the notes payable and accrued interest, if any. The year-end is December 31.

b. Assume that for item (iii) above, the borrower faces financial difficulties and can only pay 75% of the note's maturity amount. After a thorough analysis, the creditor determines that the 25% remaining is uncollectible. Prepare the entry for the note at maturity.

EXERCISE 6–10

On January 1, Harrison Corp. sold used vehicles with a cost of $78,000 and a carrying amount of $12,600 to Aberdeen Ltd. in exchange for a $18,000, four-year non-interest-bearing note receivable. The market rate of interest for a note of similar risk is 7.5%. Harrison follows IFRS and has a year-end of December 31.

Required:

a. Prepare the entries to record the sale of equipment in exchange for the note, the interest for the first year, and the collection of the note at maturity.

b. Prepare the interest entry for the first year assuming that Harrison follows ASPE and uses the straight-line method for interest.

EXERCISE 6–11

On July 1, 2020, Helim Ltd. assigns $800,000 of its accounts receivable to Central Bank of Tasmania as collateral for a $500,000 loan that is due October 1, 2020. The assignment agreement calls for Helim to continue to collect the receivables. Central Bank assesses a finance fee of 3.5% of the accounts receivable, and interest on the loan is 7.5%, a realistic rate for a note of this type and risk.

Required:

a. Assuming the transaction does not qualify as a sale, prepare the July 1, 2020 journal entry for Helim Ltd.

b. Prepare the journal entry for Helim's collection of $750,000 of the accounts receivable during the period July 1 to September 30, 2020.

c. On October 1, 2020, Helim paid Central Bank the entire amount that was due on the loan.

d. Explain the differences between IFRS and ASPE regarding the sale of receivables compared to a secured borrowing.

e. Explain if management would prefer the transaction to be reported as a sale of receivables or a secured borrowing and why.

EXERCISE 6–12

Browing Sales Ltd. sells $1,450,000 of receivables with a fair value of $1,500,000 to Finnish Trust in a securitization transaction that meets the criteria for a sale. Browing receives the full fair value of the receivables and agrees to continue to service them. The fair value of the service liability component is estimated as $250,000.

Required: Prepare the journal entry for Browing to record the sale.

EXERCISE 6–13

Jertain Corporation factors $800,000 of accounts receivable with Holistic Financing Inc. on a with recourse basis. Holistic Financing will collect the receivables. The receivable records are transferred to Holistic Financing on February 1, 2020. Holistic Financing assesses a finance charge of 2.5% of the amount of accounts receivable and also reserves an amount equal to 4% of accounts receivable to cover probable adjustments. Jertain prepares financial statements under ASPE and has a year-end of December 31.

Required:

a. Assuming that the conditions for a sale are met, prepare the journal entry on February 1, 2020, for Jertain to record the sale of receivables, assuming the recourse obligation has a fair value of $10,000.

b. What effect will the factoring of receivables have on calculating the accounts receivable turnover for Jertain?

EXERCISE 6–14

On July 1, 2020, Brew It Again Ale Co. sold excess land in exchange for a three-year, non-interest-bearing promissory note in the face amount of $530,000. The land's carrying value is $250,000.

On September 1, Brew It Again Ale rendered services in exchange for a six-year promissory note having a face value of $500,000. Interest at a rate of 3% is payable annually.

For both transactions, the customers are able to borrow money at 11% interest. Brew It Again Ale's cost of capital is 7.4%.

On October 1, 2020, Brew It Again Ale agreed to accept an instalment note from one if its

customers, in partial settlement of accounts receivable that were overdue. The note calls for five equal payments of $12,000, including the principal and interest due, on the anniversary of the note. The implied interest rate on this note is 12%.

Required:

a. Prepare the journal entries to record the three notes receivable for Brew It Again Ale Co. for 2020 fiscal year.

b. Prepare an effective-interest amortization table for the instalment note obtained in partial collection of accounts receivable. Brew It Again Ale's year-end is December 31. Prepare the year-end journal entry and the first cash payment entries for the first year.

c. From Brew It Again Ale's perspective, what are the advantages of an instalment note compared with a non-interest-bearing note?

EXERCISE 6–15

The following information below relates to Petervale Corporation for 2020:

- The beginning of the year net Accounts Receivable balance was $123,000.
- Net sales for the year were $1,865,000. Credit sales were 54.8% of the total sales and no cash discounts are offered.
- Collections on accounts receivable during the year were $863,260, and uncollectible accounts written off in 2020 were $12,500. The AFDA account ending balance for 2020 needed no further adjustment for estimated uncollectible accounts at year-end.

Required:

a. Calculate Petervale Corporation's accounts receivable turnover ratio for the year. How old is the average receivable?

b. Use the turnover ratio calculated in part (a) to analyze Petervale Corporation's liquidity. The turnover ratio last year was 5.85.

EXERCISE 6–16

Jersey Shores Ltd. sold $1,250,000 of accounts receivable to Fast Factors Inc. on a without recourse basis. The transaction meets the criteria for a sale, and no asset or liability components of the receivables are retained by Jersey Shores. Fast Factors charges a 3.5% finance fee and retains another 5% of the total accounts receivable for estimated returns and allowances.

Required:

a. Prepare the journal entries for both companies.

b. Assume instead, that Jersey Shores follows ASPE and sells the accounts receivable with recourse. The recourse obligation has a fair value of $7,400. Prepare the journal entries for the sale by Jersey Shores.

EXERCISE 6–17

Opal Co. Ltd. transfers $400,000 of its accounts receivable to an independent trust in a securitization transaction on July 11, 2020, receiving 95% of the receivables balance as proceeds. Opal will continue to manage the customer accounts, including their collection. Opal estimates this obligation has a fair value of $14,000. In addition, the agreement includes a recourse provision with an estimated value of $12,000. The transaction is to be recorded as a sale.

Required: Prepare the journal entry on July 11, 2020, for Opal Co. Ltd. to record the securitization of the receivables, assuming it follows ASPE.

Chapter 7

Inventory

Too Much Inventory

BlackBerry Ltd. faced a rough week in late September 2013. Within a seven-day period, the company not only announced a potential buyer for the company but also reported a quarterly loss of close to a billion dollars. The loss was generated primarily by write-down of BlackBerry 10 handsets (BB 10), the company's new flagship product. Prior to this result, the company had been struggling to keep up with other smartphone competitors, and sales of the new phone had not met expectations. As a result of the news reported during this week, the company's share price fell over 20 percent on the market.

When the company reported its annual financial results for the year ended March 1, 2014, the gross profit on hardware sales was actually negative. In fact, it was – $2.5 billion. How can a company report a negative gross profit? In BlackBerry's case, a further write-down of the BB 10 handset occurred in the third quarter, resulting in total write-downs for the year of approximately $2.4 billion. As described in the company's *Management Discussion and Analysis of Financial Condition* report, evaluations of inventory require an assessment of future demand assumptions (BlackBerry Ltd., 2014). Sales of the new BlackBerry product were significantly lower than expected, resulting in a large number of unsold handsets. As the goal of financial reporting is to portray the economic truth of a company, BlackBerry Ltd. had no choice but to accept the reality that their inventory of BB 10 phones could not be sold for the amount reported on the balance sheet. The company described the causes of the write-down as these: the maturing smartphone market, very intense competition, and uncertainty created by the company's strategic review process.

Regardless of the causes, it was clear that this massive write-down had a profound effect on BlackBerry Ltd.'s financial results and share price. Although the write-down was a symptom of other deeper problems in the company, it is clear that management of inventory levels can be a significant issue for many businesses. For the accountant, understanding the importance of the reported inventory amount is paramount, and critically analyzing the valuation assumptions is essential to fair reporting of inventory balances.

(Sources: BlackBerry Ltd., 2014; Damouni, Kim & Leske, 2013)

Chapter 7 Learning Objectives

After completing this chapter, you should be able to:

LO 1: Define *inventory* and identify those characteristics that distinguish it from other assets.

LO 2: Identify the types of costs that should be included in inventory.

LO 3: Identify accounting issues and treatments applied to inventory subsequent to its purchase.

- LO 3.1: Describe the differences between periodic and perpetual inventory systems.
- LO 3.2: Identify the appropriate criteria for selection of a cost flow formula and apply different cost flow formulas to inventory transactions.
- LO 3.3: Determine when inventories are overvalued and apply the lower of cost and net realizable value rule to write-down those inventories.

LO 4: Describe the presentation and disclosure requirements for inventories under both IFRS and ASPE.

LO 5: Identify the effects of inventory errors on both the balance sheet and income statement and prepare appropriate adjustments to correct the errors.

LO 6: Calculate estimated inventory amounts using the gross profit method.

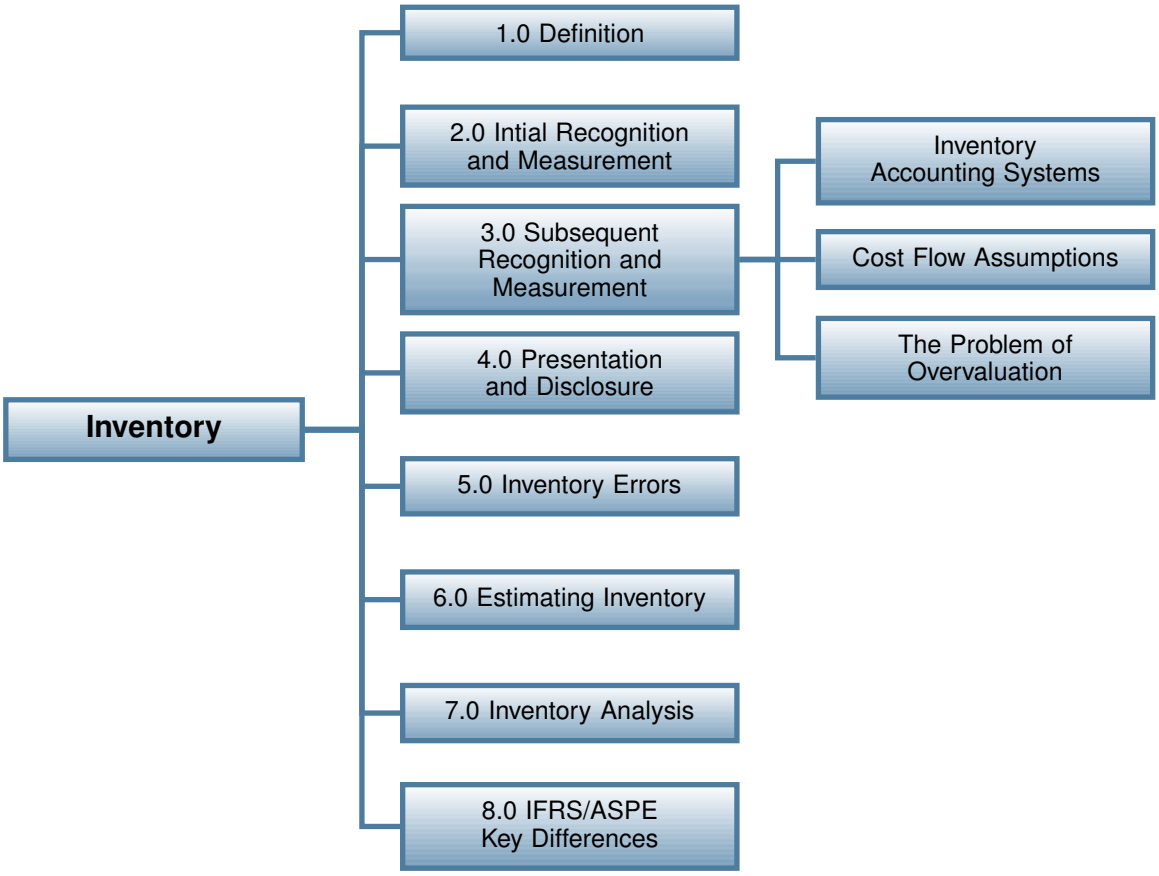
LO 7: Calculate gross profit margin and inventory turnover period and evaluate the significance of these results with respect to the profitability and efficiency of the business's operations.

LO 8: Identify differences in accounting for inventories between ASPE and IFRS.

Introduction

The nature of economic activity has been evolving rapidly over the last two decades. The knowledge economy is becoming an increasingly significant component of the world's gross domestic product. But even in the wired world of services and data, there is always a need for physical products. The concept of retail business may be changing through the development of online shopping, but consumers still expect to receive their goods eventually. This chapter will deal with some accounting issues surrounding the acquisition, production, and sale of inventory items, and it will discuss some of the problems that can arise when errors are made in the recording of inventory items.

Chapter Organization



7.1 Definition

IFRS defines *inventories* as assets that are:

- held for sale in the ordinary course of business,
- in the process of production for such sale, and
- in the form of materials or supplies to be consumed in the production process or in the rendering of services (International Accounting Standards, n.d., 2.6).

The key feature of inventory is that it is held for sale in the normal course of business, which differentiates it from other tangible assets, such as property, plant, and equipment, that are only sold only when their productive capacity is exhausted or no longer required by the business.

The definition also recognizes that for manufacturing businesses, inventory can take various forms throughout the production process. Raw materials, work in process, and finished goods are all considered inventory. For many businesses, inventory can represent a significant asset. In 2013, Bombardier Inc., a manufacturer of airplanes and trains, reported total inventory of $8.2 billion, which represented over 28 percent of the company's total assets. In the same year, Loblaw Companies Ltd., a grocery retailer, reported total inventory of over $2 billion.

It is not surprising that, given its significance, inventory can also be the source of various types of accounting problems. In 2014, BlackBerry had to write off approximately $2.4 billion of its inventory due to slow sales resulting from competitive pressures. In a more troubling series of events, inventories of DHB Industries Inc., a manufacturer of body armour for the military and police, were overstated by approximately $47 million in 2004. The accounting errors included the falsification of amounts included in work in process, and raw materials and a failure to write off significant amounts of obsolete raw materials. These accounting errors led to a Securities and Exchange Commission (SEC) investigation and penalties.

7.2 Initial Recognition and Measurement

An obvious question that arises when considering inventory is, what costs should be included? In answering this question, IFRS has provided some general guidance: the cost of inventories shall include all costs of purchase, costs of conversion, and "other costs incurred in bringing the inventories to their present location and condition" (International Accounting Standards, n.d., 2.10).

Costs of Purchase

Purchase costs include not only the direct purchase price of the goods but also the costs to transport the goods to the company's premises and any nonrecoverable taxes or import duties paid on the purchase. As well, any discounts or rebates earned on the purchase should be deducted from the cost of the inventory.

One issue that often needs to be considered when determining inventory costs at the end of an accounting period is the matter of goods in transit. Goods may be shipped by a seller before the end of an accounting period but are not received until after the end of the purchaser's accounting period. The question of who owns the goods while they are in transit obviously needs to be addressed. More specifically, three issues arise from this question:

1. Who pays for the shipping costs?
2. Who is responsible for the loss if goods are damaged in transit?
3. When should the transfer of ownership be recorded in the accounting records?

To answer these questions, the legal term *free on board* (FOB) needs to be understood. When goods are shipped by a seller, the invoice will usually indicate that the goods are shipped either *FOB shipping* or *FOB destination*. If the goods are FOB shipping, the purchaser is assuming legal title as soon as the goods leave the seller's warehouse. This means the purchaser is responsible for shipping costs as well as for any damage that occurs in transit. As well, the purchaser should record these goods in his or her inventory accounts as soon as they are shipped, even if they don't arrive until after the end of the accounting period. If the goods are FOB destination, the purchaser is not assuming ownership of the goods until they are received. This means that the seller would be responsible for shipping costs and any damage that occurs in transit. As well, the purchaser should not include these goods in his or her inventory until they are actually received. Likewise, the seller would still include the goods in his or her inventory until they are actually delivered to the purchaser. Accountants and auditors pay close attention to the FOB terms of purchases and sales near the fiscal period end, as these terms can affect the accurate recording of the inventory amount on the balance sheet.

Costs of Conversion

Another more complex issue arises in the determination of the cost of manufactured inventories. As noted above, IAS 2-10 requires the inclusion of costs to convert inventories into their current form. For a manufacturing company, this means that inventories will include raw materials, work in progress, and finished goods. For raw materials, the cost is fairly easy to determine. However, for work in progress and finished goods, the determination of which costs to include becomes more complicated. Although labour and variable overhead costs, such as utilities consumed by operating factory machines, are fairly easy to associate directly with the production of a product, the treatment of other fixed overhead costs is not as clear. It can be argued that costs such as factory rent should not be included in the inventory cost because this cost will not vary with the level of production. However, it can also be argued that without the payment of rent, the production process could not occur. For management accounting purposes, a variety of methods are used to account for overhead costs. For financial accounting purposes, however, it is clear that all conversion costs need to be included in inventory. Thus, the financial accountant will need to determine the best way to allocate fixed overhead costs. In normal circumstances, the fixed overhead costs are simply allocated to each unit of inventory produced in an accounting period. However, if production levels are significantly higher or lower than normal levels, then the accountant needs to apply some judgment to the situation. If fixed overhead costs are applied to very low levels of production, the result would be inventory that is carried at a value that may be higher than its realizable value. For this reason, fixed overhead costs should be allocated to low production volumes using the rate calculated on normal production levels, with unallocated overhead being expensed in the period. This is done to avoid reporting misleadingly high inventory levels. On the other hand, if abnormally high production occurs, the fixed overhead costs are allocated using the actual production level. This would result in lower per-unit costs for the inventory produced. This situation could result in higher profits, as presumably some of the excess production would be held in inventory at the end of the year. A manager may be tempted to increase production strictly for the purpose of increasing current earnings. Although this does not violate any accounting standard, the accountant should be careful

in this situation, as there may be a risk of obsolete inventory as a result of the overproduction, or there may be other forms of income-maximizing earnings management occurring.

Other Costs

IAS 2–15 indicates that other costs can be included in inventory only to the extent "they are incurred in bringing the inventories to their present location and condition." The standard provides examples such as certain non-production overhead costs or product-design costs for specific customers. Clearly, the accountant would need to exercise judgment in allocating these kinds of costs to inventory. The standard also clearly defines some costs that should *not* be included in inventories but rather expensed in the current period. These costs include the following:

- Abnormal amounts of wasted materials, labour, or other production costs
- Storage costs, unless those costs are necessary in the production process before a further production stage
- Administrative overheads that do not contribute to bringing inventories to their present location and condition
- Selling costs

As well, IAS 23–Borrowing Costs describes some limited and specific circumstances when interest costs can be included in inventory. IAS 2-19 also discusses inventory of a service provider. An example of this would be a professional services firm, such as an accounting practice. These types of firms will often track work in progress on their balance sheets. These accounts should include only direct costs (which would primarily consist of direct and supervisory labour) and attributable overheads. These costs should not include the costs of any administrative or sales personnel or other non-attributable overheads, nor should they include any mark-ups on costs that might be included in standard charge rates for customers.

7.3 Subsequent Recognition and Measurement

Once the initial inventory amounts have been determined and recorded, a number of subsequent accounting decisions need to be made. These decisions can be summarized in the following questions:

- What type of inventory accounting system should be used?
- What cost flow assumption should be applied?