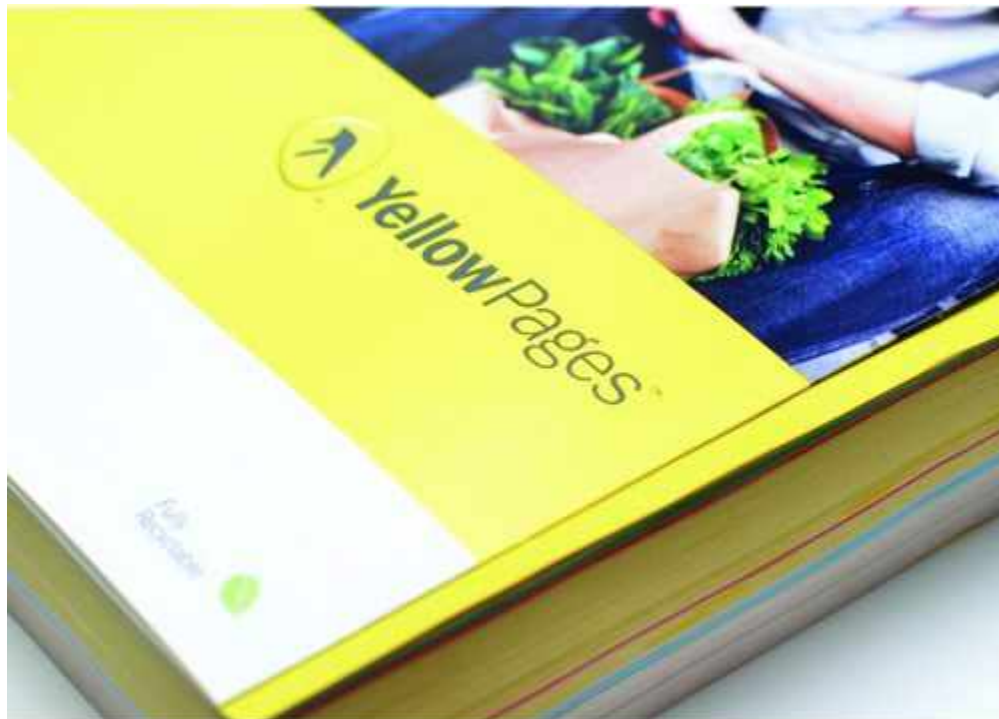


CHAPTER 12

Intangible Assets and Goodwill



AnthonyRosenberg/Getty Images

Intangible Impairment Is on the Line

The Yellow Pages print directory has been in Canada since 1908, but the phone book's days may be numbered as most Canadians look up businesses online. Yellow Pages Ltd. still prints phone directories, but it has moved into the electronic world with services such as mobile apps to find local restaurants or buy a house. Three quarters of the company's revenues are now digital, but it is struggling to find a successful business model after the company was spun off by Bell Canada in 2002.

In 2017, Yellow Pages Ltd.'s overall revenues dropped by 8.8% from the year before, to \$745.9 million, and its print revenues fell by more than 22% from the year before. In January 2018, the company laid off 500 employees, in addition to the 300 positions it cut in October 2015.

The falling value of Yellow Pages is reflected in the company's assessment of the impairment of its goodwill and other intangible assets. In 2016, the company recorded \$600 million in impairment of intangible assets and goodwill, and it recorded an impairment loss of another \$507 million in 2017, which represented 68% of revenues that year.

IFRS requires goodwill to be tested for impairment annually at the cash-generating unit (CGU) level—the smallest identifiable group of assets that generate cash. “At each reporting date, Yellow Pages Limited determines whether there are any indications that the carrying values of its tangible and intangible assets are impaired. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the

impairment loss, if any,” the company says about its accounting policies in the notes to its financial statements.

“As a result of a shortfall in revenues in the Yellow Pages and Other CGUs compared to previous estimates and uncertainty with regards to future long-term trends, the Company revised estimates of future cash flows to reflect recent historical trends as the basis,” the company's 2017 annual report states. “In conjunction, the Company recorded an impairment loss of \$480 million in the Yellow Pages CGU and an impairment loss of \$20 million in a business within the Other CGUs group as the carrying values of these CGUs exceeded their recoverable amounts. The impairment loss was applied to trademarks and non-competition agreements of the Yellow Pages CGU and primarily to goodwill of the Other CGUs.”

In 2017, more than half of the impairment writedown, \$360.6 million, was for trademarks and domain names. Yellow Pages used to categorize its trademarks as having indefinite lives. But after two consecutive years of impairment losses, and because of uncertainty regarding future cash flows, in 2017 the company reclassified its trademarks as having a finite life, and their useful lives were reduced to 10 years, using straight-line amortization.

Sources: Ross Marowits, The Canadian Press, “*Yellow Pages Ltd. Cuts Another 500 Jobs as It Struggles to Survive*,” CTVNews.ca, January 16, 2018; Yellow Pages Ltd. 2016 and 2017 annual reports; Yellow Pages Ltd. corporate website.

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

CHAPTER OUTLINE

The chapter headings related to the learning objective are:

CPA COMPETENCIES

Competencies addressed by each learning objective are as follows:

<p>1. Understand the importance of goodwill and intangible assets from a business perspective and describe their characteristics.</p>	<p>The Business Importance and Characteristics of Goodwill and Intangible Assets</p> <ul style="list-style-type: none"> • Characteristics of goodwill • Characteristics of intangible assets 	<p>1.1.1, 1.1.2, 1.1.4</p>
<p>2. Identify and apply the recognition and measurement requirements for purchased intangible assets.</p>	<p>Recognition and Measurement of Intangible Assets at Acquisition</p> <ul style="list-style-type: none"> • Purchased intangibles • Intangibles purchased in a business combination • Prepayments 	<p>1.1.1, 1.1.2, 1.2.1, 1.2.2, 1.2.3</p>
<p>3. Identify and apply the recognition and measurement requirements for internally developed intangible assets.</p>	<p>Recognition and Measurement of Internally Developed Intangible Assets</p> <ul style="list-style-type: none"> • Identifying research and development phase activities • Accounting for research phase costs • Accounting for development phase costs • Costs included and excluded 	<p>1.1.1, 1.1.2, 1.1.3, 1.2.1, 1.2.2, 1.2.3</p>
<p>4. Explain how intangible assets are accounted for after initial recognition.</p>	<p>Recognition and Measurement of Intangible Assets after Acquisition</p> <ul style="list-style-type: none"> • Limited-life intangibles • Indefinite-life intangibles 	<p>1.1.1, 1.1.2, 1.2.1, 1.2.2, 1.2.3</p>

LEARNING OBJECTIVES	CHAPTER OUTLINE	CPA COMPETENCIES
5. Identify and explain the accounting for specific types of intangible assets.	Specific Intangibles <ul style="list-style-type: none"> • Marketing-related intangible assets • Customer-related intangible assets • Artistic-related intangible assets • Contract-based intangible assets • Technology-based intangible assets 	1.1.1, 1.1.2, 1.2.1, 1.2.2
6. Explain and account for impairment and derecognition of limited-life and indefinite-life intangible assets.	Impairment and Derecognition <ul style="list-style-type: none"> • Impairment of limited-life intangibles • Impairment of indefinite-life intangibles • Derecognition 	1.1.1, 1.1.2, 1.2.1, 1.2.2, 1.2.3
7. Explain how goodwill is measured and accounted for after acquisition.	Goodwill—Recognition and Measurement <ul style="list-style-type: none"> • Internally generated goodwill • Purchased goodwill • Bargain purchase • Valuation after acquisition 	1.1.1, 1.1.2, 1.2.1, 1.2.2
8. Explain and account for impairment of goodwill.	Goodwill—Impairment	1.1.1, 1.2.1, 1.2.2, 1.2.3, 1.3.2
9. Identify the types of disclosure requirements for intangible assets and goodwill and explain the issues in analyzing these assets.	Presentation, Disclosure, and Analysis <ul style="list-style-type: none"> • Presentation and disclosure • Analysis 	1.1.1, 1.1.2, 1.3.2, 1.4.1, 1.4.2, 1.4.4, 5.1.1, 5.1.2
10. Identify differences in accounting between IFRS and ASPE.	IFRS/ASPE Comparison <ul style="list-style-type: none"> • A comparison of IFRS and ASPE • Looking ahead 	1.1.4

After studying [Appendix 12A](#), you should be able to:

11. Explain and apply basic approaches to valuing goodwill.	Appendix 12A: Valuing Goodwill <ul style="list-style-type: none"> • Excess-earnings approach • Total-earnings approach • Other valuation methods 	1.1.1, 1.1.2, 1.2.3, 1.2.4, 1.4.4, 1.4.5, 5.4.1, 5.4.2, 5.4.3
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Preview of Chapter 12

The valuation of intangible assets and goodwill is not always clear-cut. For example, in conjunction with the changeover from pre-IFRS GAAP to IFRS, several Canadian companies had very large writedowns relating to goodwill impairment. Goodwill is an asset whose value is typically recognized only when it is acquired in a business combination. This chapter explains the basic conceptual and reporting issues related to intangible assets and their close relative, goodwill.

The Business Importance and Characteristics of Goodwill and Intangible Assets

LEARNING OBJECTIVE 1

Understand the importance of goodwill and intangible assets from a business perspective and describe their characteristics.

Lululemon athletica inc.'s and **Roots Canada**'s most important asset is not their store fixtures, it is their brand image. In lululemon's 2017 annual report, the company notes that it is a “designer, distributor, and retailer of healthy lifestyle inspired athletic apparel ... marketed under the lululemon and ivivva brand names.” It discusses the importance of its “premium brand image” and its intellectual property, and states that “distinctive marks that are readily identifiable is an important factor in building our brand image.” The annual report also states, “Competition in the athletic apparel industry is principally on the basis of brand image and recognition as well as product quality, innovation, style, distribution, and price” and that “our success depends on the value and reputation of our brand.” However, if you look at lululemon's 2017 financial statements, the brand name is not listed as a key part of its \$24.7 million in recorded goodwill and intangible assets. The company's financial statements list goodwill and reacquired franchise rights as its two most significant assets of this type.

Similarly, the major asset of **Coca-Cola** is not its plant facilities, it's the secret formula for making Coke. **BCE**'s most important asset is not its Internet connection equipment, it's the subscriber base of almost 21 million customers. Our economy is increasingly dominated by information and service providers, and their major assets are often intangible in nature. Identifying and measuring these intangibles are often difficult. As a result, many intangibles

have not been captured on companies' statements of financial position. However, goodwill and intangible assets remain a key focus of companies and standard setters around the globe.

Data Analytics Although the true value of intangible assets is often not reflected on company financial statements, it does not mean that companies should ignore these assets. For example, many retailers are finding that information from their “bricks and mortar” stores can be used to improve their customers' shopping experience (and spending!). So for example, some companies are using “Big Data” analytics to take advantage of customers' experience both in person and online to identify key trends and behaviours that affect their businesses most. Retailers can assess whether their key performance indicator is driven by weather, in-store promotions, location, supply chain (their ability to fill orders promptly), or other factors by comparing key combinations of category, supplier, and brand day by day or seasonally. In short, data collection and analysis may be a key internally developed intangible asset for retailers and other companies. Perhaps it is no coincidence that **Google** and **Amazon** have two of the three most valuable brands today, as we will discuss later in this chapter.¹

Characteristics of Goodwill

Goodwill is difficult to imagine because it's not a tangible asset, it can only be recognized when a business is acquired, and it cannot be purchased or sold separately—it can only be sold when a business is sold. **Goodwill** is “an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized.”²

How is goodwill calculated? In a business combination where **one company purchases 100% of another business**, the fair value of what is given up by the acquiring entity (the **acquirer**) is allocated to the various assets and liabilities it receives.³ All identifiable assets acquired and liabilities assumed (the **identifiable net assets**) are recognized at their fair values at the acquisition date. **The difference between the fair value of the consideration transferred to acquire the business and the fair value amounts assigned to the identifiable net assets is the amount recognized as goodwill.** This is shown in **Illustration 12.1**.

Fair value of consideration transferred—any one or a combination of cash, other assets, notes payable at a later date, common or preferred shares or other equity instruments, or contingent consideration

– **Fair value of all identifiable assets acquired and liabilities assumed**, whether or not previously recognized by the acquired entity

= **GOODWILL**

ILLUSTRATION 12.1 Measurement of Goodwill

As you can tell from **Illustration 12.1**, goodwill is an unidentified excess or residual amount, and it can only be calculated in relation to the business as a whole.

Characteristics of Intangible Assets

What are intangible assets? Broadly defined, **intangible assets** are identifiable nonmonetary assets that lack physical substance. Intangible assets must have these three characteristics—**identifiability**, **non-physical existence**, and a **nonmonetary nature**—so that only appropriate assets are recognized as intangibles.

1. Intangible assets are identifiable. An asset is **identifiable** if it has at least one of the following characteristics:

- **Law** It results from contractual or other legal rights.
- It is separable—it can be separated or divided from the entity and sold, transferred, licensed, rented, or exchanged, either by itself or in combination with another contract, identifiable asset, or liability.⁴

For example, the right to lease space at a favourable rate arises from a contractual arrangement and the right may or may not be transferable to others. A subscription list of a successful magazine or newspaper has value in contributing to future revenue streams and is saleable. These are examples of identifiable intangibles that are given separate recognition. Note also that, in order to recognize these items as assets, the company has to be able to control access to the future benefits and restrict others' access. One way to control access to the benefits is having legally enforceable rights; another is having the ability to enter into exchange transactions related to the intangible.

Goodwill and some other non-physical items of value, on the other hand, are not separable from the rest of the entity, and control over the future benefits does not result from contractual or legal rights. For example, the synergies of a combined sales force or a superior management team can be identified as having value. However, these items cannot be recognized separately as intangible assets because they cannot be separated from the entity in order to exchange them with others, nor can they be controlled through contractual or other legal rights. They are therefore considered part of goodwill.

While it is important to distinguish one identifiable intangible from another, financial reporting objectives are not well met if every identifiable intangible is recognized separately. At a minimum, the ones that have similar characteristics (such as continuity, stability, and risk) are grouped and recognized together. Because knowledge-based and high-technology companies with large investments in such “soft” assets are an important part of our modern economy, how accounting treats such intangibles is a major issue.

2. Intangible assets lack physical substance. Unlike assets such as property, plant, and equipment (PP&E), the value of intangible assets comes from the rights and privileges granted to the company using them. Sometimes it is difficult to tell whether a particular asset is tangible and is therefore an item of PP&E, or whether it is intangible and covered by accounting standards for intangible assets. Consider the example of computer software that is used for a key piece of equipment on an assembly line. What is the asset? Is it the intangible software, or is it the related tangible asset of equipment? In general, if the intangible component is needed for the physical component to work, it is treated as an item of PP&E. If the intangible component is not an integral part of the physical object, then it is classified separately as an intangible asset.

3. Intangible assets are nonmonetary. Assets such as accounts receivable and long-term loans lack physical substance, but they are not classified as intangible assets. They are **monetary assets** whose value comes from the right (or claim) to receive fixed or

determinable amounts of money in the future. Intangible assets do not contain any such right or claim.

In most cases, items that meet the definition of an intangible asset provide **economic benefits** over a period of years. The benefits may be in the form of revenue from selling products or services, a reduction in future costs, or other economies. They are normally classified as long-term assets. Examples include such widely varied assets as patents, copyrights, franchises or licensing agreements, trademarks or trade names, secret formulas, computer software, technological know-how, prepayments, and some development costs. Specific intangibles are discussed later in the chapter.

Recognition and Measurement of Intangible Assets at Acquisition

LEARNING OBJECTIVE 2

Identify and apply the recognition and measurement requirements for purchased intangible assets.

The **recognition criteria** for intangible assets are identical to those for PP&E assets and both are **measured at cost** at acquisition as discussed in [Underlying Concept 12.1](#). For example, each type of asset can be recognized only when it meets the same two recognition criteria:

1. It is probable that the entity will receive the expected future economic benefits.
2. The asset's cost can be reliably measured.⁵

Underlying Concept 12.1

The cost concepts introduced in [Chapter 10](#) for property, plant, and equipment are also appropriate for determining the cost of purchased intangible assets.

In applying these criteria, however, management has to consider that there is often more uncertainty about the future economic benefits associated with intangible assets than with tangible capital assets.

Purchased Intangibles

Intangible assets may be purchased outright, they can be acquired as part of a business combination, or they can be developed internally.

As indicated above, intangible assets purchased from another party are **measured at cost**. Because the amount paid is based on the company's expectations about receiving future economic benefits from the asset, the “probability” criterion for recognition is met. Cost includes the acquisition cost and all expenditures directly associated with making the intangible ready for its intended use—for example, the purchase price, legal fees, and other direct costs to bring it into working condition. Costs that are **not capitalized** are similar to

those for property, plant, and equipment assets: they are costs related to product introduction and promotion, conducting business in a new location or with new types of customers, and administration and general overhead. Expenditures incurred after the asset is ready for use as intended and initial operating losses are also excluded.

Similar to other long-lived assets, when direct costs that meet the recognition criteria are incurred after acquisition of the intangible asset, these costs are accounted for as additions or replacements and are capitalized. This is not as common with intangibles, however.

Cost, as was seen in earlier chapters, is the cash cost, or its equivalent, as discussed below and in [Underlying Concept 12.2](#).

- If there are **delayed payment terms**, any portion of the payments that represents interest is recognized as a financing expense rather than as part of the asset cost.
- If the intangible asset is acquired for shares, cost is measured at an amount equal to the intangible asset's fair value.⁶ However, if the fair value of the intangible asset cannot be measured reliably, then the shares' fair value is used. ASPE is not as prescriptive. It allows the more reliable of the fair value of the intangible asset or the shares to be used.
- If the intangible asset is acquired by giving up **nonmonetary assets**, the cost of the intangible is the fair value of what is given up or the fair value of the intangible asset received, whichever one can be measured more reliably. This assumes that the transaction has **commercial substance** and that fair values can be reliably measured. You may want to review the section in [Chapter 10](#) that discusses this situation and provides examples of transactions and entries for nonmonetary exchanges.
- If the intangible asset is acquired via a government grant, the asset's fair value usually establishes its cost on the books. IFRS does permit a company to recognize a zero or nominal dollar cost in this case. Any other direct costs of acquisition are capitalized into the asset cost, however.

Underlying Concept 12.2

The basic attributes of intangibles, the uncertainty of their future benefits, and their uniqueness have discouraged valuing them at more than their cost.

Intangibles Purchased in a Business Combination

When a company purchases an intangible asset as a single asset, such as an acquisition of a specific trademark or patent, the accounting is relatively clear. When several intangibles are bought together in a “basket purchase,” the accounting is more complex because the cost has to be allocated to each intangible based on its relative fair value.

A further complication happens when intangibles are acquired in a [business combination](#)—when one entity acquires control over one or more businesses. This can take place either by directly purchasing the net assets of the business or by acquiring the equity interests (the shares) that control the entity and its net assets. An issue arises because of the variety of assets and liabilities that make up a complete and ongoing business. Even the fact that the business is fully operational instead of being just in the planning stages adds value to it. The entity has to account for all the assets that are acquired, regardless of whether or not

they are recognized in the acquired business's accounting records. Many of the assets acquired that contribute to the value of the business are intangible, but only those that are **identifiable** can be separately recognized. Intangibles acquired that are not identifiable assets are considered part of goodwill.

The acquisition cost assigned to each of the identifiable intangible assets acquired as part of a business combination is its fair value.⁷ All such assets acquired in this way are recognized, even though they may have been internally generated by the business itself and are not eligible for capitalization under the standards for internally generated intangible assets. Examples include brand names, patents, customer relationships, and **in-process research and development (R&D)**. In-process R&D comes about when one company acquires the business of another company, and one of the identifiable assets acquired is the research work and findings of the acquired company. When the research work and findings meet the requirements for being reported as an asset separate from goodwill, they are recognized as an identifiable intangible.

Prepayments

So far we have seen that, if expenditures for intangibles do not qualify for recognition as an intangible asset or as part of goodwill in a business combination, they must be recognized as an expense when incurred. In some cases, however, a prepaid asset—a **prepaid expense**—can be recognized initially. A prepayment is recognized as an asset only when an entity pays for **goods** before their delivery (or other right of access) or for **services** before receiving those services, as shown in **Example 12.1**. The asset is the right to receive the goods or services. When received, or if the “right to receive” no longer exists, the costs are expensed.

Example 12.1 | Accounting for Prepaid Assets

Facts Beta Limited (BL) places an order for the production of mail-order catalogues by a supplier, and pays \$5,000 when the order is placed. When the catalogues are received from the supplier, BL immediately sends them out to its customers.



Instructions

How should BL account for the catalogues at the time of initial payment to its supplier, and later when they are received from the supplier?

Solution

At the time of payment, BL has a prepayment asset—the right to receive the catalogues from the supplier. The entry to record this exchange is:

Prepaid Expenses	5,000	
Cash		5,000

A	=	L	+	SE
0				

Cash flows: ↓ 5,000 outflow

When the supplier delivers the catalogues, BL immediately sends them to its customers. So, BL no longer has the prepayment asset previously recognized, and it is derecognized.

Because such catalogues are considered a form of advertising and promotion, their cost is expensed. BL makes the following entry:

Advertising Expense	5,000	
Prepaid Expenses		5,000

A	=	L	+	SE
-5,000				-5,000

Cash flows: No effect

Whether intangible assets qualify for recognition or not, they can be quite valuable as illustrated in relation to patents in [What Do the Numbers Mean? 12.1](#).

What Do the Numbers Mean? 12.1

Canadian-based **Nortel Networks** filed for bankruptcy protection in January 2009. But unlike many bankrupt companies, Nortel still had some valuable assets to sell: its patents. Two and a half years after declaring bankruptcy, Nortel auctioned off approximately 6,000 patents to **Rockstar**, a company co-owned by **Apple**, **Microsoft**, **BlackBerry**, **Ericsson**, and **Sony**, for \$4.5 billion. The patents included products and processes related to 4G wireless networks, Internet and voice technology, semiconductors, and optical equipment. Rockstar filed patent lawsuits against **Google**, **Samsung**, **HTC**, and **Huawei** in late 2013 relating to these patents. In November 2014, it was reported that Google and Rockstar agreed to settle the patent litigation. Subsequently, the most valuable patents were distributed among the Rockstar consortium members, with the remaining patents being sold to **RPX**, a patent risk management company, for \$900 million. RPX uses the patents acquired from Rockstar and its other patents to provide “sub-licences” to its clients. It considers its patent acquisitions to be a key driver of the value it creates for its clients. With annual revenue of over U.S. \$330 million in 2016, the patent business can be a lucrative one!

Sources: RPX Corporation 2016 annual report; Barrie McKenna, “The Ghost of Nortel Continues to Haunt Canada's Tech Sector,” *The Globe and Mail*, December 4, 2011; Charles Arthur, “Nortel Patents Sold for \$4.5bn,” *The Guardian*, July 1, 2011; “Nortel Reports Financial Results for the Fourth Quarter and Full Year 2011,” company news release, March 8, 2012; “Nortel Patents at Issue in Suits Against Google, Huawei,” CBCNews.ca, November 1, 2013; “Google, Rockstar Agree to Settle Patent Litigation,” <http://re/code.net>, November 20, 2014; “Apple-Backed Rockstar Sells Patents to RPX for \$900 Million,” <http://re/code.net>, December 23, 2014.

Recognition and Measurement of Internally Developed Intangible Assets

LEARNING OBJECTIVE 3

Identify and apply the recognition and measurement requirements for internally developed intangible assets.

It is a more challenging task to decide which costs should be capitalized and recognized as intangible assets when an entity develops such assets internally. The difficulty involves the following recognition and measurement issues.

1. Has an identifiable asset been created that will generate expected future cash flows?
2. What costs should be capitalized? Are the costs incurred just day-to-day operating costs or expenditures related to internally generated goodwill (which are expensed), or are they really additional costs of identifiable assets? How reliably can cost be measured?

How costs associated with internally generated intangible assets should be accounted for has been a controversial issue for many years. The following alternatives have been suggested:

- a. Recognize the costs as internally generated intangible assets when certain criteria are met, and expense all others.
- b. Recognize all costs of internally generated intangible assets as an expense. See [Underlying Concept 12.3](#).
- c. Recognize expenditures on all internally generated intangible assets as an expense, with certain specified exceptions.
- d. Allow a choice between the accounting treatments in (a) and (b) above.

Underlying Concept 12.3

The Financial Accounting Standards Board (FASB) in the United States has chosen option (b).

IFRS **ASPE** The IASB decided on option (a) in IAS 38 *Intangible Assets* while option (d) was selected in *CPA Canada Handbook*, Part II, Section 3064 *Goodwill and Intangible Assets* for private enterprises.⁸ Option (a) is illustrated in the next section. Note that the IFRS requirements for recognizing “self-constructed” intangibles are more stringent than those for property, plant, and equipment assets. This is because of the recognition and measurement uncertainties referred to above.

Identifying Research and Development Phase Activities

To deal with the uncertainty of whether an asset should be recognized, the process of generating the intangible is broken down into two parts: a [research phase](#) and a [development phase](#). **Research** is the planned investigation undertaken with the hope of gaining new scientific or technical knowledge and better understanding. The investigation may or may not be directed toward a specific practical aim or application. **Development**, on the other hand, is the translation of research findings or other knowledge into a plan or design for new or substantially improved materials, devices, products, processes, systems, or services before starting commercial production or use.⁹

Research phase and **development phase** activities are interpreted in the accounting standards as broader terms than implied in the definitions of research and development provided. Examples of activities in each of these phases are set out in [Illustration 12.2](#).

Activities in the Research Stage	Activities in the Development Stage
Obtaining new knowledge	Designing, constructing, and testing prototypes and models prior to production or use
Searching for, evaluating, and selecting ways to use research findings or knowledge	Designing tools, jigs, moulds, and dies involving new technology
Investigating possible alternatives for existing materials, products, processes, systems, and services	Designing, constructing, and operating pilot plants that are not economically feasible for commercial production
Formulating, designing, evaluating, and choosing possible alternatives for improved or new materials, products, processes, systems, and services	Designing, constructing, and testing chosen alternatives for new or improved materials, products, processes, systems, and services ¹⁰

ILLUSTRATION 12.2 Examples of Research Stage Activities and Development Stage Activities

If there is uncertainty about which phase a particular activity relates to when internally creating an intangible asset, it would be classified as a **research phase** activity.

Accounting for Research Phase Costs

The accounting standards are very clear that costs incurred on research or during the research phase of an internal project do not meet the criteria for recognition as an intangible asset. **All such costs are recognized as expenses when they are incurred.** However, if a company has its own research facility consisting of buildings, laboratories, and equipment that are used for general research activities, it accounts for these assets as capitalized property, plant, and equipment. The depreciation and other costs that are related to such facilities are accounted for as research-related expenses.

Sometimes entities conduct research activities for other companies **under a contractual arrangement.** In this case, the contract usually specifies that all direct costs, certain specific indirect costs, and a profit element will be reimbursed to the entity performing the research work. Because reimbursement is expected, such research costs are recorded as inventory or a receivable.

Accounting for Development Phase Costs

An intangible asset can be recognized from the development stage of an internal project, but only when an entity can demonstrate its technical and financial feasibility and the company's intention and ability to generate future economic benefits from it. **All six of the following specific conditions need to be demonstrated** in order to capitalize costs incurred in the development phase:

1. Technical feasibility of completing the intangible asset
2. The entity's intention to complete it for use or sale

3. The entity's ability to use or sell it
4. Availability of technical, financial, and other resources needed to complete it, and to use or sell it
5. The way in which the future economic benefits will be generated, including the existence of a market for the asset if it will be sold, or its usefulness to the entity if it will be used internally
6. The ability to reliably measure the costs associated with and attributed to the intangible asset during its development (*CPA Canada Handbook*, Part II, Section 3064.41; IAS 38.57).

Because **all** six criteria must be met, this means that an entity capitalizes development phase costs **only when the future benefits are reasonably certain**. This in turn means that internally generated intangible assets are recognized only in limited situations, and projects may be quite far along in the development stage before all six criteria are met. **Only then do the costs begin to be capitalized**. No expenditures incurred prior to this point and previously expensed are added to the asset's cost, even if the expenditures were in the same accounting period.

Although it is contrary to the usual principles-based approach, several items are specifically identified as not being recognized as internally generated intangible assets. These include brands, mastheads (the front-page or cover banner design of newspapers and magazines), publishing titles, customer lists, and other similar items. They are excluded on the basis that costs incurred to develop them cannot be distinguished from general business development costs. The debate regarding what costs should be expensed vs. capitalized can be considered using “First Principles” as discussed in [Underlying Concept 12.4](#).

Underlying Concept 12.4

The requirement that all research-type and most development-type costs be expensed as they are incurred is an example of the old conflict between relevance and reliability, with verifiability or reliability carrying more weight in this case.

Costs Included and Excluded

The cost of an internally generated intangible begins to be accumulated at the date when the six criteria in the development process are met. From this point forward, the types of expenditures that are capitalized are familiar: all directly attributable costs needed to create, produce, and prepare the intangible asset to operate in the way intended by management. Examples of such direct costs include:


1. Materials and services used or consumed to generate the asset
2. Direct costs of personnel, such as salaries, wages, payroll taxes, and related employee benefit costs
3. Fees needed to register a legal right
4. Amortization of other intangibles needed to generate the new asset
5. Interest or borrowing costs¹¹

Specifically **excluded** as capitalized costs are selling, administrative, and other general overhead costs that cannot be directly linked to preparing the asset for use, costs incurred to train employees, and initial operating losses after the intangible is ready for use.

Generally, the costs of start-up activities such as legal and other costs of incorporation (**organization costs**); pre-opening costs associated with new facilities or businesses; and pre-operating costs for launching new operations, products, or processes are all expensed. Relocation and reorganization costs, and those associated with advertising and promotional activities including mail-order catalogues, are also not capitalized.

To illustrate the accounting treatment of activities associated with intangible items and research and development phases, assume that a company develops, produces, and markets laser machines for medical, industrial, and defence uses. The types of expenditures related to its laser machine activities, along with the recommended IFRS accounting treatment, are listed in **Illustration 12.3**.

Type of Expenditure	Accounting Treatment
1. Construction of long-range research facility (three-storey, 1,000-square metre building) for use in current and future projects	Capitalize as PP&E assets; depreciate as a research-type expense.
2. Acquisition of research-related equipment for use on current project only	Capitalize as PP&E asset; depreciate as a research-type expense.
3. Purchase of materials to be used on current and future R&D projects	Capitalize as inventory; expense as a research-type expense as consumed.
4. Salaries of research staff designing new laser bone scanner	Expense immediately as a research-type expense.
5. Research costs incurred under contract for customer and billable monthly	Expense as operating expense in period of related revenue recognition.
6. Material, labour, and overhead costs of prototype laser scanner	Capitalize as intangible asset if development criteria are all met; otherwise, expense.
7. Costs of testing prototype and design modifications	Capitalize as intangible asset if development criteria are all met; otherwise, expense.
8. Legal fees to obtain patent on new laser scanner	Capitalize as patent (intangible asset) provided asset meets recognition criteria; amortize to cost of goods manufactured as used.
9. Executive salaries	Expense as operating expense (general and administrative).
10. Cost of marketing research related to promotion of new laser scanner	Expense as operating expense (selling).
11. Engineering costs incurred to advance the laser scanner to full production stage	Capitalize as intangible asset if development criteria are all met; otherwise, expense.
12. Costs of successfully defending patent on laser scanner	Capitalize as intangible asset (patent); amortize to cost of goods manufactured as used.
13. Commissions to sales staff marketing new laser scanner	Expense as operating expense (selling).

ILLUSTRATION 12.3  **Sample Expenditures and Their Accounting Treatment**

Recognition and Measurement of Intangible Assets after Acquisition

LEARNING OBJECTIVE 4

Explain how intangible assets are accounted for after initial recognition.

Items of property, plant, and equipment commonly have parts added to them or replaced, but most intangible assets do not. The nature of intangibles is such that costs incurred after the asset has been acquired are normally made to maintain the asset's benefits and therefore do not meet the recognition criteria for capitalization. Although there are exceptions, most after-acquisition costs are expensed.

IFRS Two models have been put forward for measuring intangible assets after initial recognition: a **cost model (CM)** and a **revaluation model (RM)**. **ASPE** The CM is the most widely used approach by far, and under ASPE, it is the only method allowed.

Why is the RM not widely used? The reason is simply that it can be applied only to intangible assets that have a fair value determined in an **active market**.¹² This limits its use to situations where the items are homogeneous (interchangeable), there is a good supply of willing buyers and sellers, and the prices are available to the public. An active securities market, such as the Toronto Stock Exchange, exists for equity securities, but active markets do not ordinarily exist for intangible assets. Most intangible assets, such as patents, brands, and trademarks, grant unique rights to the entity that holds them. This results in unique pricing when such assets are bought and sold. There are some exceptions. Examples include the prices of quotas for a variety of agricultural products for which the government sets production limits, such as milk or eggs, or perhaps even bitcoins as discussed later in this chapter. The revaluation model could also be used where there are transferable fishing or taxi licences, which are available in some jurisdictions.

When the RM is chosen for an intangible asset, all the assets in the same class must also apply the same method. Examples of classes include copyrights, patents, computer software, secret recipes, and designs. If there is no active market for the other assets in the class, then the CM is applied to these assets.

Accounting under these two models is the same for intangible assets as for property, plant, and equipment. For both PP&E and intangible assets using the RM, there is no requirement for an annual revaluation, only that the carrying amount reported on the statement of financial position not be materially different from its fair value. Instead of repeating the full coverage of this topic provided in Chapters 10 and 11, we summarize the two methods of accounting for limited-life intangible assets in **Illustration 12.4**.¹³ You may want to review the specific examples in the earlier chapters to reinforce this material.

Cost Model (CM)	
At acquisition	Recognized and measured at cost.
After acquisition	Carried at cost less accumulated amortization and any accumulated impairment losses.
On disposal	Difference between asset's carrying amount and proceeds on disposal is gain or loss reported in net income.
Revaluation Model (RM)	
At acquisition	Recognized and measured at cost.
After acquisition	Carried at fair value at the date of the revaluation less any subsequent accumulated amortization and any subsequent loss on impairment.
Revaluation increase	Record credit to Revaluation Surplus (Other Comprehensive Income) unless this reverses a previous decrease recognized in income. If so, recognize the increase in income to the extent of the prior decrease.
Revaluation decrease	Record debit to Revaluation Surplus (Other Comprehensive Income) to the extent there is a balance associated with the same asset. Any remaining amount is recognized as a charge to income.
Revaluation	Apply either the proportional method (both asset and accumulated amortization balances continue and are adjusted regularly—for example, every three years—so that the net amount is the asset's new fair value) or the asset adjustment method (accumulated amortization is closed periodically to the asset account and begins again at zero; the asset is revalued to the new amount).
On disposal	Either (a) adjust the asset to its fair value at the date of disposal, account for the revaluation increase or decrease as above, and recognize no gain or loss on disposal, or (b) recognize a gain or loss on disposal in net income equal to the difference between the proceeds on disposal and the asset's carrying amount on the date of disposal.
Revaluation Surplus account balance	Either transfer amounts directly to Retained Earnings each period (equal to the difference between amortization expense determined on the CM basis and amortization expense determined on the RM basis) or, when the asset is disposed of, transfer the balance remaining in the account directly to Retained Earnings.

ILLUSTRATION 12.4 Cost Model and Revaluation Model for Limited-Life Intangible Assets

As suggested above, intangibles are a diverse mix of assets. Some intangibles have values based on rights that are given legally by contract, statute, or similar means. Examples include a **Tim Hortons** franchise or licences granted by the federal government to broadcasters. Some of these rights have finite or limited legal lives that can be easily renewed; others have lives that are not renewable, and others are renewable only at a significant cost. Some can be sold while others may not be exchangeable. Internally developed intangibles may have a wide range of useful lives. Other intangibles may be granted in perpetuity and have an indefinite life. An **indefinite life** does not mean “infinite”—that the asset will last forever. Instead, it means that, after looking at all relevant factors, there appears to be no foreseeable limit to how long the asset will generate positive net cash flows for the entity.

Accounting standards used to require all intangible assets to be amortized over a period of not more than 40 years. While this simplified the accounting, the reality is that intangibles are diverse, and the approach to their measurement after acquisition should be based on their specific characteristics. Under current standards, if an intangible asset has a finite, or limited, useful life, it is amortized over that useful life. If instead the intangible has an indefinite life, no amortization is taken. The asset is retained in the accounts until it is determined to be impaired or its life becomes limited.

Limited-Life Intangibles

An intangible asset with a **finite** or **limited life** is amortized by systematic charges to expense over its useful life whether using the cost model or the revaluation model. The factors to consider in determining the useful life are similar to the factors for long-lived property, plant, and equipment, and include:

1. The expected use of the asset by the entity, and the expected useful life of other assets that may affect the useful life of the intangible asset (such as mineral rights for depleting assets).
2. Any legal, regulatory, or contractual provisions that may either limit the useful life or allow renewal or extension of the asset's legal or contractual life without the entity having to pay a substantial cost. (If the renewal cost is significant, then the expenditure for the renewal may represent the cost of a new intangible asset.)
3. The effects of obsolescence, demand, competition, and other economic factors. Examples include the stability of the industry, known technological advances, and legislative action that results in an uncertain or changing regulatory environment. For instance, expected future reductions in sales prices of items produced using an intangible asset (such as a patent) could indicate expected commercial or technological obsolescence.¹⁴
4. The level of maintenance expenditure that is needed to obtain the expected future cash flows from the asset.¹⁵

Amortization expense for a limited-life asset should ideally reflect the pattern in which the asset's economic benefits are used up, if that pattern can be reliably determined. For example, assume that Second Wave Inc. has purchased a licence to manufacture a limited quantity of a vaccine called Megadose. Because the life of the licence is reduced with each unit produced, the cost of the licence is amortized following the pattern of production of Megadose—a unit of production approach. If the pattern cannot be determined, the straight-line method is used. The amortization charges are usually reported **as expenses**, and the

credits are made to **accumulated amortization** accounts. Note that in the Second Wave Inc. example, the amortization is likely a product cost that is first included in inventory and then expensed on the income statement as part of the cost of goods sold when the product is sold. Effective January 1, 2016, IAS 38.98 was clarified to reflect an underlying assumption that it is inappropriate to use amortization methods based on revenue generated by an activity, including the use of an intangible asset. The standard does allow exceptions, however. An example of an exception would be an intangible asset providing the right to operate a toll road that expires when a preset cumulative toll amount to be collected is reached.

The amount to amortize for an intangible asset is its carrying amount less residual value. Uncertainties about residual values for intangibles are greater than they are for items of property, plant, and equipment. Because of this, an intangible asset's residual value is assumed to be zero. This assumption can be overturned only if the asset is expected to be of use to another entity and a third party commits to purchase the asset at the end of its useful life, or if there is an active market for the asset that is expected to still exist at the end of its useful life to the entity.¹⁶

There are other similarities between the accounting for limited-life intangibles and property, plant, and equipment assets, as shown in **Illustration 12.5**.

Transaction or Event	Accounting Treatment for Intangible Assets with a Limited Life	Same as for Most PP&E Assets?
Amortization begins...	... when the asset is in the location and condition to be able to be used as management intends	Yes
Amortization stops ...	... at the earlier of when it is derecognized or classified as held for sale	Yes
Review of useful life and amortization method	ASPE: at least annually; IFRS: at least at the end of each financial year	Yes (PP&E is reviewed “regularly”)
Change in estimate of useful life, residual value, amortization method	Accounted for prospectively—as a change in accounting estimate	Yes

ILLUSTRATION 12.5 Accounting for Intangible Assets with a Limited Life

Indefinite-Life Intangibles

An intangible asset with an indefinite life **is not amortized**. For example, assume that Double Klik Inc. acquires a trademark that is used to distinguish a leading consumer product from other such products. The trademark is renewable every 10 years at minimal cost. After evaluating all relevant factors, the evidence indicates that this trademark product will

generate net cash flows for an indefinite period of time. Therefore, it has an indefinite life.

Because of the potential effect on the financial statements, it is important for management to review whether events and circumstances continue to support the assessment of an indefinite life. This is required every accounting period under IFRS (and when circumstances indicate possible impairment under ASPE). If the useful life is later considered to be limited instead of indefinite, the change is considered a change in estimate and past results are not affected. Such an assessment may also indicate that the asset's carrying amount is impaired. The accounting treatment for impairment is discussed later in this chapter.

Specific Intangibles

LEARNING OBJECTIVE 5

Identify and explain the accounting for specific types of intangible assets.

The many different types of intangible assets are sometimes classified into the following five major categories:¹⁷

1. Marketing-related
2. Customer-related
3. Artistic-related
4. Contract-based
5. Technology-based

Marketing-Related Intangible Assets

Marketing-related intangible assets are used mainly in the marketing or promotion of products or services and derive their value from the contractual or legal rights that they contain. Examples are trademarks or trade names, Internet domain names, and non-competition agreements.

Law A very common form of marketing-related intangible asset is a trademark. A **trademark** or **trade name** is a word, symbol, or design, or combination of these, that is used to distinguish the goods or services of one person or entity from those of others. The terms **brand** and **brand name** are similar but often refer to a group of assets such as a trade name and its related formulas, recipes, and technology. The right to use a trademark or trade name as part of a brand image in Canada is granted by Innovation, Science and Economic Development Canada and the registration system is administered by its Canadian Intellectual Property Office (CIPO).¹⁸ In order to obtain and maintain this right, the owner must have made prior and continuing use of it. Trade names like Kraft Dinner, Pepsi-Cola, and Kleenex, and brand names such as President's Choice and Canadian Tire, create immediate product recognition in our minds, which makes them more marketable. Company names themselves may have value and characteristics that companies are willing to spend money on to develop.¹⁹

If a mark or name is **purchased**, its capitalizable cost is the purchase price and other direct costs of acquisition. If it is **developed** by the enterprise itself and its future benefits to the company are reasonably assured, the costs may be capitalized, but only from the point in time when all six of the required capitalization criteria are met in its development phase. These costs may include lawyers' fees, registration fees, design costs, consulting fees, successful legal defence costs, expenditures related to securing the mark or name, and other direct development costs. When a trademark, trade name, or brand name's total cost is insignificant or all six capitalization criteria have not been met, the costs are expensed. The debate regarding whether intangible assets like brands should be recorded in company financial statements is an important one because, as is discussed in [What Do the Numbers Mean? 12.2](#), brands can be very, very valuable!

What Do the Numbers Mean? 12.2

Hoping to promote the management of brands in the same financially robust way as other long-term investments, Brand Finance plc published a report entitled the *Brand Finance Global 500 2017*. The study uses a “royalty relief approach” to value the brands of major companies; that is, the authors determine how much a company would have to pay to license the brand from a third party. The brand's value is the present value of that hypothetical stream of payments.

Google, Apple, and **Amazon** were ranked as having the three most valuable brands in the world (all having brand values over U.S. \$100 billion), with China's **ICBC** joining Samsung as the only non-U.S.-based companies in the top 10. The most valuable Canadian brand, according to this report, was the **Royal Bank of Canada (RBC)**, with an estimated worth of almost U.S. \$12.7 billion. Other major Canadian banks (**TD Bank, Bank of Montreal, Scotiabank, and CIBC**) were included in the top 500 world brands, together with other well-known companies and brands like **Tim Hortons, Bell Canada, Rogers, TELUS, and Brookfield Asset Management**. The RBC brand, however, does not appear as an asset on the Royal Bank's balance sheet. Why not? Brand value is a function of marketing, advertising, and public relations spending, including customer loyalty and retention programs, which all result in an increased volume of business, retail sales, and shipments. This type of cost is expensed as it is incurred because it cannot be directly related to future benefits.

In an earlier report, Brand Finance contended that “long-term investment decisions about future promotional expenditures, and the host of other activities that combine to build brand value” are better made when management can articulate the arguments in financial terms, as is done for most other investments.

Source: Brand Finance website, www.brandfinance.com.

Trademark registrations in Canada last for 15 years, and are renewable at a reasonable cost. Although the legal life of such assets **may be unlimited**, in practice they may only provide benefits to the enterprise over a **finite** period. Trademarks can, however, be determined to provide benefits to an enterprise indefinitely. A brand such as Coca-Cola, worth over U.S. \$30 billion in 2017, may reasonably be expected to have an indefinite useful life. In this case, the intangible asset is not amortized.

Customer-Related Intangible Assets

Customer-related intangible assets result from interactions with outside parties and their value may be derived from legal-contractual rights, or because they could be sold separately. Examples include customer lists, order or production backlogs, and customer contracts or non-contractual relationships. See [Example 12.2](#).

Example 12.2 | Accounting for Customer Lists

Facts We-Market Inc. acquires the customer list of a large newspaper for \$6 million on January 1, 2020. The customer list is a database that includes customer names, contact information, order history, and demographic information. We-Market expects to benefit from the information on the acquired list for 10 years, and it believes that these benefits will be spread evenly over the 10 years. In this case, assume the customer list is a limited-life intangible that should be amortized on a straight-line basis. Customer lists like this one would typically have a limited life due to factors such as people moving into or out of the area and competition from other newspapers and other media sources.

Instructions

- Provide the journal entries needed to record the purchase of the customer list and its amortization at the end of each year.
- How would your answer change if We-Market determines that it can sell the list for \$60,000 to another company at the end of 10 years?

Solution

- The journal entries needed are as follows:

January 1, 2020

Intangible Assets—Customer List	6,000,000	
Cash		6,000,000

$$\begin{array}{r} \boxed{A = L + SE} \\ 0 \end{array}$$

Cash flows: ↓ 6,000,000 outflow

December 31, 2020, through December 31, 2029

Amortization Expense	600,000	
Accumulated Amortization—Customer List		600,000

$$\begin{array}{r} \boxed{A = L + SE} \\ -600,000 \qquad \qquad -600,000 \end{array}$$

Cash flows: No effect

- This example assumes that the customer list has no residual value. If We-Market

determines that it can sell the list to another company at the end of 10 years, the residual value (\$60,000) would be subtracted from the cost to determine the amortizable amount, but only if there is an active market for customer lists like this or if a third party has committed to purchase the list at the end of the 10 years.

Artistic-Related Intangible Assets

Artistic-related intangible assets involve ownership rights to plays, literary works, musical works, pictures, photographs, and video and audiovisual material. These ownership rights are protected by copyrights and have value because of the legal-contractual nature of the rights as discussed in [What Do the Numbers Mean? 12.3](#).

What Do the Numbers Mean? 12.3

Copyrights can be valuable. When Michael Jackson died in mid-2009, he was in dire financial trouble. However, he did have one asset that was extremely valuable: a 50% interest in the **Sony Corp./ATV Music Publishing** joint venture set up in 1995. The partnership owns copyrights to the lyrics and music of tens of thousands of songs by such artists as the Beatles, Roy Orbison, Hank Williams, and Jimi Hendrix. With its 2012 acquisition of EMI Music Publishing, Sony/ATV is said to have become the world's largest publishing company, with over 2 million songs and revenues in excess of U.S. \$1.2 billion, and is estimated to be worth more than U.S. \$2 billion! Altogether, Sony/ATV Music Publishing owns or administers more than 2 million copyrights for the who's who of the music industry. Sony Corp. acquired Michael Jackson's estate's share of Sony/ATV Music Publishing in 2016, giving it sole ownership of the joint venture.

Law A copyright is the exclusive right to copy a creative work or allow someone else to do so. It is a federally granted right that applies to all original literary, dramatic, musical, and artistic works, whatever the mode or form of expression. A copyright is acquired automatically when an original work is created, but it can also be registered with the federal Copyright Office (part of the Canadian Intellectual Property Office). The right is granted for the life of the creator plus 50 years, and gives the owner or heirs the exclusive right to reproduce, sell, communicate, or translate an artistic or published work. Copyrights are not renewable. Like trade names, they may be assigned or sold to other individuals.²⁰ The costs of acquiring and defending a copyright may be capitalized, but research costs that are associated with them are expensed as they are incurred.

Generally, the copyright's useful life is shorter than its legal life. Its useful life depends on the unique facts and circumstances of each case. Consumer habits, market trends, and prior experience all play a part. Because it is so difficult to determine the period of benefit from a copyright, companies often choose to write these costs off over a short period.

Contract-Based Intangible Assets

Law Contract-based intangible assets represent the value of rights that come from contractual arrangements. Examples are licensing arrangements, lease agreements,

construction permits, broadcast rights, and service or supply contracts. A very common form of contract-based intangible asset is a franchise.

When you drive down the street in an automobile purchased from a Toyota dealer, fill your tank at the corner Petro-Canada station, grab a coffee at Tim Hortons, eat lunch at McDonald's, cool off with a Baskin-Robbins cone, work at a Coca-Cola bottling plant, live in a home purchased through a Royal LePage real estate broker, or vacation at a Holiday Inn resort, you are dealing with franchises. A **franchise** is a contractual arrangement under which the franchisor grants the franchisee the right to sell certain products or services; to use certain trademarks, trade names, or brands; or to perform certain functions, usually within a designated geographic area. **Licensing agreements** work in a similar way.

After having developed a unique concept or product, the franchisor protects it through a patent, copyright, trademark, or trade name. The franchisee then acquires the right to take advantage of the franchisor's idea or product by signing a franchise agreement. Another type of franchise is the arrangement that is commonly entered into by a municipality or other government body and a business enterprise that uses public property. In this case, a privately owned enterprise is given permission to use public property in performing its services. Examples are the use of public waterways for a ferry service, the use of public land for telephone or electric lines, the use of city streets for a bus line, or the use of the airwaves for radio or TV broadcasting. Such operating rights are frequently referred to as **licences** or **permits**, and are obtained through agreements with government departments or agencies.

Franchises and licences may be granted for a definite period of time, for an indefinite period of time, or in perpetuity. The enterprise that acquires the franchise or licence recognizes an intangible asset account titled either Franchise or Licence on its books as soon as there are costs (such as a lump-sum payment in advance or legal fees and other expenditures) that are identified with the acquisition of the operating right. The cost of a franchise or licence **with a limited life** is amortized over the lesser of its legal or useful life. A franchise **with an indefinite life** is not amortized. And a **perpetual franchise** is only amortized if its **useful life** is deemed to be limited.

Annual franchise fees paid under a franchise agreement are recorded as operating expenses in the period in which they are incurred. They do not represent an asset to the enterprise because they do not relate to future rights.

Another contract-related intangible asset is a **favourable lease**. A **lease** or **leasehold** is a contractual understanding between a lessor (property owner) and a lessee (property renter) that grants the lessee the right to use specific property, owned by the lessor, for a certain period of time in return for specific, usually periodic, cash payments. A lease contract is an intangible asset to the extent that the terms are more favourable than the usual market terms for such an arrangement. It could be an asset to the lessor or the lessee.²¹

Technology-Based Intangible Assets

Law **Technology-based intangible assets** relate to innovations or technological advances. Examples include Nortel's patents that were sold in 2011 (as discussed in [What Do the Numbers Mean? 12.1](#)) and patents for technology and trade secrets that are granted by the federal government's Patent Office (also part of CIPO). Patents are granted for products and processes that are new, workable, or ingenious. A **patent** gives the holder the right to exclude others from making, selling, or using a product or process for a period of 20 years

from the date the patent application is filed with the Patent Office. Fortunes can be made by holding patents, as companies such as **BlackBerry**, **IMAX**, **Facebook**, and **Google** can attest.²²

If a patent is purchased from an inventor or other owner, the purchase price represents its cost. Other costs that are incurred in connection with securing a patent, including legal fees and unrecovered costs of a successful lawsuit to protect the patent, are capitalized as part of the patent cost. Most research and development costs incurred that result in an internally generated patent are expensed. Only directly attributable costs incurred in the development phase after the six capitalization criteria are met can be included as part of the asset's cost. For this reason, most research and development costs related to developing a product, process, or idea that is subsequently patented are expensed as they are incurred.

The cost of a patent is amortized over its legal life or its useful life to the entity, whichever is shorter. If a patent is owned from the date it is granted, and it is expected to be useful during its entire legal life, it is amortized over 20 years. If it is expected to be useful for a shorter period, its cost is amortized to expense over that shorter period. Changing demand, new inventions replacing old ones, inadequacy, and other factors often limit the useful life of a patent to less than its legal life. For example, the useful life of patents in the pharmaceutical industry is often less than the legal life because of the testing and approval period that follows their issuance. A typical drug patent has five to 11 years knocked off its 20-year legal life. Why? A drug manufacturer spends one to four years on animal tests, four to six years on human tests, and two to three years for government agencies to review the tests—all after the patent is issued but before the product goes on the pharmacist's shelves.

Legal fees and other costs that are associated with a successful defence of a patent are capitalized as part of the asset's cost because lawsuits establish the patent holder's legal rights. Such costs are amortized along with other acquisition costs over the patent's remaining useful life.

As shown in **Example 12.3**, patent amortization follows a pattern that is consistent with the benefits that are received, if that pattern can be reliably determined. This could be based on time or on units produced.

Example 12.3 | Accounting for Patent Amortization

Facts Assume that on January 1, 2020, Harcott Ltd. either pays \$180,000 to acquire a patent or incurs \$180,000 in legal costs to successfully defend an internally developed patent. Further, assume that the patent has a remaining useful life of 12 years and is amortized on a straight-line basis.

Instructions

What journal entries should be made to record the \$180,000 expenditure on January 1, 2020, and amortization at the end of each year?

Solution

The required entries are as follows:

January 1, 2020

Intangible Assets—Patents	180,000	
Cash		180,000

A = L + SE

0

Cash flows: ↓ 180,000 outflow

December 31, 2020

Amortization Expense	15,000	
Accumulated Amortization—Patents		15,000

A = L + SE

-15,000 -15,000

Cash flows: No effect

Although a patent's useful life may be limited by its legal life, small modifications or additions may lead to a new patent and an extension of the life of the old patent.²³ In this case, the entity can apply the unamortized costs of the old patent to the new patent if the new patent provides essentially the same benefits. Alternatively, if a patent's value is reduced because, for example, demand drops for the product, the asset is tested for impairment.²⁴ Overall, as illustrated in [What Do the Numbers Mean? 12.4](#), deciding if an intangible asset has an

indefinite life or not can be challenging.

What Do the Numbers Mean? 12.4

Coca-Cola has managed to keep the recipe for the world's best-selling soft drink under wraps for more than 100 years. How has it done so? The company offers almost no information about its lifeblood. The only written copy of the formula is in a vault in the company's own museum in Atlanta, Georgia. This handwritten sheet is not available to anyone except by vote of the Coca-Cola board of directors.

Why is science unable to offer some clues? Coke contains 17 to 18 ingredients. These include the usual caramel colour and corn syrup, as well as a blend of oils known as 7X—rumoured to be a mix of orange, lemon, cinnamon, and others. Distilling natural products like these is complicated since they are made of thousands of compounds. Although the original formula contained trace amounts of cocaine, this is one ingredient that you will not find in today's Coke. When was it removed? That is a secret, too. Experts suggest that the power of this formula and related brand image account for almost U.S. \$56 billion of the company's market capitalization of U.S. \$183 billion (as of May 2017).

Sources: Reed Tucker, “How Has Coke's Formula Stayed a Secret?” *Fortune*, July 24, 2000, p. 42; David Kiley, “Best Global Brands,” *Business Week*, August 6, 2007, p. 59; Gavin Allen, “Bad News Pepsi! After 90 Years Coca-Cola's Secret Recipe Is Finally Out of the Bank Vault for Museum Display ... But Rivals Still Won't Get a Peek at the Ingredients,” *The Daily Mail*, December 9, 2011; www.forbes.com/powerful-brands/list/ (accessed January 28, 2018).

Another common technology-based intangible relates to **computer software costs**, either for internal use or for sale as a product. Costs that are incurred in the development of software as a potential product **for sale** or those directly attributable to the development, betterment, or acquisition of computer software **for internal use** are covered by the same capitalization criteria required for other intangible assets.

Impairment and Derecognition

LEARNING OBJECTIVE 6

Explain and account for impairment and derecognition of limited-life and indefinite-life intangible assets.

Similar to property, plant, and equipment, the carrying amounts of intangible assets and goodwill have to be reviewed to ensure that they do not exceed the economic benefits the assets are expected to provide in the future. If an item is determined to be **impaired**, its carrying amount will have to be written down and a loss on impairment recognized.

Impairment of Limited-Life Intangibles

The same impairment models and standards that apply to **long-lived tangible assets** also apply to **limited-life intangibles**.²⁵ As indicated in [Chapter 11](#), under ASPE, long-lived assets that a company intends to hold and use are assessed for potential impairment whenever events and circumstances indicate the carrying value may not be recoverable. Under IFRS, these assets are **assessed for impairment** at the end of each reporting period.

The internal and external sources of information that may indicate an intangible asset is impaired are the same factors described in [Illustration 11.5](#) in [Chapter 11](#) for items of property, plant, and equipment. Of course, evidence of physical damage would not apply in the assessment of an intangible asset! If an assessment indicates there may be impairment, the asset is formally tested by applying the appropriate impairment model.

A summary of the two models and how they are applied is provided in [Illustration 12.6](#). Remember that the [cost recovery impairment model](#) is used for **ASPE**, and the [rational entity impairment model](#) is used for **IFRS**. If you review the section “Impairment—Recognition and Measurement Models” in [Chapter 11](#), it might help to reinforce your understanding of the details of each model.

Cost Recovery Impairment Model

Concept	Assumes asset will continue to be used; it is impaired only if the asset's carrying amount is not recoverable from the future undiscounted cash flows from use and eventual sale.						
Recoverability test	<p>If undiscounted future cash flows \geq carrying amount, asset is not impaired.</p> <p>If undiscounted future cash flows $<$ carrying amount, asset is impaired. Required to calculate loss on impairment.</p>						
Loss on impairment	Asset's carrying amount – fair value = loss on impairment; fair value is a discounted cash flow, market-based concept.						
Entry to record loss	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">Loss on Impairment</td> <td style="text-align: right;">\$XX</td> </tr> <tr> <td style="padding-left: 20px;">Accumulated Impairment Losses</td> <td style="text-align: right;">\$XX</td> </tr> <tr> <td style="padding-left: 20px;">–Licences (or “–Patents”, etc.)</td> <td></td> </tr> </table>	Loss on Impairment	\$XX	Accumulated Impairment Losses	\$XX	–Licences (or “–Patents”, etc.)	
Loss on Impairment	\$XX						
Accumulated Impairment Losses	\$XX						
–Licences (or “–Patents”, etc.)							
Subsequent amortization	Review carrying amount to be amortized, useful life, and pattern of amortization and determine new periodic amortization charge.						
Reversal of loss on impairment	Reversal not permitted. The fair value to which the asset is written down becomes the asset's new cost basis.						
If no single-asset identifiable cash flows	Combine with other assets into an asset group, test for impairment, and, if impaired, calculate loss on impairment using same approach as for an individual asset. Allocate loss only to long-lived assets, based on their relative carrying amounts, within limits.						

Rational Entity Impairment Model

Concept	Assumes management will use the asset or dispose of it currently, whichever results in a higher value to the entity. It is impaired only if its carrying amount is not recoverable from the higher of the two options.
Recoverability test	No separate test of undiscounted cash flows.
Loss on impairment	<p>Calculate recoverable amount = higher of value in use and fair value less costs to sell, both of which are discounted cash flow concepts.</p> <p>If recoverable amount \geq carrying amount, no loss on impairment.</p> <p>If recoverable amount \leq carrying amount, loss on impairment = the difference.</p>

Entry to record loss under cost model	Loss on Impairment Accumulated Impairment Losses —Licences (or “—Patents”, etc.)	\$XX \$XX
Subsequent amortization	Review carrying amount to be amortized, useful life, and pattern of amortization and determine new periodic amortization charge.	
Reversal of loss on impairment	Reversal of loss is required if estimates underlying recoverable amount have changed. Reversal amount is limited.	
If no single-asset identifiable cash flows	Combine with other assets into a cash-generating unit and calculate loss on impairment using same approach as for an individual asset. Allocate loss to assets based on their relative carrying amounts, within limits.	

ILLUSTRATION 12.6 ASPE IFRS **Summary of Impairment Models for Limited-Life Intangible Assets**

Impairment of Indefinite-Life Intangibles

Accounting for the impairment of intangible assets with an **indefinite life** is a little different than explained above for limited-life intangibles. These differences and the reasons for them are discussed below.

ASPE

An intangible asset with an indefinite life still needs to be tested for impairment only when events and circumstances indicate there might be impairment, but now the test is different. The impairment test for an indefinite-life asset is a **fair value test**. This test compares the **fair value** of the intangible asset with the asset's carrying amount. If its fair value is less than the carrying amount, a loss on impairment equal to the difference is recognized.

Why is there a different standard for indefinite-life intangibles? This one-step test is used because it would be relatively easy for many indefinite-life assets to meet the recoverability test. That is, the undiscounted cash flows would extend many years into the future and the total cash to be recovered tends to add up to a large sum. However, the dollars received in periods far into the future have a much lower value today. **As a result, the separate recoverability test is not used**, and the test compares the carrying amount directly with the asset's fair value—a discounted cash flow concept. See [Example 12.4](#).

Example 12.4 | Accounting for Impairment of Indefinite-Life Intangibles

Facts Assume that Space Corp. (SC) purchases a broadcast licence for \$4,150,000, and that the licence is renewable every seven years if the company provides appropriate service and does not violate the rules and regulations of the Canadian Radio-television and Telecommunications Commission (CRTC). The licence is then renewed with the CRTC twice at a minimal cost, and because cash flows are expected to last indefinitely, the licence is reported as an indefinite-life intangible asset. Assume that SC is beginning to question whether the asset might be impaired because advertising revenues are expected to drop with changing demographics in the area covered by the licence. The following information has been gathered about the benefits of the licence:

Undiscounted future net cash flows expected from its use	\$4,800,000
Discounted future net cash flows, or fair value	\$3,950,000

Instructions

Is the licence impaired? If yes, how much impairment should SC record and how should it account for the impairment?

Solution

Yes, the licence is impaired because the carrying amount of \$4,150,000 is more than its fair value of \$3,950,000, so a loss on impairment of $\$4,150,000 - \$3,950,000 = \$200,000$ is indicated.

SC may either set up and credit an account called Accumulated Impairment Losses—Licences or credit the asset account itself. The licence is now reported at a net amount of \$3,950,000, and this is its new “cost” for subsequent accounting.

IFRS

There is only a minor difference between the IFRS standard for impairment for indefinite-life intangibles and those with limited lives. Assets with an indefinite life are **tested for impairment** by comparing their carrying amount and recoverable value **on an annual basis, whether or not there is any indication of impairment**. Why a stronger standard for these assets? The answer lies in the fact that no expense is being charged against income for such assets on a regular basis. For this reason, the assumption of a continuing recoverable value in excess of book value needs to be regularly tested.

Derecognition

An intangible asset is derecognized when it is disposed of or when its continuing use or disposal is not expected to generate any further economic benefits. Similar to property, plant, and equipment assets, a gain or loss is recognized at this time, equal to the difference between the asset's carrying amount and the proceeds on disposal, if any. The gain or loss on disposal is recognized in income in the period of disposal.

Goodwill—Recognition and Measurement

LEARNING OBJECTIVE 7

Explain how goodwill is measured and accounted for after acquisition.

Internally Generated Goodwill

Goodwill that is generated internally is not capitalized in the accounts. Measuring the components of internally generated goodwill is simply too complex, and associating costs incurred with future benefits is too difficult. In fact, the future benefits of goodwill may have no relationship to the costs that were incurred to develop it. To add to the complexity, goodwill may even exist when there have been no specific expenditures to develop it. In addition, because no transaction has taken place with outside parties, a great deal of subjectivity—even misrepresentation—might be involved in trying to measure it.

Purchased Goodwill

As previously indicated, goodwill is recognized only when a business combination occurs, because the value of goodwill cannot be separated from a business as a whole. The problem of determining the proper values to assign to identifiable intangible assets in a business combination is complex because of the many different types of intangibles that might be acquired. Because goodwill is a residual amount, every dollar that is assigned to other assets, including identifiable intangible assets, leaves one less dollar to be assigned to goodwill.

Differences between the current fair value and carrying amount are more common among long-term assets, although there can also be significant differences in the current asset category. Cash is obviously not a problem in terms of its value. Receivables are normally fairly close to their current valuation, although adjustments do sometimes need to be made because of inadequate bad debt provisions. The fair values of current and long-term liabilities also are usually close to their recorded book values. However, if interest rates have changed since long-term debt was issued, its value determined using current interest rates may be quite different from the carrying amount. A careful analysis must also be done to ensure that there are no unrecorded liabilities. [Example 12.5](#) explores how fair value of net assets and goodwill is determined in a business combination.

Example 12.5 | Purchased Goodwill

Facts To illustrate, assume that Multi-Diversified Inc. decides that it needs a parts division to supplement its existing tractor distributorship. The president of Multi-Diversified is interested in buying Tractorling Ltd., a small company near Edmonton that has an established reputation and is looking to sell its business. Tractorling's current statement of financial position is as follows:

Tractorling Ltd.			
Statement of Financial Position			
December 31, 2020			
Assets		Liabilities and equity	
Cash	\$ 25,000	Current liabilities	\$ 55,000
Accounts receivable	35,000	Share capital	20,000
Inventories	42,000	Retained earnings	180,000
Property, plant, and equipment (net)	<u>153,000</u>		<u> </u>
Total assets	<u>\$255,000</u>	Total liabilities and equity	<u>\$255,000</u>

After considerable negotiation, Tractorling Ltd.'s shareholders decide to accept Multi-Diversified's offer of \$400,000. The two companies might agree on a \$400,000 cash payment, or \$400,000 in value of Multi-Diversified's shares, or other forms of consideration.

Instructions

- How would the fair value of Tractorling's underlying assets be determined?
- Why might Multi-Diversified pay an amount in excess of the fair value of the individual assets of Tractorling to acquire the company?
- How would goodwill, if any, be measured and what does it represent?
- Provide the journal entry that should be made by Multi-Diversified for its acquisition of Tractorling.

Solution

- The best way to determine fair value is not obvious. The fair values of Tractorling's identifiable assets and liabilities are not disclosed in its cost-based statement of financial position. It is likely, though, that as the negotiations progressed, Multi-Diversified had a detailed investigation done of Tractorling's underlying assets to determine their fair values. Such an investigation may be done through a purchase audit by Multi-Diversified's auditors, or an independent appraisal from some other source. Let's assume that the result of the analysis of fair values is as follows:

Tractorling Fair Values, December 31, 2020	
Cash	\$ 25,000
Accounts receivable	35,000
Inventories	62,000
Property, plant, and equipment (net)	265,000
Patents	18,000
Liabilities	<u>(55,000)</u>
Fair value of identifiable net assets	<u>\$350,000</u>

The \$20,000 difference between the fair value and carrying amount of Tractorling's inventories (\$62,000 – \$42,000) could be due to several factors. One explanation might be that Tractorling acquired significant inventories when the prices were lower and uses specific identification or an average cost valuation, in which ending inventory includes inventory at older costs.

In Tractorling's case, let's assume that PP&E includes land that was acquired many years ago and its fair value has increased significantly, and that internally developed patents have not been recognized in the accounts, yet they have a fair value of \$18,000.

- b.** Since the investigation indicates that the fair value of the identifiable net assets is \$350,000, why would Multi-Diversified pay \$400,000? Tractorling might point to the company's established reputation, good credit rating, top management team, well-trained employees, and so on, as factors that make the value of the business as a whole greater than \$350,000. Multi-Diversified places a premium on the future earning power of these attributes as well as the company's current basic asset structure. At this point in the negotiations, Tractorling's total fair value, and price, may be due to many factors; the most important may be sheer skill at the bargaining table.
- c.** Multi-Diversified labels the difference between the fair value of the consideration paid of \$400,000 and the fair value of the identifiable net assets of \$350,000 as goodwill. Goodwill is viewed as the unidentifiable values plus the value of the identifiable intangibles that do not meet the criteria for separate recognition. The procedure for valuation shown below is referred to as a master valuation approach, because goodwill is assumed to cover all the values that cannot be specifically associated with any identifiable tangible or intangible asset. Note that this method of accounting for a business combination is a fair value approach rather than one based on the cost of the acquisition and cost allocation. For example, acquisition-related costs associated with a business combination are expensed as incurred and are not capitalized as they would be in a cost-based system.

Determination of Goodwill—Master Valuation Approach

Fair value of consideration transferred:		\$400,000
Fair value of identifiable net assets:		
Cash	\$ 25,000	
Accounts receivable	35,000	
Inventories	62,000	
Property, plant, and equipment	265,000	
Patents	18,000	
Liabilities	<u>(55,000)</u>	<u>350,000</u>
Value assigned to goodwill:		<u>\$ 50,000</u>

d. Multi-Diversified's entry to record the purchase of Tractorling's net assets, assuming the consideration is \$400,000 cash, is as follows:²⁶

Cash	25,000	
Accounts Receivable	35,000	
Inventory	62,000	
Property, Plant, and Equipment	265,000	
Intangible Assets—Patents	18,000	
Goodwill	50,000	
Liabilities		55,000
Cash		400,000

A	=	L	+	SE
+55,000		+55,000		

Cash flows: ↓ 375,000 outflow

* Specific PPE and Liability accounts would be debited and credited as part of this journal entry.

In many cases, the values of long-lived assets such as property, plant, and equipment and intangibles may have increased substantially over the years. This difference could be due to inaccurate estimates of useful lives, continual expensing of small expenditures (say, amounts less than \$500), or substantial increases in replacement costs. Alternatively, there may be assets that have not been recognized in the company's books.

Bargain Purchase

A **bargain purchase**, resulting in what is sometimes called **negative goodwill**, arises when the total of the fair value of the identifiable net assets acquired is higher than the fair value of the consideration transferred for those net assets. This situation is a result of market imperfection (or a poor decision by the seller) because the seller would be better off to sell the assets individually than in total. However, situations do occur when the value of what is given up is less than the value of the identifiable net assets that are acquired, and this requires accounting for a goodwill “credit.”

How should this credit be handled in the accounts? Should it be an increase to Retained Earnings directly, or Other Comprehensive Income, or included in net income in the year of purchase, or should it be amortized to income over a reasonable future period? The accounting standards over the past 45 years or so have taken a variety of approaches to this “bonus,” which shows the difficulty there has been in coming to terms with its conceptual nature.

Current standards require the excess to be recognized **as a gain in net income** in the same period that the combination takes place. However, this cannot be done without a thorough reassessment of all the variables, values, and measurement procedures used that resulted in this gain. If a gain still results after the re-examination, then it is recognized in income. While some critics do not agree with recognizing a gain **on the acquisition of assets**, this treatment is not applied lightly and appears to be a practical approach to a situation that rarely occurs.

Valuation after Acquisition

Once goodwill has been recognized in the accounts, how should it be treated in subsequent periods? Three basic approaches have been suggested:

- 1. Charge goodwill immediately to expense.** Supporters of this approach justify an immediate write off because the accounting for goodwill is then consistent whether purchased or created internally. Goodwill created internally is not recognized as an asset. Perhaps the best rationale for charging goodwill against income directly is that identifying the periods over which the future benefits are to be received is so difficult that the result is purely arbitrary.
- 2. Amortize goodwill over its useful life.** Some believe that goodwill has value when it is acquired, but that its value eventually disappears. Therefore the asset should be charged to expense over the periods that are affected. To the extent that goodwill represents a wasting asset, this method provides a better matching of the costs of the benefits to revenues than other methods, even though the useful life may be difficult to determine.
- 3. Retain goodwill indefinitely unless a reduction in value occurs.** Others believe that goodwill can have an indefinite life and should be kept as an asset until a decline in value occurs. Some form of goodwill should always be an asset because the current costs to maintain or enhance the purchased goodwill are being expensed. Also, unless there is strong evidence that a decline in its value has occurred, a write off of goodwill is arbitrary and leads to distortions in net income.

Not so long ago, companies were required to amortize goodwill over a period no longer than 40 years. However, goodwill acquired in a business combination **is now considered to have an indefinite life and is no longer amortized**. Although goodwill may decrease

over time, predicting the actual life of goodwill and an appropriate pattern of amortization is extremely difficult. Therefore, it is carried on the statement of financial position at the amount originally recognized in the combination less any subsequent impairment losses. Impairment losses can be challenging to estimate as discussed in [What Do the Numbers Mean? 12.5](#). **Income statements are not charged with any amounts paid for the goodwill until the asset is considered impaired.**

What Do the Numbers Mean? 12.5

Duff & Phelps and the Financial Executives Research Foundation prepare an annual Goodwill Impairment Study of U.S. public companies. The 2017 study noted that total goodwill impairment for the companies in their study was cut in half, down to \$28.5 billion in 2016. A similar study focused on Canada a few years earlier and included a summary of a survey of members of the Financial Executives International. These members stated that the top challenges for companies when performing goodwill impairment tests were developing cash flow projections, identifying cash-generating units (CGUs), determining the discount rate to be used for estimation, and properly identifying impairment indicators for CGUs.

Goodwill—Impairment

LEARNING OBJECTIVE 8

Explain and account for impairment of goodwill.

Goodwill is not an identifiable asset and cannot generate cash flows independently of other assets. Because it can be acquired only in combination with other assets making up a business, it has to be assigned to a reporting unit or cash-generating unit (CGU) in order to be tested for impairment. An example of a CGU is the Markets division of **Thomson Reuters**, which, when it adopted IFRS, contributed to the company's goodwill impairment charge of over U.S. \$3.0 billion. Other than this specific requirement regarding the reporting unit or CGU, impairment accounting for goodwill is similar to that of intangibles with an indefinite life. Applying the standards in this area can be complex, but we provide a summary of the basic elements in [Illustration 12.7](#) and [Examples 12.6](#) and [12.7](#), under both ASPE and IFRS.

	ASPE	IFRS
Apply impairment test ...	... when events or changes in circumstances indicate.	... annually, and whenever there is an indication that the CGU may be impaired.
At acquisition date, assign goodwill ...	... to a reporting unit: an operating segment or one level below.	... to cash-generating unit: smallest identifiable group of assets where goodwill is monitored for management purposes, and no larger than an operating segment.
There is a loss on impairment ...	... when carrying amount of reporting unit including goodwill > fair value of reporting unit. Loss = amount of excess	... when carrying amount of CGU including goodwill > recoverable amount. Loss = amount of excess. Recoverable amount is the higher of value in use and fair value less costs to sell.
Loss on impairment is allocated ...	... to goodwill; impairment test for other assets in group is done before goodwill impairment test.	... first to goodwill related to the CGU, then remainder to other assets on a relative carrying amount (proportionate) basis.
Goodwill impairment reversal ...	... is not permitted.	... is not permitted.

ILLUSTRATION 12.7 Summary of Accounting for Impairment of Goodwill

Example 12.6 | Accounting for Goodwill Impairment

Facts Assume that Coburg Corporation has three divisions. One division, Pritt Products, was purchased four years ago for \$2 million and has been identified as a reporting unit. Unfortunately, it has experienced operating losses over the past three quarters and management is reviewing the reporting unit to determine whether there has been an impairment of goodwill. The carrying amounts of Pritt Division's net assets, including the associated goodwill of \$900,000, are listed below. Assume that Pritt's reporting unit is also a cash-generating unit under IFRS.

Pritt Reporting Unit—Carrying Amount of Net Assets Including Goodwill	
Cash	\$ 200,000
Receivables	300,000
Inventory	700,000
Property, plant, and equipment (net)	800,000
Goodwill	900,000
Less: Accounts and notes payable	<u>(500,000)</u>
Net assets, at carrying amounts	<u>\$2,400,000</u>

Instructions IFRS ASPE

Assume that the fair value of the Pritt Division reporting unit as a whole is estimated to be \$2.8 million. Also assume that management determines that the unit's value in use is \$2.9 million and that the company would incur direct costs of \$50,000 if the unit were sold.

- Would goodwill be considered impaired under ASPE?
- Would your answer change under IFRS?

Solution

- Under **ASPE**, the goodwill is not impaired. The asset group's \$2.4-million carrying value is less than its fair value of \$2.8 million.
- Under **IFRS**, goodwill is not considered impaired either. The recoverable amount of the unit is \$2.9 million—the higher of its value in use (\$2.9 million) and its fair value less costs to sell (\$2,800,000 – \$50,000)—and this exceeds the unit's carrying amount of \$2.4 million.

Example 12.7 | Accounting for Goodwill Impairment with Journal Entries

Facts Assume the same facts as [Example 12.6](#), except assume that the fair value of the Pritt Division unit as a whole is \$1.9 million, its value in use is \$2.1 million, and the direct costs of selling the unit are \$50,000.

Instructions IFRS ASPE

- a. Calculate goodwill impairment under ASPE and under IFRS.
- b. Provide the related journal entries, if any, under both ASPE and IFRS, and calculate the net carrying amount for goodwill under ASPE vs. IFRS.

Solution

- a. Under **ASPE**, a loss on impairment of \$500,000 is indicated as follows:

Carrying amount of unit, including goodwill	\$2,400,000
Fair value of unit	<u>1,900,000</u>
Goodwill—loss on impairment	<u>\$ 500,000</u>

- Under **IFRS**, a loss on impairment of \$300,000 is indicated:

Carrying amount of unit, including goodwill		\$ 2,400,000
Recoverable amount of unit: higher of		
Value in use	\$2,100,000	}
and		
Fair value less costs to sell	\$1,850,000	
Goodwill—loss on impairment		<u><u>\$ 300,000</u></u>

- b. The entries to record the losses under ASPE and IFRS are:

	ASPE	IFRS	
Loss on Impairment	500,000	300,000	
Accumulated			
Impairment			
Losses—Goodwill	500,000	300,000	

A	= L +	SE
ASPE		
-500,000		-500,000
IFRS		
-300,000		-300,000

Cash flows: No effect

Because there is a requirement to report the gross amount of goodwill and accumulated impairment losses at the end of the period, the Accumulated Impairment Losses—Goodwill account is credited instead of the Goodwill account so that the required information is retained. The Goodwill's net carrying amount is now \$400,000 (\$900,000 – \$500,000) under ASPE and \$600,000 (\$900,000 – \$300,000) under IFRS.

Impairment tests for various types of assets are summarized in [Illustration 12.8](#).

Type of Asset	Impairment Test	
	ASPE	IFRS
Limited-life intangible	Compare carrying amount with undiscounted future cash flows	Compare carrying amount with recoverable amount
Indefinite-life intangible	Compare carrying amount with fair value	Compare carrying amount with recoverable amount
Goodwill	Compare carrying amount of reporting unit with its fair value	Compare carrying amount of CGU with its recoverable amount

ILLUSTRATION 12.8 Summary of the Impairment Tests for Intangible Assets and Goodwill

Presentation, Disclosure, and Analysis

LEARNING OBJECTIVE 9

Identify the types of disclosure requirements for intangible assets and goodwill and explain the issues in analyzing these assets.

A survey indicates that the most common types of intangible assets reported are broadcast rights, publishing rights, trademarks, patents, licences, customer lists, non-competition agreements, franchises, and purchased R&D.²⁷ These, along with goodwill, have become an increasingly large proportion of companies' reported assets, making intangibles an important contributor to entity performance and financial position. For example, **Corus Entertainment Inc.**, a Canadian-based media and entertainment company, reported indefinite-life broadcast licences and goodwill at August 31, 2017, that amounted to 71% of its total assets. There were no charges for impairment in either 2017 or 2016, after several periods in a row with impairment charges for these intangibles. For example, the company recognized \$130.0 million of impairment losses on these two classes of assets in 2015 (\$83.0 million in 2014). The goodwill write off in 2015 represented about 11% of its opening book value, with the impairment being due, in part, to “certain radio clusters (with) actual results and revised cash flow projections that fell short of previous estimates.” The CGUs affected by the write offs were predominantly in the radio segments for broadcast licence impairment and also in the radio CGU for goodwill.

Presentation and Disclosure

IFRS **ASPE** **Overview**

While there are few required disclosures on the face of the statement of financial position and the statement of comprehensive income, a significant amount of information is required in the notes to the financial statements, particularly those prepared under IFRS. As seen in previous chapters, ASPE disclosures are considerably curtailed because most users of such financial statements can request additional information as needed. The goal of disclosure for publicly accountable entities is basically to allow readers to understand the significance of intangibles and goodwill to the operations of the business. To that end, this section summarizes some of the major disclosures required.

For each class of intangible asset, and separately for internally generated intangibles and other intangible assets, the following information is required:

- whether their lives are indefinite or finite (limited), useful life, methods and rates of amortization, and the line where amortization is included on the statement of comprehensive income;
- the carrying amount of intangible assets with an indefinite life, and the reasons supporting an assessment of an indefinite life;
- a reconciliation of the opening and ending balances of their carrying amount and accumulated amortization and losses on impairment, separately identifying each reason for an increase or decrease; and
- losses on impairment and reversals of losses on impairment and where they are reported in the statement of comprehensive income.

For each material loss on impairment recognized or reversed in the period, the following is required:

- the circumstances that led to its recognition, the amount recognized, the nature of the asset or cash-generating unit, and information about how the recoverable amount was determined.

For each cash-generating unit or group of units that has a significant amount of goodwill or intangible assets with an indefinite life, the following is required:

- how the unit's recoverable amount was determined, as well as assumptions underlying the calculation of the recoverable amount.

For intangible assets measured using the revaluation model, the following is required:

- their carrying amount, the carrying amounts if the revaluation model had not been applied, the date of the revaluation, the amount of the associated revaluation surplus and changes in that account, and the methods and assumptions used in estimating fair values.

This list identifies only some of the disclosures. The best source of the specific requirements is the standards themselves.

Illustration of Disclosures

Excerpts from the financial statements of Corus Entertainment for its year ended August 31, 2017, are provided in [Illustration 12.9](#). These disclosures are based on IFRS, which the company adopted in 2012. This company, reporting in thousands of Canadian dollars, operates through two main lines of business: television and radio. Its 45 specialty television networks include YTV, Treehouse, TELETOON, W Network, and SHOWCASE.

3. SIGNIFICANT ACCOUNTING POLICIES

BASIS OF PRESENTATION

The consolidated financial statements have been prepared on a cost basis, except for derivative financial instruments and certain available-for-sale financial assets, which have been measured at fair value. The consolidated financial statements are presented in Canadian dollars, which is also the Company's functional currency and all values are rounded to the nearest thousand, except where otherwise noted.

GOODWILL AND INTANGIBLE ASSETS

Intangible assets acquired separately are measured on initial recognition at cost. Intangible assets acquired in a business combination are measured at fair value as at the date of acquisition. Following initial recognition, intangible assets are carried at cost less accumulated amortization and accumulated impairment charges, if any. Internally generated intangible assets such as goodwill, brands and customer lists, excluding capitalized program and film development costs, are not capitalized and expenditures are reflected in the consolidated statements of income and comprehensive income in the year in which the expenditure is incurred.

Intangible assets are recognized separately from goodwill when they are separable or arise from contractual or other legal rights and their fair value can be measured reliably. The useful lives of intangible assets are assessed as either finite or indefinite.

Intangible assets with finite lives are amortized over their useful economic lives and assessed for impairment whenever there is an indication that the intangible assets may be impaired. The amortization period and the amortization method for intangible assets with finite useful lives are reviewed at least at the end of each reporting period. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the assets are accounted for by changing the amortization period or method, as appropriate, and are treated as changes in accounting estimates. The amortization expense on intangible assets with finite lives is recognized in the consolidated statements of income and comprehensive income in the expense category, consistent with the function of the intangible assets.

Amortization is recorded on a straight-line basis over the estimated useful life of the asset as follows:

Brand names, trade marks and digital rights	Agreement term
Software, patents and customer lists	3 – 5 years

Intangible assets with indefinite useful lives are not amortized. Broadcast licenses are considered to have an indefinite life based on management's intent and ability to renew the licenses without significant cost and without material modification of the existing terms and conditions of the license. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable. If not, the change in useful life from indefinite to finite is made on a prospective basis.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interest over the net identifiable assets acquired and liabilities assumed. If this consideration is lower

than the fair value of the net identifiable assets of the subsidiary acquired, the difference is recognized in the consolidated statements of income and comprehensive income.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to a CGU or group of CGUs that are expected to benefit from the synergies of the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units. The group of CGUs is not larger than the level at which management monitors goodwill or the Company's operating segments.

Where goodwill forms part of a CGU and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal of the operation. Goodwill disposed of in this circumstance is measured based on the relative fair value of the operation disposed of and the portion of the CGU retained.

Broadcast licenses and goodwill are tested for impairment annually or more frequently if events or circumstances indicate that they may be impaired. The Company completes its annual testing during the fourth quarter each year.

Broadcast licenses by themselves do not generate cash inflows and therefore, when assessing these assets for impairment, the Company looks to the CGU to which the asset belongs. The identification of CGUs involves judgment and is based on how senior management monitors operations; however, the lowest aggregations of assets that generate largely independent cash inflows represent CGUs for broadcast license impairment testing.

CGUs for broadcast license impairment testing

For the Television segment, the Company has determined that there are two CGUs: (1) Managed Brands consisting of conventional television stations, specialty television networks and pay television services (ceased operations February 29, 2016) that are operated and managed directly by the Company; and (2) Other, as these are the levels at which independent cash inflows have been identified.

For the Radio segment, the Company has determined that the CGU is a radio cluster whereby a cluster represents a geographic area, generally a city, where radio stations are combined for the purpose of managing performance. These clusters are managed as a single asset and overhead costs are allocated amongst the cluster and have independent cash inflows at the cluster level.

Groups of CGUs for goodwill impairment testing

For purposes of impairment testing of goodwill, the Company has grouped the CGUs within the Television and Radio operating segments and performs the test at the operating segment level. This is the lowest level at which management monitors goodwill for internal management purposes.

Other intangible assets

Gains or losses on an intangible asset are measured as the difference between the net disposal proceeds and the carrying amount of the asset and are recognized in the consolidated statements of income and comprehensive income when the asset is

derecognized.

9. INTANGIBLES

	Broadcast Licenses ⁽¹⁾	Other ⁽²⁾	Total
Balance—August 31, 2015	956,984	17,631	974,615
Additions	—	122,621	122,621
Acquisitions (note 27)	78,300	987,540	1,065,840
Disposals (note 27)	(50,395)	(2,662)	(53,057)
Amortization	—	(33,782)	(33,782)
Balance—August 31, 2016	984,889	1,091,348	2,076,237
Additions	—	12,439	12,439
Amortizations	—	(42,863)	(42,863)
Balance—August 31, 2017	984,889	1,060,924	2,045,813

⁽¹⁾ Broadcast licenses are located in Canada.

⁽²⁾ Other intangibles are comprised of brands, trade marks and software.

At August 31, 2017, other intangibles with a finite life consisted of:

	2017	2016
Cost	258,246	247,483
Accumulated amortization	124,125	82,933
Net book value	134,121	164,550

The Company expects that approximately 29% of the net book value of intangible assets with a finite life will be amortized during the year ended August 31, 2018. The Company expects the net book value of intangible assets with a finite life to be fully amortized by August 2022.

Indefinite life intangibles, such as broadcast licenses, are tested for impairment annually as at August 31 or more frequently if events or changes in circumstances indicate that they may be impaired. At August 31, 2017, the Company performed its annual impairment test for fiscal 2017 and determined that there were no impairments for the year then ended on indefinite life intangibles.

ILLUSTRATION 12.9 Selected Excerpts: Notes on Intangible Assets and Goodwill—Corus Entertainment

Analysis

Missing Values

The requirement that most research and development phase costs incurred for internally developed intangibles be expensed immediately is a conservative, practical solution that ensures consistency in practice and uniformity among companies. But the practice of immediately writing off expenditures that are made in the expectation of benefiting future

periods cannot always be justified on the grounds that it is good accounting theory.

Since the 1990s, the conventional financial-accounting model has been increasingly criticized for its inability to capture many of the attributes that give a business value. At the end of third quarter of 2018, for example, Apple Inc. had a total book value of approximately U.S. \$115 billion, while its market capitalization (the market value of its outstanding shares) was over U.S. \$1.1 trillion.²⁸ Why such a significant difference?

The answer is that financial accounting does not capture and report many of the assets that contribute to future cash flows, and this is seen by some critics as the greatest challenge facing the accounting profession today. Many of the missing values belong to unrecognized, internally developed intangible assets known as **knowledge assets** or **intellectual capital**. These include the value of key personnel (not only Tim Cook, the CEO successor to Apple co-founder Steve Jobs, but the many creative and technologically proficient employees in general), the investment in products from research and development and their potential, organizational adaptability, customer retention, strategic direction, brands, flexible and innovative management, customer service capability, and effective advertising programs, to name only a few types of knowledge assets. When a company is not allowed to capitalize many of these expenditures, this excludes from its statement of financial position what may be its most valuable assets.

The challenges of proper recording of assets as the economy evolves are significant, as discussed for cryptocurrencies such as bitcoin in **[What Do the Numbers Mean? 12.6](#)**.

What Do the Numbers Mean? 12.6

Cryptocurrencies such as bitcoin are difficult to classify. They appear to be a form of cash, but they are not backed by a central bank or intermediary. The lack of backing by a bank or government, and the volatility of their value, implies that bitcoins do not qualify as cash or cash equivalents under IFRS. Similarly, the lack of a contractual right to receive cash or another financial asset implies that bitcoins are not financial instruments. The lack of physical existence or substance implies that bitcoins are not property, plant and equipment. They are not held for sale in the ordinary course of business for most companies, and a lack of trading activity implies that bitcoins are not likely to be considered inventory. The best choice may be for bitcoins to be considered intangible assets as they are identifiable and separable—they can be separated or divided from the entity and can be sold, transferred or exchanged! Remember that, as we discussed earlier in this chapter, as long as there is an active market for intangible assets (like bitcoins) they can be measured at fair value.²⁹

Finance 5.1.1, 5.1.2 These indicators of longer-term value that are created in an organization will ultimately result in realized values through future transactions and, therefore, are relevant information for financial statement readers. Companies increasingly disclose more of this “soft” information in annual reports outside the financial statements, in news releases, and in interviews with market analysts. While some observers believe that standard setters should work to ensure that more of these intangibles are captured on the statement of financial position, others believe that new frameworks for reporting

performance need to be developed together with—or to even replace—the current financial reporting model.

Our conventional accounting model captures the results of past transactions. This has been considered a very significant benefit because it is what makes it possible to verify the reported measures and therefore add to the reliability of the financial statements. In most cases, the intellectual capital and knowledge assets identified above cannot be measured in financial terms with enough reliability to give them accounting recognition. Some cannot be included as assets because of the enterprise's inability to control access to the benefits. Investments that are made in employee education and development, for example, can walk out the door when employees leave the company to work elsewhere. Others argue that the amount of costs charged to expense in each accounting period is about the same whether there is immediate expensing or capitalization followed by amortization, because most companies continuously invest in a variety of research, development, and other activities.

Theory Others opposed to increased capitalization of costs point to the decline in market value of technology shares—in particular, from early 2000 to 2001. Microsoft, a key company in the high-tech sector, lost over 60% of its value in this period, bringing it much closer to its book value. Some use this as an argument that the historical cost model still has much to recommend it! The “truth,” of course, lies somewhere in between. While inflated market values are not reliable enough to support the recognition of previously unrecognized intangible asset value, the historical-cost, transactions-based model certainly fails to capture many of the things at the heart of corporate value. Much research is being carried out in the search for solutions to the discrepancies between what gets reported as having value on the financial statements and what the capital markets perceive as having value and therefore reflect in share prices.

Comparing Results

When comparing the operating results of companies—either of one company over time or between companies—it is not only important to pay close attention to which set of GAAP each applies. It is also important to examine how deferred charges, intangible assets, and goodwill have been accounted for and how any changes in related accounting policies have been handled. This is important because the standards for intangibles have changed significantly in recent years and may continue to change. Montreal-based communications company **Quebecor Inc.**, for example, like other companies when they first adopted IFRS, was required to review its existing goodwill and was permitted to recognize any impairment as an adjustment to its opening balance of retained earnings. So, when IFRS was first applied, Quebecor recognized a goodwill impairment loss of \$2.2 billion—a charge that bypassed the income statement completely and went straight against retained earnings! Quebecor thus took a “big bath” writedown—writing down goodwill that it had previously reported as an asset. This means that these costs will never flow through the company's income statement, and future operating statements are freed from them.³⁰ Care has to be taken when calculating and interpreting any ratios that include earnings and asset numbers, especially when the results of different years are being compared.

IFRS/ASPE Comparison

LEARNING OBJECTIVE 10

Identify differences in accounting between IFRS and ASPE.

A Comparison of IFRS and ASPE

With a few specific exceptions, accounting for intangible assets and goodwill under IFRS and ASPE is very similar. [Illustration 12.10](#) identifies the relevant standards that apply to intangible assets and goodwill for both and the areas of difference that exist.

		Accounting Standards for Private Enterprises (ASPE)—CPA Canada Handbook, Part II, Sections 1582, 3063, 3064, 3475, and 3831	References to Related Examples, Illustrations and Select Brief Exercises
IFRS—IAS 23, 36, and 38; IFRS 2, 3, and 13			
Measurement at acquisition	<p>Borrowing costs directly attributable to the acquisition, construction, or development of qualifying assets are capitalized.</p> <p>Costs associated with the development of internally generated intangible assets are capitalized when six specific conditions are met in the development stage.</p>	<p>Interest costs directly attributable to the acquisition, construction, or development of an intangible asset, once it meets the criteria to be capitalized, may be capitalized or expensed, depending on the entity's accounting policy.</p> <p>Costs associated with the development of internally generated intangible assets that meet the six specific conditions in the development stage may be capitalized or expensed, depending on the entity's accounting policy.</p>	<p>BE12.3 and BE12.12</p> <p>BE12.8 and BE12.9</p>
Measurement after acquisition	Intangible assets are accounted for under the cost model or the revaluation model. The latter is used only when the asset has an active market fair value.	Intangible assets are accounted for according to the cost model.	Illustration 12.4 BE12.15
Impairment of intangible assets	Assess limited-life intangible assets for potential impairment at the end of each reporting period; for those with an indefinite life, this includes calculating the recoverable amount and comparing it with book value.	Test both limited- and indefinite-life intangibles for potential impairment whenever events and changing circumstances indicate the carrying value may not be recoverable.	Illustration 12.6

		Accounting Standards for Private Enterprises (ASPE)—CPA Canada Handbook, Part II, Sections 1582, 3063, 3064, 3475, and 3831	References to Related Examples, Illustrations and Select Brief Exercises
	IFRS—IAS 23, 36, and 38; IFRS 2, 3, and 13		
	For limited-life intangibles, apply the rational entity impairment model.	For limited-life intangibles, apply the cost recovery impairment model.	Illustrations 12.6 and 12.8
			BE12.15 , BE12.16 , and BE12.17
	For indefinite-life intangibles, apply the rational entity impairment model.	For indefinite-life intangibles, impairment test is comparison of carrying amount with asset's fair value; loss is equal to the difference when fair value is lower.	Example 12.4 Illustration 12.8 BE12.18
	Within limits, losses on impairment are reversed for recoveries related to economic changes.	Losses on impairment are not reversed.	
Impairment of goodwill	Similar to impairment of indefinite-life intangible assets, except that there is no reversal of a loss on impairment for goodwill. See also Illustration 12.7 .	Similar to impairment of indefinite-life intangible assets. See also Illustration 12.7 .	Examples 12.6 and 12.7 Illustrations 12.7 and 12.8 BE12.20 and BE12.21
Disclosures	Significant disclosures are required including detailed reconciliations between opening and ending balances for each type of intangible and goodwill. Considerable information is also required whenever fair values are used to explain how they are determined,	Basic disclosures are required about the balance of intangible assets and goodwill on the balance sheet with additional details by classes and whether or not they are amortized. Details explaining each impairment loss and where each is reported on	Illustration 12.9

	Accounting Standards for Private Enterprises (ASPE)—CPA Canada Handbook, Part II, Sections 1582, 3063, 3064, 3475, and 3831	References to Related Examples, Illustrations and Select Brief Exercises
IFRS—IAS 23, 36, and 38; IFRS 2, 3, and 13		
as well as background information about losses on impairment for goodwill and intangibles.	the income statement are also required.	

ILLUSTRATION 12.10 IFRS and ASPE Comparison Chart

Looking Ahead

Whether recognized or not, intangible assets are an increasingly important aspect of what gives an entity value, and existing standards do not do a very good job of reporting these assets to users of the financial statements. Current standards significantly restrict the intangibles that can be recognized, and after acquisition, only intangibles with fair values determined in an active market can use the revaluation model under IFRS. Also, there are inconsistent treatments of intangible assets developed internally and those acquired in a business combination, as well as of internally developed property, plant, and equipment assets.

Effective January 1, 2016, IAS 38.98 was clarified via IAS 38.98A such that there is an underlying assumption (which the IASB calls a “rebuttable presumption”) that amortization methods based on revenue generated by an activity that includes the use of an intangible asset are inappropriate.

The IASB tentatively decided not to consider reintroducing amortization of goodwill. However, it was considering ways of ensuring that impairment of goodwill is recognized on a timely basis. For example, it was considering simplifying the “value in use” calculation for IAS 36 in its Goodwill and Impairment project, if it could do so without making the impairment test in IAS 36 *Impairment of Assets* less robust. So, in January 2018 the Board announced that it may remove the requirement for companies to exclude cash flows resulting from a future restructuring or a future enhancement from the “value in use” calculation. The next step being considered is a Discussion Paper or Exposure Draft.

Appendix 12A Valuing Goodwill

LEARNING OBJECTIVE 11

Explain and apply basic approaches to valuing goodwill.

In this chapter, we discussed the method of measuring and recording goodwill when one entity acquires 100% of another business **as the excess of the fair value of the consideration given up by the acquirer over the fair value of the identifiable assets acquired and liabilities assumed in a business acquisition**. Determining the fair value of the consideration transferred and the fair value of the assets and liabilities acquired is an inexact process, and therefore, so is the calculation of the amount of goodwill. As the chapter suggests, it is usually possible to determine the fair value of specifically identifiable assets, but the question remains, “How does a buyer value intangible factors such as superior management, a good credit rating, and so on?”

Excess-Earnings Approach

Finance 5.4.1, 5.4.2, 5.4.3 One method to estimate the amount of goodwill in a business is the **excess-earnings approach**. This approach works as follows:

1. Calculate the average annual “normalized” earnings that the company is expected to earn in the future.
2. Calculate the average annual earnings that the company would be expected to earn if it generated the same return on investment (ROI) as the average firm in the same industry. The return on investment is the percentage that results when income is divided by the net assets or shareholders' equity invested to generate that income.
3. Calculate the excess annual earnings: the difference between what the specific company and the average firm in the industry are expected to earn in the future. The ability to generate a higher income indicates that the business has an unidentifiable value that provides this greater earning power. This ability to earn a higher rate of return than the industry is considered to be the heart of what goodwill really is.
4. Estimate the value of the goodwill based on the future stream of excess earnings.

This approach is a systematic and logical way to calculate goodwill because its value is directly related to what makes a company worth more than the sum of its parts. We will use the Tractorling Ltd. example referred to in [Example 12.5](#) again here to explain each of the four steps above. As indicated above, we first calculate the average annual “normalized” earnings that the company is expected to earn in the future. Because the past often provides useful information about the future, the past earnings are a good place to start in estimating a company's likely future earnings. Going back three to six years is usually adequate.

Assume that Tractorling's net income amounts for the past five years and the calculation of the company's average earnings over this period are as given in [Illustration 12.A.1](#). The information in this illustration, and in the discussion that follows it, will provide the basis for our next two examples.

Earnings History—Tractorling Limited

2016	\$ 60,000
2017	55,000
2018	110,000 ^a
2019	70,000
2020	<u>80,000</u>
Total for 5 years	<u>\$375,000</u>
Average earnings	$\$375,000 \div 5 \text{ years} = \$75,000$

^a Includes gain on discontinued operation of \$25,000

ILLUSTRATION 12.A.1 Calculation of Average Past Earnings

Based on the average annual earnings of \$75,000 and the fair value of the company's identifiable net assets of \$350,000 from [Example 12.5](#), a return on investment of approximately 21.4% is initially indicated: $\$75,000 \div \$350,000$. Before we go further, however, we need to know whether \$75,000 is representative of Tractorling's **future earnings**. A company's past earnings need to be analyzed to determine whether any adjustments are needed in estimating expected future earnings. This process is often called “normalizing earnings” and the income that results is termed [normalized earnings](#).

First, **the accounting policies applied should be consistent with those of the purchaser**. For example, assume that the purchasing company measures inventory using the FIFO cost formula rather than average cost, which Tractorling uses. Further assume that the use of average cost had the effect of reducing Tractorling's net income by \$2,000 each year below a FIFO-based net income. In addition, Tractorling uses accelerated depreciation while the purchaser uses straight-line. As a result, the reported earnings are \$3,000 lower each year than they would have been on a straight-line basis.

Second, because the purchaser will pay current prices for the company, **future earnings should be based on the net assets' current fair values** rather than the carrying amount on Tractorling's books. That is, differences between the assets' carrying amounts and fair values may affect reported earnings in the future. For example, internally developed patent costs of \$18,000 not previously recognized as an asset would be recognized on the purchase of Tractorling and are included in the \$350,000 fair value of identifiable assets. This asset will need to be amortized, say, at the rate of \$1,000 per year.

Finally, because we are trying to estimate future earnings, **amounts that are not expected to recur should be adjusted out of our calculations**. The 2018 gain on discontinued operations of \$25,000 is an example of such an item. [Example 12.A.1](#) illustrates normalized earnings for a company being acquired.

Example 12.A.1 | Calculation of Normalized Earnings

Facts [Illustration 12.A.1](#) provides the earnings history of Tractorling, and the subsequent discussion summarizes differences in Tractorling's accounting policies compared with the company purchasing it (relating to inventory costing, depreciation expense, discontinued operations, and patent amortization).

Instructions

Prepare a calculation of normalized earnings for Tractorling (that is, prepare an estimate of what the purchaser would expect recurring annual future earnings to be).

Solution

Average past earnings of Tractorling (from Illustration 12.A.1)		\$75,000
Add		
Adjustment for change from average cost to FIFO	\$2,000	
Adjustment for change from accelerated to straight-line depreciation	<u>3,000</u>	<u>5,000</u>
		80,000
Deduct		
Gain on discontinued operation ($\$25,000 \div 5$)	\$5,000	
Patent amortization on straight-line basis	<u>1,000</u>	<u>6,000</u>
Expected future annual earnings of Tractorling		<u>\$74,000</u>

Note that it was necessary to divide the gain on the discontinued operation of \$25,000 by five years to adjust it correctly. The whole \$25,000 was included in the total income earned over the five-year history, but only one fifth of it, or \$5,000, is included in the average annual earnings.³¹

Determining the industry's average rate of return earned on net assets requires an analysis of companies that are similar to the enterprise being examined. An industry average may be determined by examining annual reports or data from statistical services. This industry average would typically reflect the level of earnings that is expected from companies in the industry without taking into account any goodwill. We extend the scenario for Tractorling via [Example 12.A.2](#) by taking into account an industry average rate of return.

Example 12.A.2 | Estimation of Annual Average Earnings Tractorling Would Generate Based on Industry Average ROI

Facts Assume that a rate of 15% is found to be average for companies in Tractorling's industry. Consistent with prior examples, assume the fair value of the company's identifiable net assets is \$350,000.

Instructions

- a. What would Tractorling's earnings be if they are based on the norm for the industry?
- b. Calculate Tractorling's excess annual earnings: the difference between what the specific company and the average firm in the industry are expected to earn in the future.
- c. Estimate the value of the goodwill based on the future stream of excess earnings discounted at 15% vs. 25%. Discuss how the discount rate should be chosen and how alternate discount periods affect the amount that would be paid for Tractorling.

Solution

- a. An estimate of Tractorling's expected earnings if they were based on the norm for the industry is calculated below:

Fair value of Tractorling's identifiable net assets	\$350,000
Industry average rate of return	<u>15%</u>
Tractorling's earnings if no goodwill	<u>\$ 52,500</u>

Note that the net assets' fair value—not their carrying amount—is used to calculate Tractorling's level of earnings at the industry average rate of return. Fair value is the relevant measure because the cost of the net identifiable assets to any company that is interested in purchasing Tractorling will be their fair value, not the carrying amount.

- b. Excess annual earnings represents how much the company's expected earnings exceed the industry norm. This is what gives the company value in excess of the fair value of its identifiable net assets.

Expected future earnings of Tractorling	\$74,000
Tractorling's earnings if no goodwill	<u>52,500</u>
Tractorling's excess annual earnings	<u>\$21,500</u>

- c. Estimated goodwill based on the future excess earnings: Because excess earnings are expected to continue for several years, they are discounted back to their present value to determine how much a purchaser would pay for them now. A discount rate must be chosen, as well as the length of the discount period.

The choice of discount rate is relatively subjective.³² The lower the discount rate, the higher the goodwill value and vice versa. To illustrate, assume that the excess

earnings of \$21,500 are expected to continue indefinitely. If the excess earnings are capitalized at a rate of 25% in perpetuity, for example, the results are:

Capitalization at 25%

$$\frac{\text{Excess earnings}}{\text{Capitalization rate}} = \frac{\$21,500}{0.25} = \$86,000$$

As indicated below, if the excess earnings are capitalized in perpetuity at a somewhat lower rate, say 15%, a much higher goodwill figure results.³³

Capitalization at 15%

$$\frac{\text{Excess earnings}}{\text{Capitalization rate}} = \frac{\$21,500}{0.15} = \$143,333$$

What do these numbers mean? In effect, if a company pays \$86,000 over and above the fair value of Tractorling's identifiable net assets because the company generates earnings above the industry norm, and Tractorling actually does generate these excess profits in perpetuity, the \$21,500 of extra earnings per year represents a 25% return on the amount invested. That is, there is a \$21,500 return on the \$86,000 invested.

If the purchaser invests \$143,333 for the goodwill, the extra \$21,500 represents a 15% return on investment: \$21,500 relative to the \$143,333 invested.

Because it is uncertain—risky—that excess profits will continue, a conservative or risk-adjusted rate (higher than the normal rate) tends to be used. Factors that are considered in determining the rate are the stability of past earnings, the speculative nature of the business, and general economic conditions.

As for the discount period, determining the period over which excess earnings are expected to continue is perhaps the most difficult problem in estimating goodwill. The perpetuity examples above assume that the excess earnings will last indefinitely. Usually, however, the excess earnings are assumed to last a limited number of years. The earnings are then discounted over the shorter period.

Assume that the company interested in buying Tractorling's business believes that the excess earnings will last only 10 years and, because of general economic uncertainty, chooses 25% as an appropriate rate of return. The present value of a 10-year annuity of excess earnings of \$21,500 discounted at 25% is \$76,766.³⁴ This is the amount that a purchaser should be willing to pay above the fair value of the identifiable net assets—that is, for goodwill—given the assumptions stated.

Total-Earnings Approach

Another way to estimate goodwill that is similar may help to increase your understanding of the process and resulting numbers. Under this approach—the **total-earnings approach**—the value of the company as a whole is determined, based on the total expected earnings, not just the excess earnings. The fair value of the identifiable net assets is then deducted from the

value of the company as a whole. The difference is goodwill. The calculations under both approaches are provided in [Example 12.A.3](#), assuming the purchaser is looking for a 15% return on the amounts it will invest in Tractorling, and the earnings are expected to continue into perpetuity.

Example 12.A.3 | Total-Earnings Approach to the Calculation of Goodwill

Facts Assume that a rate of 15% is the appropriate discount rate for calculating goodwill, and that Tractorling's excess earnings will last indefinitely. Other facts are consistent with [Example 12.A.2](#).

Instructions

Estimate the value of the goodwill based on the total-earnings approach, and compare the results with those from the excess earnings approach.

Solution

Assumptions:	Expected future earnings		\$ 74,000
	Normal or industry-level earnings		<u>52,500</u>
	Expected excess future earnings		<u>\$ 21,500</u>
	Discount rate		15%
	Discount period		perpetuity, ∞
Excess-earnings approach:	Goodwill	= present value of the annuity of excess future earnings	
		= present value of annuity of \$21,500 ($n = \infty, i = 0.15$)	
		$= \frac{\$21,500}{0.15}$	<u>=\$143,333</u>
Total-earnings approach:	Goodwill	= difference between the fair value of the company and the fair value of its identifiable net assets	
	Fair value of company	= present value of the annuity of future earnings	
		= present value of annuity of \$74,000 ($n = \infty, i = 0.15$)	

		$= \frac{\$74,000}{0.15}$	\$493,333
Fair value of identifiable net assets	= present value of the annuity of industry-level earnings	= present value of annuity of \$52,500 ($n = \infty, i = 0.15$)	
		$= \frac{\$52,500}{0.15}$	= <u>(350,000)</u>
Goodwill	=		<u>\$143,333</u>

Other Valuation Methods

There are several other methods of valuing goodwill: some are very basic and others are very sophisticated. The methods illustrated here are some of the least complex approaches. Others include simply multiplying excess earnings by the number of years that the excess earnings are expected to continue. This method, often called the [number of years method](#), provides a rough measure of goodwill. The approach has the advantage only of simplicity; it does not consider the time value of money because the future cash flows are not discounted.

An even simpler method is one that relies on multiples of average yearly earnings that are paid for other companies in the same industry. If Skyward Airlines was recently acquired for five times its average yearly earnings of \$50 million, or \$250 million, then Worldwide Airways, a close competitor with \$80 million in average yearly earnings, would be worth \$400 million.

Finance 5.4.1, 5.4.2, 5.4.3 Another method (similar to discounting excess earnings) is the [discounted free cash flow method](#), which involves projecting the company's free cash flow over a long period, typically 10 or 20 years. The method first projects into the future a dozen or so important financial variables, including production; prices; and non-cash expenses such as amortization, taxes, and capital outlays—all adjusted for inflation. The objective is to determine the amount of operating cash flow that will be generated beyond the amount needed to maintain existing capacity. The present value of the free cash flow is then calculated. This amount represents the value of the business.

For example, if Magnaputer Ltd. is expected to generate \$1 million a year of free cash flow for 20 years, and the buyer's rate-of-return objective is 15%, the buyer would be willing to pay about \$6,260,000 for Magnaputer. (The present value of \$1 million to be received for 20 years discounted at 15% is \$6,259,330.) The goodwill, then, is the difference between the \$6,260,000 and the fair value of the company's identifiable net assets.

In practice, prospective buyers use a variety of methods to produce a valuation curve or range of prices. But the actual price that ends up being paid may be more a factor of the buyer's or seller's ego and negotiating skill.

Valuation of a business—determining how much to pay for it—and its inherent goodwill is at best a highly uncertain process.³⁵ The estimated value of goodwill depends on a number of factors, all of which are tenuous and subject to bargaining. It ends up accounted for as the difference between the fair value of what you give up to acquire the business and the fair value of the identifiable net assets acquired.

Review and Practice

Summary of Learning Objectives

1. Understand the importance of goodwill and intangible assets from a business perspective and describe their characteristics.

Our economy is increasingly dominated by information and service providers, and their major assets are often intangible in nature. Identifying and measuring intangible assets tends to be difficult, and as a result many intangibles are not captured on companies' statements of financial position. However, intangible assets and goodwill remain critically important for companies, and are a key focus of standard setters in North America and internationally.

Intangible assets have three characteristics: (1) they are identifiable, (2) they lack physical substance, and (3) they are nonmonetary in nature. Goodwill represents the difference between the fair value of the identifiable assets acquired and liabilities assumed and the consideration given when a company acquires another business.

2. Identify and apply the recognition and measurement requirements for purchased intangible assets.

A purchased intangible asset is recognized when it is probable that the entity will receive the expected future economic benefits and when its cost can be measured reliably. It is measured initially at cost. When several intangibles, or a combination of intangibles and other assets, are acquired in a business combination, the cost of each intangible asset is its fair value. When acquired in a business combination, the identifiable intangibles are recognized separately from the goodwill component.

3. Identify and apply the recognition and measurement requirements for internally developed intangible assets.

No costs are capitalized unless they meet the general recognition criteria concerning future benefits and measurability. Costs incurred in the research phase of developing an intangible asset internally are expensed. Costs incurred in the development phase of a project are also expensed unless the entity can demonstrate that it meets six stringent criteria. These criteria are designed to provide evidence that the asset is technically and financially feasible and that the company has the intent and ability to generate future economic benefits from it. Under ASPE, entities have a choice whether to capitalize or expense development costs that meet the six criteria.

4. Explain how intangible assets are accounted for after initial recognition.

Under ASPE, intangible assets are only accounted for using the cost model. IFRS also allows the revaluation model to be used if the asset's fair value is determined in an active

market, but it is not used often. An intangible with a finite or limited useful life is amortized over its useful life to the entity. Except in unusual and specific circumstances, the residual value is assumed to be zero. The amount to report for amortization expense should reflect the pattern in which the asset is consumed or used up if that pattern can be reliably determined. Otherwise, a straight-line approach is used. An intangible with an indefinite life is not amortized until its life is determined to no longer be indefinite. All intangibles are tested for impairment.

5. Identify and explain the accounting for specific types of intangible assets.

Major types of intangibles include the following: (1) marketing- related intangibles that are used in the marketing or promotion of products or services, (2) customer-related intangibles that result from interactions with outside parties, (3) artistic-related intangibles that involve ownership rights to such items as plays and literary works, (4) contract-based intangibles that represent the value of rights that arise from contractual arrangements, and (5) technology- based intangible assets that relate to innovations or technological advances.

6. Explain and account for impairment and derecognition of limited-life and indefinite-life intangible assets.

Under ASPE, impairment is determined and applied by using the cost recovery impairment model. Impairment for *limited-life* intangible assets is based first on a recoverability test. If the carrying amount is higher than the asset's (undiscounted) net recoverable amount, then a loss on impairment must be measured and recognized, based on the asset's fair value. No reversals of such losses are permitted. The procedures are the same as for property, plant, and equipment. *Indefinite-life* intangibles use only a fair value test. Under IFRS, the rational entity impairment model is used. An intangible asset is impaired only if its carrying amount is higher than its recoverable amount. The recoverable amount is defined as the greater of the asset's value in use and its fair value less costs to sell. The loss on impairment is the difference between the carrying amount and the recoverable amount, if lower. The loss may be reversed subsequently if economic conditions change and the recoverable amount increases. The same approach is used for both limited-life and indefinite-life intangible assets.

7. Explain how goodwill is measured and accounted for after acquisition.

Goodwill is unique because, unlike all other assets, it can be identified only with the business as a whole. It is not an identifiable asset. Goodwill is recorded only when a business is purchased. To calculate goodwill in a 100% acquisition, the fair value of the identifiable assets that are acquired and liabilities that are assumed is compared with the fair value of the consideration transferred for the acquired business. The difference is goodwill. After acquisition, it is not amortized but is regularly assessed for impairment.

8. Explain and account for impairment of goodwill.

Goodwill is assigned to a cash-generating group or reporting unit and the group/unit is tested for impairment. Under ASPE, a goodwill loss on impairment is recognized if the fair value of the unit is lower than its carrying amount, and the loss is equal to the difference. Under IFRS, there is a goodwill loss on impairment if the recoverable amount of the cash-generating unit is less than its carrying amount. The loss is equal to the difference and is applied to goodwill first. Under **both** ASPE and IFRS, goodwill losses

on impairment are not reversed.

9. Identify the types of disclosure requirements for intangible assets and goodwill and explain the issues in analyzing these assets.

Disclosures under ASPE are limited because users can typically access additional information. Under IFRS, significant details are required to be disclosed. The disclosures allow a reader to determine how amounts invested in classes of intangibles (and goodwill) have changed over the period, with substantial information provided when fair values are used, such as under the revaluation model and all impairment calculations. For intangibles that are not amortized, companies must indicate the amount of any losses on impairment that have been recognized as well as information about the circumstances that led to the writedown. Goodwill must be separately reported, as must the major classes of intangible assets. Because it is difficult to measure intangibles, some resources, such as intellectual capital and other internally developed intangible assets, do not get captured on the statement of financial position. Other intangibles are recognized, but with a relatively high level of measurement uncertainty. For these reasons, care must be taken when analyzing financial statement information related to earnings and total assets.

10. Identify differences in accounting between IFRS and ASPE.

There are few, but significant, differences between ASPE and IFRS regarding intangible assets and goodwill. One major difference is the accounting treatment for costs incurred in the development phase of internally generated intangible assets that meet the six stringent criteria for capitalization. Under ASPE, entities can choose whether to capitalize these costs or expense all such costs. Under IFRS, these costs are capitalized. The other major difference is the impairment models applied: the cost recovery model for ASPE, and the rational entity model for IFRS.

11. Explain and apply basic approaches to valuing goodwill.

One method of valuing goodwill is the excess-earnings approach. Using this approach, the value of goodwill is based on discounting expected future earnings in excess of the industry average to their present value. Another method involves determining the total value of the business by capitalizing total earnings, and then deducting the fair values of the identifiable net assets. The number of years method of valuing goodwill simply multiplies the excess earnings by the number of years of expected excess earnings. Another method of valuing goodwill is the discounted free cash flow method, which projects the future operating cash that will be generated over and above the amount needed to maintain current operating levels. The present value of the free cash flows is today's estimate of the firm's value.

Practice Problem

Sky Corp., organized in 2020, provided you with the following information. Sky follows ASPE.

1. Sky purchased a licence for \$20,000 on July 1, 2020. The licence gives Sky exclusive rights to sell its services in the province and will expire on July 1, 2028.
2. Sky purchased a patent on January 2, 2021, for \$40,000. It is estimated to have a five-

year life.

3. Costs incurred to develop an exclusive Internet connection process as of June 1, 2021, were \$45,000. The process is expected to have an indefinite life, but Sky is still finalizing its testing of the process to ensure it is technically feasible.
4. On April 1, 2021, Sky purchased a small circuit board manufacturer for \$350,000. Goodwill recorded in the purchase transaction was \$90,000.
5. On July 1, 2021, legal fees for successful defence of the patent purchased on January 2, 2021, were \$11,400.
6. Research and development costs incurred as of September 1, 2021, were \$75,000. None of the related projects involved had achieved economic viability.

Instructions

- a. Prepare the journal entries to record all the entries related to the patent during 2021.
- b. At December 31, 2021, an impairment test is performed on the licence purchased in 2020. It is estimated that the net cash flows to be received from the licence will be \$13,000, and its fair value is \$7,000. Calculate the amount of impairment, if any, to be recorded on December 31, 2021.
- c. (1) What are the amounts to be reported for intangible assets and goodwill on the statement of financial position at December 31, 2020? (2) At December 31, 2021?

Solution

a.

January 2, 2021

Intangible Assets—Patents	40,000	
Cash		40,000

July 1, 2021

Intangible Assets—Patents	11,400	
Cash		11,400

December 31, 2021

Amortization Expense	9,267	
Intangible Assets—Patents		9,267

Calculation of amortization expense for the patent:

$$\begin{aligned} \$40,000 \times 12/60 &= \$8,000 \\ \$11,400 \times 6/54 &= \underline{1,267} \\ \text{Total} &= \underline{\underline{\$9,267}} \end{aligned}$$

b. Calculation of impairment loss:

Cost	\$20,000
Less: Accumulated amortization ($\$20,000 \times 18/96$)	<u>3,750</u>
Carrying amount	<u>\$16,250</u>

Carrying amount of \$16,250 is greater than the undiscounted net cash flows amount of \$13,000. Therefore, the licence is impaired. The impairment loss is calculated as follows:

Carrying amount	\$16,250
Fair value	<u>7,000</u>
Loss on impairment	<u>\$ 9,250</u>

c. (1) Intangible assets as at December 31, 2020:

Licences	<u>\$18,750*</u>
*Cost	\$20,000
Less: Accumulated amortization ($\$20,000 \times 6/96$)	<u>1,250</u>
Net book value	<u>\$18,750</u>

(2) Intangible assets and goodwill as at December 31, 2021:

Licences	\$ 7,000
Patents ($\$40,000 + \$11,400 - \$9,267$)	42,133
Goodwill	90,000

All the costs to develop the Internet connection process and the research and development costs are expensed as incurred.

Key Terms

[acquirer](#)

[active market](#)

[artistic-related intangible assets](#)

[bargain purchase](#)

[brand](#)

[brand name](#)

[business combination](#)

[computer software costs](#)

[contract-based intangible assets](#)

[copyright](#)

[cost recovery impairment model](#)

[customer-related intangible assets](#)

[development](#)

[development phase](#)
[discounted free cash flow method](#)
[economic benefits](#)
[excess-earnings approach](#)
[favourable lease](#)
[finite life](#)
[franchise](#)
[goodwill](#)
[identifiable](#)
[identifiable net assets](#)
[impaired](#)
[indefinite life](#)
[intangible assets](#)
[intellectual capital](#)
[in-process research and development \(R&D\)](#)
[knowledge assets](#)
[lease](#)
[leasehold](#)
[licences](#)
[licensing agreements](#)
[limited life](#)
[marketing-related intangible assets](#)
[monetary assets](#)
[negative goodwill](#)
[normalized earnings](#)
[number of years method](#)
[organization costs](#)
[patent](#)
[permits](#)
[prepaid expense](#)
[rational entity impairment model](#)
[research](#)
[research phase](#)
[technology-based intangible assets](#)

[total-earnings approach](#)

[trade name](#)

[trademark](#)

Assignment Material

Note: All assignment material with an asterisk (*) relates to the appendix to the chapter.

Unless otherwise indicated, amortization expense should be calculated to the nearest whole month.

Enabling Competencies Completion of this end-of-chapter material will help develop CPA-enabling competencies (such as ethics and professionalism, problem-solving and decision-making, and communication) and technical competencies. We have highlighted selected items with a specific integration word mark and material in *WileyPLUS* has been linked to the competencies. All cases emphasize integration, especially of the enabling competencies. The brief exercises, exercises, and problems generally emphasize problem-solving and decision-making.

Brief Exercises

BE12.1 (LO 1) Wholesome Foods Corporation is a producer of gourmet organic cookies. The company was established three years ago when its founder and president, Martha Spencer, purchased the trademark “Healthy Originals” and its six patented cookie recipes. Martha soon discovered that there was a specialty market for the cookies, and began marketing them as hand-decorated and personalized gourmet organic cookies for special occasions such as birthdays and bridal and baby showers. Nearly all of the company's sales are through its internally developed website where customers can enter personalized orders for batches of individually decorated and wrapped cookies.

- a. Provide examples of intangible assets that may appear on the company's statement of financial position.
- b. Discuss the importance of the intangible assets to the company's business.
- c. Referring to the conceptual framework (discussed in [Chapter 2](#)), discuss the importance of recording the intangible assets on the company's statement of financial position.

BE12.2 (LO 1, 2, 3) For each independent scenario outlined below, discuss whether the three criteria required for an asset to be classified as an intangible are fulfilled:


- a. Software purchased specifically for a manufacturing machine that cannot operate without that software
- b. Software purchased for a hotel reservation system that is not essential to the related ancillary hardware equipment
- c. Software developed internally for eventual sale to customers
- d. Software purchased for eventual resale to customers

BE12.3 (LO 2, 3, 10) E-Learning Educational Services Inc. incurred the following costs associated with its research facilities. Indicate whether these items are capitalized or expensed in the current year, assuming the company reports under ASPE. Where applicable, indicate how your answer would change under IFRS.

- a. Executive salaries
- b. Costs of testing prototypes
- c. Market research to prepare for the product launch
- d. Sales commissions
- e. Salaries of research staff investigating alternatives for existing products
- f. Borrowing costs directly attributable to the development of a qualifying intangible asset

BE12.4 (LO 2, 3, 4) Azure Industries Ltd. acquired two copyrights during 2020. One copyright was on a textbook that was developed internally at a cost of \$36,000. This textbook is estimated to have a useful life of three years from July 1, 2020, the date it was published. The second copyright is for a history research textbook and was purchased from University Press on October 1, 2020, for \$54,000. This textbook seems to have an indefinite useful life. How should these two copyrights be reported on Azure's statement of financial position as at December 31, 2020?

BE12.5 (LO 2) Sunny Valley Inc. bought an Internet domain name by issuing a \$220,000, five-year, non-interest-bearing note to Ti-Mine Corp. with an effective yield of 12%. The note is repayable in five annual payments of \$44,000 made at the end of each year. Prepare the journal entry to record the purchase of the intangible asset. Show calculations using any of the following methods: (a) factor Table A.4, (b) a financial calculator, or (c) Excel function PV. Round final answers to the nearest dollar.

BE12.6 (LO 2, 3, 5)  Bountiful Industries Ltd. had one patent recorded on its books as at January 1, 2020. This patent had a book value of \$365,000 and a remaining useful life of eight years. During 2020, Bountiful incurred research costs of \$140,000 and brought a patent infringement suit against a competitor. On December 1, 2020, Bountiful received the good news that its patent was valid and that its competitor could not use the process Bountiful had patented. The company spent \$106,000 to defend this patent. At what amount should the patent be reported on the December 31, 2020 statement of financial position, assuming monthly straight-line amortization of patents? Round amortization amounts to the nearest dollar.

BE12.7 (LO 2, 3) Programming for Kids Ltd. decided that it needed to update its computer programs for its supplier relationships. It purchased an off-the-shelf program and modified it internally to link it to Programming for Kids' other programs. The following costs may be relevant to the accounting for the new software:


Original cost of old software	\$10,000
Accumulated amortization of old software	8,000
Purchase price of new software	7,500
Training costs	4,000
General and administrative costs	2,480
Direct cost of in-house programmer's time spent on modifying software	1,480


Prepare the journal entry to record the software replacement.

BE12.8 (LO 2, 3, 5, 10) Indicate whether the following items are capitalized or expensed in the current year, assuming IFRS was used to prepare financial statements. Assume that any items that may qualify for capitalization have met all six “development phase” criteria.

- a. The purchase cost of a patent from a competitor
- b. Product research costs
- c. Organization costs
- d. Costs that are incurred internally to create goodwill
- e. Costs that are incurred internally to create a secret recipe
- f. Legal costs to successfully support trademark
- g. Pre-operating costs to launch new products
- h. Relocation of manufacturing activities
- i. Corporate reorganization costs
- j. Costs incurred to develop computer software

How would the answer differ if ASPE were used to prepare financial statements?

BE12.9 (LO 2, 3, 4, 10)  Sweet Tooth Inc., a private company that applies ASPE, incurred \$15,000 in materials and \$12,000 in direct labour costs between January and March 2020 to develop a new product. In May 2020, the criteria required to capitalize development costs were met. A further \$45,000 was spent for materials, \$15,000 for direct labour costs, \$2,000 for borrowing costs, and \$72,000 for directly related legal fees. Discuss any options that may be available to Sweet Tooth for recording these expenditures. In addition, prepare the appropriate journal entries. How would your answer change if Sweet Tooth were a public company following IFRS?

BE12.10 (LO 2, 4, 5)  Darrien Corporation purchased a trade name, customer list, and manufacturing equipment for a lump sum of \$800,000. The fair market values of each asset are \$280,000, \$290,000, and \$320,000, respectively. There were initial operating losses of \$14,500 during the first four months after the assets were put into use. Prepare the journal entry to record the treatment of these costs. Do not round intermediate calculations in asset allocations and round final answers to the nearest dollar.

BE12.11 (LO 3) Using the data provided in [BE12.10](#), assume that Darrien also spent \$12,500 to promote and launch the product that the manufacturing equipment is used to produce.

Explain the accounting for these costs.

BE12.12 (LO 3, 4, 10) Green Earth Corp. has capitalized software costs of \$450,000 on a product to be sold externally. During its first year, sales of this product totalled \$195,000. Green Earth expects to earn \$1,250,000 in additional future revenue from this product, which is estimated to have an economic life of four years. Green Earth is considering capitalizing and amortizing the software based on when the revenue is expected to be generated. Comment on the appropriateness of this approach assuming Green Earth uses IFRS. How would your answer differ under ASPE?

BE12.13 (LO 2, 4) Lakeshore Corporation purchased a patent from MaFee Corp. on January 1, 2020, for \$87,000. The patent had a remaining legal life of 16 years. Prepare Lakeshore's journal entries to record the 2020 patent purchase and amortization for the year rounded to the nearest dollar.

BE12.14 (LO 2, 4) Use the information in [BE12.13](#) and assume that in January 2022, Lakeshore spends \$26,000 successfully defending a patent suit. In addition, Lakeshore now feels the patent will be useful only for another seven years. Prepare the journal entries to record the 2022 expenditure and amortization for the year rounded to the nearest dollar.

BE12.15 (LO 2, 4, 10) On December 31, 2020, Convenient Cabs Incorporated was granted 10 taxi licences by the City of Somerdale, at a cost of \$1,000 per licence. It is probable that Convenient Cabs will receive the expected future economic benefits of the taxi licences. There is an active market for taxi licences in Somerdale.

- a. Prepare the journal entry to record the costs incurred.
- b. Discuss how the licences are accounted for after initial recognition if Convenient Cabs follows ASPE.
- c. Discuss how the licences are accounted for after initial recognition if Convenient Cabs follows IFRS.

BE12.16 (LO 6, 10) Coffee Company Limited has a trademark with a carrying amount of \$83,750, and expected useful life of 15 years. As part of an impairment test on December 31, 2020, due to a change in customer tastes, Coffee Company gathered the following data about the trademark for the purposes of an impairment test: fair value \$45,000; fair value less costs to sell \$40,000; value in use \$95,200; and undiscounted future cash flows \$125,000. Assume that Coffee Company is reporting under ASPE. Determine if the trademark is impaired on December 31, 2020.

BE12.17 (LO 6, 10) Use the data provided in [BE12.16](#). How would your response change if Coffee Company were a public company reporting under IFRS?

BE12.18 (LO 6, 10) Use the data provided in [BE12.16](#), except assume that useful life is expected to be unlimited. How would your response change if Coffee Company reported under (a) ASPE or (b) IFRS?

BE12.19 (LO 7)  On September 1, 2020, Pipeline Corporation acquired

Tunneling Limited for a cash payment of \$954,000. At the time of purchase, Tunneling's statement of financial position showed assets of \$780,000, liabilities of \$420,000, and owners' equity of \$360,000. The fair value of Tunneling's assets is estimated to be \$1,140,000. Calculate the amount of goodwill acquired by Pipeline.

BE12.20 (LO 8, 10) Using the data from [BE12.19](#), assume that Pipeline Corporation is a public company and that the goodwill was allocated entirely to one cash-generating unit (CGU). Two years later, information about the CGU is as follows: carrying amount \$3,740,000; value in use \$3,680,000; and fair value less costs to sell \$3,575,000. Determine if the goodwill is impaired, and calculate the goodwill loss on impairment, if any.

BE12.21 (LO 8, 10) Using the data from [BE12.19](#), assume that Pipeline Corporation is a private entity. Explain how goodwill will be tested for impairment. If the unit's carrying amount (including goodwill) is \$3,581,000 and its fair value is \$3,474,000, determine the amount of loss on impairment, if any, under ASPE.

***BE12.22 (LO 11)** **Finance** Nigel Corporation is interested in purchasing Lau Company Ltd. The total of Lau's net income amounts over the past five years is \$750,000. During one of those years, Lau reported a gain on discontinued operations of \$94,000. The fair value of Lau's net identifiable assets is \$690,000. A normal rate of return is 15%, and Nigel wants to capitalize excess earnings at 20%. Calculate the estimated value of Lau's goodwill.

Exercises

E12.1 (LO 2, 5, 10) (Classification Issues—Intangibles) The following is a list of items that could be included in the intangible assets section of the statement of financial position:

1. An investment in a subsidiary company
2. Timberland
3. The cost of an engineering activity needed to advance a product's design to the manufacturing stage
4. A lease prepayment (six months of rent paid in advance)
5. The cost of equipment obtained under a capital lease
6. The cost of searching for applications for new research findings
7. Costs incurred in forming a corporation
8. Operating losses incurred in the start-up of a business
9. Training costs incurred in the start-up of a new operation
10. The purchase cost of a franchise
11. Goodwill generated internally
12. The cost of testing in the search for product alternatives
13. Goodwill acquired in the purchase of a business
14. The cost of developing a patent
15. The cost of purchasing a patent from an inventor
16. Legal costs incurred in securing a patent
17. Unrecovered costs of a successful legal suit to protect a patent
18. The cost of conceptual formulation of possible product alternatives
19. The cost of purchasing a copyright

- 20. Product development costs
- 21. Long-term receivables
- 22. The cost of developing a trademark
- 23. The cost of purchasing a trademark
- 24. The cost of an annual update of payroll software
- 25. A five-year advertising contract for rights of advertising by a top hockey player in Canada
- 26. Borrowing costs specifically identifiable with an internally developed intangible asset

Instructions

- a. Indicate which items on the list would be reported as intangible assets on the statement of financial position.
- b. Indicate how, if at all, the items that are not reportable as intangible assets would be reported in the financial statements.
- c. Identify any differences between ASPE and IFRS with respect to capitalization of such items as intangible assets.

E12.2 (LO 2, 5, 7, 10) (Classification Issues—Intangibles) Selected account information follows for Entertainment Inc. as at December 31, 2020. All the accounts have debit balances. Assume the company uses IFRS when preparing financial statements.

Cable Television Franchises	Film Contract Rights
Music Copyrights	Customer Lists Acquired in a Business Combination
Research Costs	Prepaid Expenses
Goodwill	Covenants Not to Compete
Cash	Brand Names
Accounts Receivable	Notes Receivable
Property, Plant, and Equipment	Investments in Affiliated Companies
Leasehold Improvements	Organization Cost
Annual Franchise Fee Paid	Land
In-Process Research and Development	Excess of Purchase Price over Fair Value of Identifiable
Acquired in a Business Combination	Net Assets, X Corp.

Instructions

- a. Identify which items should be classified as intangible assets. For the items that are not classified as intangible assets, indicate where they would be reported in the financial statements.
- b. How would the answer to part (a) differ if ASPE were followed instead of IFRS?

E12.3 (LO 2, 3, 5, 7, 10) Excel (Classification Issues—Intangibles) Berrie Electric Inc. has the following amounts included in its general ledger at December 31, 2020:

Organization costs	\$
	34,000
Purchased trademarks	17,500
Development phase activities (meet all six development phase criteria)	29,000
Deposits with advertising agency for ads to promote goodwill of company	8,000
Excess of cost over fair value of identifiable net assets of acquired subsidiary	81,000
Cost of equipment acquired for research and development projects; the equipment has an alternative future use	125,000
Costs of researching a secret formula for a product that is expected to be marketed for at least 20 years	75,000
Payment for a favourable lease; lease term of 10 years	15,000

Instructions

- Based on the information provided, calculate the total amount for Berrie to report as intangible assets on its statement of financial position at December 31, 2020. Assume Berrie uses IFRS to prepare its financial statements.
- If an item should not be included in intangible assets, explain the proper treatment for reporting it.
- Indicate which amounts might be reported differently if ASPE were followed instead of IFRS.

E12.4 (LO 2, 3, 4, 10) (Intangible Amortization) Selected information follows for Mount Olympus Corporation for three independent situations:

- Mount Olympus purchased a patent from Bakhshi Co. for \$1.8 million on January 1, 2018. The patent expires on January 1, 2028, and Mount Olympus is amortizing it over the 10 years remaining in its legal life. During 2020, Mount Olympus determined that the patent's economic benefits would not last longer than six years from the date of acquisition.
- Mount Olympus bought a perpetual franchise from Carmody Inc. on January 1, 2020, for \$650,000. Its carrying amount on Carmody's books at January 1, 2020, was \$750,000. Assume that Mount Olympus can only provide evidence of clearly identifiable cash flows for 25 years, but thinks the franchise could have value for up to 60 years.
- On January 1, 2018, Mount Olympus incurred development costs (meeting all required criteria) of \$375,000. Mount Olympus is amortizing these costs over five years.

Instructions

a. In situation 1, what amount should be reported in the statement of financial position for the patent, net of accumulated amortization, at December 31, 2020?

b. In situation 2, what amount of amortization expense should be reported for the year ended December 31, 2020?

c. In situation 3, what amount, if any, should be reported as unamortized development costs as at December 31, 2020? How might the accounting treatment change if Mount Olympus were using ASPE?

E12.5 (LO 2, 3, 4, 10) (Correction of Intangible Asset Account) As the recently appointed auditor for Daleara Corporation, you have been asked to examine selected accounts before the six-month financial statements of June 30, 2020, are prepared. The controller for Daleara Corporation mentions that only one account is kept for intangible assets. The entries in Intangible Assets since January 1, 2020, are as follows:

Intangible Assets					
			<u>Debit</u>	<u>Credit</u>	<u>Balance</u>
Jan.	4	Research costs	1,050,000		1,050,000
	5	Legal costs to obtain patent	45,000		1,095,000
		Payment of seven months' rent on property leased by Daleara (February to August)	49,000		1,144,000
Feb.	11	Proceeds from issue of common shares		296,000	848,000
Apr.	30	Promotional expenses related to start-up of business	157,000		1,005,000
June	1	Development stage costs (meet all six development stage criteria)	215,000		1,220,000
	30	Start-up costs for first six months of operations	316,000		1,536,000

Instructions

Prepare the entry or entries needed to correct this account. Assume that the patent has a useful life of 10 years and that Daleara Corporation follows IFRS.

E12.6 (LO 2, 3, 4, 5) Excel (Recognition and Amortization of Intangibles) Institute Limited organized late in 2019 and set up a single account for all intangible assets. The following summary shows the entries in 2020 (all debits) that have been recorded in Intangible Assets since then:

Jan.	2	Purchased patent (8-year life)	\$ 320,000
Mar.	31	Costs to search for new ways to apply patent that was purchased on Jan. 2	21,000
Apr.	1	Purchased goodwill (indefinite life)	310,000
July	1	Purchased franchise with 10-year life; expiration date July 1, 2030	\$ 250,000
	1	Promotional costs to increase the future economic benefit of the goodwill that was purchased on Apr. 1	33,000
Aug.	1	Payment for copyright (5-year life)	140,000
	1	Purchased trademark (3-year life)	15,000
	1	Purchased customer list (2-year life)	10,000
Sept.	1	Research costs	<u>239,000</u>
			<u>\$1,338,000</u>

Instructions

- Prepare the necessary entries to clear the Intangible Assets account and to set up separate accounts for distinct types of intangibles.
- Make the entries as at December 31, 2020, for any necessary amortization so that all balances are accurate as at that date. Round all amounts to the nearest dollar.
- Provide the asset amounts reported on the December 31, 2020 statement of financial position.

E12.7 (LO 2, 3, 4, 5) (Accounting for Trade Name) In early January 2020, FJS Corporation applied for and received approval for a trade name, incurring legal costs of \$52,500. In early January 2021, FJS incurred \$28,200 in legal fees in a successful defence of its trade name.

Instructions

- Management determines that this asset has a limited useful life. Identify the variables that must be considered in determining the appropriate amortization period for this trade name.
- Calculate amortization for 2020; carrying amount at December 31, 2020; amortization for 2021; and carrying amount at December 31, 2021, if the company amortizes the trade name over its 15-year legal life. Round amortization calculations to the nearest dollar.
- Repeat part (b), assuming a useful life of six years.
- Assume the trade name is assessed as having an indefinite life upon initial acquisition. Explain the accounting implications.
- Digging Deeper** Assume the role of a potential investor in FJS. Comment on the estimated useful life of the trade name, and its effects on the company's financial statements.

E12.8 (LO 3, 4, 10) (Internally Generated Intangibles) Oakville Corp. incurred the following costs during 2020 in connection with its research and development phase activities:

Cost of equipment acquired for use in research and development projects over the next five years (straight-line depreciation used)	\$240,000
Materials consumed in research projects	61,000
Materials consumed in the development of a product committed for manufacturing in the first quarter of 2021	32,000
Consulting fees paid in the last quarter of 2020 to outsiders for research and development projects, including \$4,500 for advice related to the \$32,000 of materials used above	95,000
Personnel costs of persons involved in research and development projects	108,000
Indirect costs reasonably allocated to research and development projects	25,000
General borrowing costs on the company's line of credit	12,000
Training costs for a new customer service software program	17,500

Instructions

- a. Calculate the amount to be reported as research and development expense by Oakville on its income statement for 2020. Assume the equipment is purchased at the beginning of the year. Assume the company follows IFRS for financial reporting purposes.
- b. Explain the treatment of training costs and borrowing costs incurred after the six development phase capitalization criteria are met.
- c. Explain how the answer may be the same or differ if ASPE were followed.

E12.9 (LO 3, 4, 5, 10) (Internally Generated Intangibles) In 2020, Inventors Corp. spent \$392,000 on a research project, but by the end of 2020 it was impossible to determine whether any benefit would come from it. Inventors prepares financial statements in accordance with IFRS.

Instructions

a. What account should be charged for the \$392,000, and how should it be shown in the financial statements for fiscal 2020?

b. The research project is completed in 2021, and a successful patent is obtained. The research phase costs to complete the project are \$71,000. The administrative and legal expenses incurred in obtaining patent number 481-761-0092 on January 3, 2021, total \$10,000. The patent has an expected useful life of five years. Inventors Corp. will now begin investigating applications that use or apply the knowledge obtained on this project. Record these costs in journal entry form. Also, record patent amortization for a full year in 2021.

c. In January 2022, the company successfully defended the patent in litigation at a cost of \$12,400. The victory extended the patent's life to December 31, 2030. What is the proper way to account for this cost? Also, record patent amortization for a full year in 2022.

d. By early September 2022, and at an additional cost of \$101,000, Inventors Corp. had a product design that was technologically and financially feasible. Additional engineering and consulting costs of \$66,000 were incurred in October 2022 to advance the design of the new product to the manufacturing stage. Discuss the proper accounting treatment for the 2022 costs incurred.

E12.10 (LO 2, 3, 4, 5, 10) (Accounting for Patents, Franchises, and R&D) Tennessee Corp., reporting under ASPE, has provided the following information regarding its intangible assets:

1. A patent was purchased from Marvin Inc. for \$1.2 million on January 1, 2019. Tennessee estimated the patent's remaining useful life to be 10 years. The patent was carried in Marvin's accounting records at a carrying amount of \$1,350,000 when Marvin sold it to Tennessee. On January 1, 2020, because of recent events in the field, Tennessee estimates that the remaining life of this patent is only five years from January 1, 2020.
2. During 2020, a franchise was purchased from Burr Ltd. for \$290,000. As part of the deal, Burr must also be paid 5% of revenue from the franchise operations. Revenue from the franchise for 2020 was \$1.4 million. Tennessee estimates the franchise's useful life to be 10 years and takes a full year's amortization in the year of purchase.
3. Tennessee incurred the following research costs in 2020:

Materials and equipment	\$ 81,000
Personnel	111,000
Indirect costs	<u>55,000</u>
	<u>\$247,000</u>

Instructions

- a. Prepare a schedule showing the intangibles section of Tennessee's statement of financial position at December 31, 2020. Show supporting calculations in good form.
- b. Prepare a schedule showing the income statement effect for the year ended December 31, 2020, as a result of the facts above. Show supporting calculations in good form.
- c. Explain how the accounting would differ if Tennessee were a public company.

(Adapted from AICPA)

E12.11 (LO 3, 4, 6, 10) (Internally Developed Intangibles) During 2020, Saskatchewan Enterprises Ltd., a private entity, incurred \$4.7 million in costs to develop a new software product called Dover. Of this amount, \$1.8 million was spent before the company determined that the product was technologically and financially feasible. Dover was completed by December 31, 2020, and will be marketed to third parties. Saskatchewan expects a useful life of eight years for this product, with total revenues of \$12 million. During 2021, Saskatchewan realized revenues of \$2.7 million from sales of Dover.

Instructions

- a. Assuming Saskatchewan reports under ASPE, prepare the journal entries that are required in 2020 to record the above.
- b. Prepare the entry to record amortization at December 31, 2021, assuming a straight-line method of amortization.
- c. At what amount should the software costs be reported in the December 31, 2021, statement of financial position?
- d. Could the net realizable value of this asset at December 31, 2021, affect your answer? Explain how limited-life assets are tested for impairment.
- e. How would your response to part (d) change if Saskatchewan Enterprises Ltd. were a public company?

E12.12 (LO 2, 4, 6, 10) (Revaluation Model) Blue and White Town Taxi Incorporated applied for several taxi licences for its taxicab operations in the Town of Somerville and, on August 31, 2020, incurred costs of \$12,500 in the application process. The outcome of applying for taxi licences in the town was uncertain, as Somerville has been known to limit the number of issued taxi licences in an effort to encourage use of public transportation.

The application was successful and on June 30, 2021, Blue and White was granted 30 freely transferable taxi licences for a registration fee of \$3,750 per licence. According to management, each licence will have a useful life of only five years from the date of registration, because demand for taxi services in Somerville is expected to decrease significantly after the town's subway system is expanded. There is an active market for taxi licences in Somerville.

In 2022, in an effort to decrease traffic congestion in its downtown, the town did not issue any new taxi licences, and the fair value of each taxi licence held by Blue and White was \$4,200 as at December 31, 2022. In 2024, due to a severe shortage of taxis in the town, Somerville decreased the registration fee and issued many new taxi licences. As at December 31, 2024, each taxi licence had value in use of \$5,400, fair value of \$3,800, and costs to sell of \$200. Blue and White amortizes intangible assets using the straight-line method, and prepares financial statements in accordance with IFRS.

Instructions

- a. Prepare the entry to record the costs incurred on August 31, 2020.
- b. Prepare the entry to record the costs incurred on June 30, 2021.
- c. Assume that after initial recognition, Blue and White uses the cost model to measure its intangible assets. Prepare the entries required on December 31, 2022, December 31, 2023, and December 31, 2024, and calculate the carrying amount of the intangible asset, if any, as at December 31, 2024.
- d. Assume that after initial recognition, Blue and White uses the revaluation model (asset adjustment method) to measure its intangible assets. Prepare the entries required on December 31, 2022, December 31, 2023, and December 31, 2024, and calculate the carrying amount of the intangible asset, if any, as at December 31, 2024. Assume revaluation adjustments are made on December 31, 2022, and December 31, 2024.
- e. **Digging Deeper** From the perspective of Blue and White's auditor, discuss the criteria that must be met for the intangible asset to be measured using the revaluation model. Discuss under which financial reporting standards the revaluation model can be applied.

E12.13 (LO 6, 10) (Impairment Testing) At the end of 2020, Dayton Corporation owns a licence with a remaining life of 10 years and a carrying amount of \$530,000. Dayton expects undiscounted future cash flows from this licence to total \$535,000. The licence's fair value is \$425,000 and disposal costs are estimated to be nil. The licence's discounted cash flows (that is, value in use) are estimated to be \$475,000. Dayton prepares financial statements in accordance with IFRS.

Instructions

- a. Determine if the licence is impaired at the end of 2020 and prepare any related entries that are necessary.
- b. Assume the recoverable amount is calculated to be \$450,000 at the end of 2021. Determine if the licence is impaired at the end of 2021 and prepare any related entries that are necessary.
- c. Explain how the answer to part (b) would change if the licence's fair value were \$500,000 at the end of 2021.

E12.14 (LO 6, 10) (Impairment Testing)

Instructions

Repeat [E12.13](#), but now assume that Dayton prepares financial statements in accordance with ASPE, and that the recoverable amount under ASPE (undiscounted future cash flows) is calculated to be \$500,000 at the end of 2021.

E12.15 (LO 6, 10) (Impairment Testing)


Instructions

Repeat [E12.13](#), but now assume that the licence was granted in perpetuity and has an indefinite life.

E12.16 (LO 6, 10) (Impairment Testing)

Instructions

Repeat [E12.13](#), but now assume that the licence was granted in perpetuity and has an indefinite life, and that Dayton prepares financial statements in accordance with ASPE.

E12.17 (LO 6, 10)  **(Intangible Impairment)** The following information is for a copyright owned by Lighting Designs Corp., a private entity, at December 31, 2020. Lighting Designs Corp. applies ASPE.

Cost	\$4,300,000
Carrying amount	2,150,000
Expected future net cash flows (undiscounted)	2,000,000
Fair value	1,600,000

Assume that Lighting Designs Corp. will continue to use this copyright in the future. As at December 31, 2020, the copyright is estimated to have a remaining useful life of 10 years.

Instructions

- Prepare the journal entry, if any, to record the asset's impairment at December 31, 2020.
- Prepare the journal entry to record amortization expense for 2021 related to the copyright.
- The copyright's fair value at December 31, 2021, is \$2.2 million. Prepare the journal entry, if any, to record the increase in fair value.
- Digging Deeper** Using the information from part (a), discuss whether the copyright would be amortized in 2020 before the impairment test is conducted. Would the asset be tested for impairment before or after amortizing the copyright in 2020?

E12.18 (LO 6, 10) (Intangible Impairment) Refer to the information provided in [E12.17](#), but now assume that Lighting Designs Corp. is a publicly accountable company. At December 31, 2020, the copyright's value in use is \$1,850,000 and its selling costs are \$100,000.

Instructions

- Prepare the journal entry, if any, to record the asset's impairment at December 31, 2020.
- Prepare the journal entry to record amortization expense for 2021 related to the copyright.
- The copyright's fair value at December 31, 2021, is \$2.2 million. Prepare the journal entry, if any, to record the increase in fair value.

E12.19 (LO 7) (Accounting for Goodwill) Fred Moss, owner of Medici Interiors Inc., is negotiating for the purchase of Athenian Galleries Ltd. The condensed statement of financial position of Athenian follows in an abbreviated form:

Athenian Galleries Ltd.
Statement of Financial Position
As at December 31, 2020

Assets		Liabilities and Shareholders' Equity	
Cash	\$118,000	Accounts payable	\$ 92,000
Land	70,000	Long-term notes payable	<u>351,000</u>
Buildings (net)	244,000	Total liabilities	443,000
Equipment (net)	185,000	Common shares	\$200,000
Copyright (net)	<u>98,000</u>	Retained earnings	<u>72,000</u> <u>272,000</u>
Total assets	<u>\$715,000</u>	Total liabilities and shareholders' equity	<u>\$715,000</u>

Medici and Athenian agree that the land is undervalued by \$40,000 and the business equipment is overvalued by \$12,000. Athenian agrees to sell the business to Medici for \$382,000.

Instructions

Prepare the entry to record the purchase of the business's net assets on Medici's books.

E12.20 (LO 7, 8, 10) (Accounting for Goodwill) On July 1, 2020, Zoe Corporation purchased the net assets of Soorya Company by paying \$415,000 cash and issuing a \$50,000 note payable to Soorya Company. At July 1, 2020, the statement of financial position of Soorya Company was as follows:

Cash	\$ 75,000	Accounts payable	\$300,000
Accounts receivable	102,000	Soorya, capital	<u>239,000</u>
Inventory	98,000		<u>\$539,000</u>
Land	50,000		
Buildings (net)	75,000		
Equipment (net)	90,000		
Trademarks (net)	<u>49,000</u>		
	<u>\$539,000</u>		

The recorded amounts all approximate current values except for land (worth \$60,000), inventory (worth \$125,000), and trademarks (worthless). The receivables are shown net of an allowance for doubtful accounts of \$12,000. The amounts for buildings, equipment, and trademarks are shown net of accumulated amortization of \$14,000, \$23,000, and \$47,000, respectively.

Instructions

- a.** Prepare the July 1, 2020 entry for Zoe Corporation to record the purchase.
- b.** Assume that Zoe is a private entity and tested its goodwill for impairment on December 31, 2021. Management determined that the reporting unit's carrying amount (including goodwill) was \$500,000 and that the reporting unit's fair value (including goodwill) was \$450,000. Determine if there is any impairment and prepare any necessary entry on December 31, 2021. Zoe applies ASPE.
- c.** Repeat part (a), assuming that the purchase price was \$204,000, all paid in cash.
- d.** Based on part (a), assume now that Zoe is a public entity and tested its goodwill for impairment on December 31, 2021. The cash-generating unit's values (including goodwill) are as follows:

Carrying amount	\$500,000
Value in use	475,000
Fair value	450,000
Disposal costs	25,000

Determine if there is any impairment and prepare any necessary entry on December 31, 2021.

- e. Digging Deeper** Based on part (a), discuss factors that Zoe may have considered in deciding to pay total consideration of \$465,000 for Soorya.

E12.21 (LO 8, 10) (Goodwill Impairment) The following is net asset information for the Dhillon Division of Klaus Inc.:

Net Assets		
As at December 31, 2020		
(in millions)		
	Book Value	Fair Value Excluding Goodwill
Cash	\$ 50	\$ 50
Accounts receivable	216	216
Property, plant, and equipment (net)	2,618	2,760
Goodwill	206	
Less: Notes payable	<u>(2,700)</u>	(2,700)
Net assets	<u>\$ 390</u>	

The purpose of the Dhillon Division (also identified as a reporting unit or cash-generating unit) is to develop a nuclear-powered aircraft. If successful, travelling delays that are associated with refuelling could be greatly reduced, and operational efficiency would increase significantly.

To date, management has not had much success and is deciding whether a writedown is appropriate at this time. Management has prepared the following estimates for the reporting unit or cash-generating unit:

1. Undiscounted future net cash flows are approximately \$400 million.

2. Future value in use is approximately \$385 million.
3. Sale of the unit would yield \$346 million and selling costs would total \$5 million.

Instructions

- a. Under ASPE, determine if there is any impairment and prepare any necessary entry on December 31, 2020.
- b. On December 31, 2021, it is estimated that the reporting unit's fair value has increased to \$400 million. Under ASPE, prepare the journal entry, if any, to record the increase in fair value.
- c. Under IFRS, determine if there is any impairment and prepare any necessary entry on December 31, 2020.
- d. On December 31, 2021, it is estimated that the cash-generating unit's fair value has increased to \$400 million. Under IFRS, prepare the journal entry, if any, to record the increase in fair value.

***E12.22 (LO 11) Finance (Calculation of Normalized Earnings)** Rotterdam Corporation's pre-tax accounting income of \$725,000 for the year 2020 included the following items:

Amortization of identifiable intangibles	\$147,000
Depreciation of building	115,000
Loss from discontinued operations	44,000
Unusual, non-recurring gains	152,000
Profit-sharing payments to employees	65,000

Ewing Industries Ltd. would like to purchase Rotterdam Corporation. In trying to measure Rotterdam's normalized earnings for 2020, Ewing determines that the building's fair value is triple the book value and that its remaining economic life is double the life that Rotterdam is using. Ewing would continue the profit-sharing payments to employees, with the payments being based on income from continuing operations before amortization and depreciation.

Instructions

Calculate the 2020 normalized earnings amount of Rotterdam Corporation that Ewing would use to calculate goodwill.

***E12.23 (LO 11) Finance (Calculation of Goodwill)** Net income figures for Belgian Ltd. are as follows:

2016—\$75,000	2019—\$87,000
2017—\$53,000	2020—\$69,000
2018—\$84,000	

Future income is expected to continue at the average amount of the past five years. The company's identifiable net assets are appraised at \$460,000 on December 31, 2020. The business is to be acquired by Mooney Corp. in early 2021. The normal rate of return on net assets for the industry is 7%.

Instructions

What amount should Mooney Corp. pay for goodwill, and for Belgian Ltd. as a whole, if:

- goodwill is equal to average excess earnings capitalized at 23%?
- a perpetual 18% return is expected on any amount paid for goodwill?
- goodwill is equal to five years of excess earnings?
- goodwill is equal to the present value of five years of excess earnings capitalized at 15%? Show calculations using factor Table A.4, a financial calculator, or Excel function PV. Round final amounts to the nearest dollar.

***E12.24 (LO 11) Finance (Calculation of Goodwill)** Aswan Corporation is interested in acquiring Richmond Plastics Limited. Richmond has determined that its excess earnings have averaged approximately \$175,000 and feels that such an amount should be capitalized over an unlimited period at a 15% rate. Aswan feels that, because of increased competition, the excess earnings of Richmond Plastics will continue for seven years at the most and that a 12% discount rate is appropriate.

Instructions

- How far apart are the positions of these two parties? Show calculations using factor Table A.4, a financial calculator, or Excel function PV.
- Is there really a difference in the two approaches being used by the parties to evaluate Richmond Plastics' goodwill? Explain.

***E12.25 (LO 11) Finance (Calculation of Goodwill)** As the president of Niagara Wineries Corp., you are considering purchasing Grimsby Wine Accessories Limited, whose statement of financial position is summarized as follows:

Current assets	\$ 240,000	Current liabilities	\$ 210,000
Plant and equipment (net)	825,000	Long-term liabilities	550,000
Other assets	285,000	Common shares	440,000
		Retained earnings	<u>150,000</u>
Total	<u>\$1,350,000</u>	Total	<u>\$1,350,000</u>

The current assets' fair value is \$80,000 higher than their carrying amount because of inventory undervaluation. All other assets and liabilities have book values that approximate their fair value. The normal rate of return on net assets for the industry is 15%. The expected annual earnings for Grimsby are \$140,000.

Instructions

Assuming that the excess earnings are expected to continue for five years, how much would you be willing to pay for goodwill, and for the company? Estimate goodwill by the present value method, showing calculations using factor Table A.4, a financial calculator, or Excel function PV.

***E12.26 (LO 11) Finance (Calculation of Fair Value of Identifiable Assets)** Louvre Inc. bought a business that is expected to give a 25% annual rate of return on the investment. Of the total amount paid for the business, \$75,000 was deemed to be goodwill, and the rest

was attributed to the identifiable net assets. Louvre Inc. estimated that the annual future earnings of the new business would be equal to the average ordinary earnings per year of the business over the past three years. The total net income over the past three years was \$375,000. This amount included a loss on discontinued operations of \$25,000 in one year and an unusual and non-recurring gain of \$95,000 in one of the other two years.

Instructions

Calculate the fair value of the identifiable net assets that Louvre Inc. purchased in this transaction.

Problems

P12.1 Guigliano Inc. is a large, publicly held corporation. The following are six selected expenditures that were made by the company during the fiscal year ended April 30, 2020. The proper accounting treatment of these transactions must be determined in order to ensure that Guigliano's annual financial statements are prepared in accordance with IFRS.

1. Guigliano spent \$3 million on a program that is designed to improve relations with its dealers. Dealers responded well to the project and Guigliano's management believes that it will therefore result in significant future benefits. The program was conducted during the fourth quarter of the 2019–20 fiscal year.
2. A pilot plant was constructed during 2019–20 at a cost of \$5.5 million to test a new production process. The plant will be operated for approximately five years. After the five years, the company will make a decision about the economic value of the production process. The pilot plant is too small for commercial production, so it will be dismantled when the test is over.
3. During the year, Guigliano began a new manufacturing operation in Newfoundland, its first plant east of Montreal. To get the plant into operation, the following costs were incurred: (i) \$100,000 to make the building fully wheelchair-accessible; (ii) \$41,600 to outfit the new employees with Guigliano uniforms; (iii) \$12,700 for the reception to introduce the company to others in the industrial mall where the plant is located; and (iv) \$64,400 in payroll costs for the new employees while they were being trained.
4. Guigliano purchased Eagle Company for \$6 million cash in early August 2019. The fair value of Eagle's net identifiable assets was \$5.2 million.
5. The company spent \$14 million on advertising during the year. Of that, \$2.5 million was spent in April 2020 to introduce a new product to be released during the first quarter of the 2020–21 fiscal year and \$200,000 was used to advertise the opening of the new plant in Newfoundland. The remaining expenditures were for recurring advertising and promotion coverage.
6. During the first six months of the 2019–20 fiscal year, \$400,000 was spent on legal work on a successful patent application. The patent became effective in November 2019. The patent's legal life is 20 years and its economic life is expected to be approximately 10 years.

Instructions

For each of the six items presented, determine and justify the following:

- a. The amount, if any, that should be capitalized and included on Guigliano's statement of financial position prepared as at April 30, 2020.
- b. The amount that should be included in Guigliano's statement of income for the year ended April 30, 2020.

P12.2 Information for Naples Corporation's intangible assets follows:

1. On January 1, 2020, Naples signed an agreement to operate as a franchisee of Copy Service Inc., for an initial franchise fee of \$75,000. Of this amount, \$35,000 was paid when the agreement was signed and the balance is payable in four annual payments of \$10,000 each, beginning January 1, 2021. The agreement provides that the down payment is not refundable and no future services are required of the franchisor. The present value at January 1, 2020, of the four annual payments discounted at 8% (the implicit rate for a loan of this type) is \$33,121. The agreement also provides that 5% of the franchisee's revenue must be paid to the franchisor each year. The franchisor requires that Naples provide it with some form of assurance verifying the revenue amount used to determine the 5% payment. Naples's revenue from the franchise for 2020 was \$800,000. Naples estimates that the franchise's useful life will be 10 years.
2. Naples incurred \$45,000 in experimental costs in its laboratory to develop a patent, and the patent was granted on January 2, 2020. Legal fees and other costs of patent registration totalled \$13,600. Naples estimates that the useful life of the patent will be six years.
3. A trademark was purchased from Shanghai Company for \$28,600 on July 1, 2017. The legal costs to successfully defend the trademark totalled \$8,160 and were paid on July 1, 2020. Naples estimates that the trademark's useful life will be 15 years from the acquisition date.

Assume that Naples reports using ASPE.

Instructions

- a. Prepare a schedule showing the intangible assets section of Naples's statement of financial position at December 31, 2020. Show supporting calculations in good form.
- b. Prepare a schedule showing all expenses resulting from the transactions that would appear on Naples's income statement for the year ended December 31, 2020. Show supporting calculations in good form.
- c. How would your response change under IFRS?
- d. **Digging Deeper** What type of report could Naples provide to the franchisor to verify the revenue amount provided?

(Adapted from AICPA)

P12.3 Gelato Corporation, a private entity reporting under ASPE, was incorporated on January 3, 2019. The corporation's financial statements for its first year of operations were not examined by a public accountant. You have been engaged to audit the financial statements for the year ended December 31, 2020, and your audit is almost complete. The corporation's trial balance is as follows:

Gelato Corporation
Trial Balance
December 31, 2020

	<u>Debit</u>	<u>Credit</u>
Cash	\$ 57,000	
Accounts receivable	87,000	
Allowance for doubtful accounts		\$ 1,500
Inventory	60,200	
Machinery	82,000	
Equipment	37,000	
Accumulated depreciation		26,200
Intangible assets—patents	128,200	
Leasehold improvements	36,100	
Prepaid expenses	13,000	
Goodwill	30,000	
Intangible assets—licensing agreement No. 1	60,000	
Intangible assets—licensing agreement No. 2	56,000	
Accounts payable		93,000
Unearned revenue		17,280
Common shares		300,000
Retained earnings, January 1, 2020		173,020
Sales		720,000
Cost of goods sold	475,000	
Selling expenses	180,000	
Interest expense	<u>29,500</u>	
Totals	<u>\$1,331,000</u>	<u>\$1,331,000</u>

The following information is for accounts that may still need adjustment:

1. Patents for Gelato's manufacturing process were acquired on January 2, 2020, at a cost of \$87,500. An additional \$35,000 was spent in July 2020 and \$5,700 in December 2020 to improve machinery covered by the patents and was charged to the Intangible Assets—Patents account. Depreciation on fixed assets was properly recorded for 2020 in accordance with Gelato's practice, which is to take a full year of depreciation for property on hand at June 30. No other depreciation or amortization was recorded. Gelato uses the straight-line method for all amortization and amortizes its patents over their legal life, which was 17 years when the patent was granted. Accumulate all amortization expense in one income statement account.
2. At December 31, 2020, management determined that the undiscounted future net cash flows that are expected from the use of the patent would be \$80,000, the value in use was \$75,000, the resale value of the patent was approximately \$55,000, and

disposal costs would be \$5,000.

3. On January 3, 2019, Gelato purchased licensing agreement no. 1, which management believed had an unlimited useful life. Licences similar to this are frequently bought and sold. Gelato could only clearly identify cash flows from agreement no. 1 for 15 years. After the 15 years, further cash flows are still possible, but are uncertain. The balance in the Licences account includes the agreement's purchase price of \$57,000 and expenses of \$3,000 related to the acquisition. On January 1, 2020, Gelato purchased licensing agreement no. 2, which has a life expectancy of five years. The balance in the Licences account includes its \$54,000 purchase price and \$6,000 in acquisition expenses, but it has been reduced by a credit of \$4,000 for the advance collection of 2021 revenue from the agreement. In late December 2019, an explosion caused a permanent 60% reduction in the expected revenue-producing value of licensing agreement no. 1. In January 2021, a flood caused additional damage that rendered the agreement worthless.
4. The balance in the Goodwill account results from legal expenses of \$30,000 that were incurred for Gelato's incorporation on January 3, 2019. Management assumes that the \$30,000 cost will benefit the entire life of the organization, and believes that these costs should be amortized over a limited life of 30 years. No entry has been made yet.
5. The Leasehold Improvements account includes the following:
 - i. There is a \$15,000 cost of improvements that Gelato made to premises that it leases as a tenant. The improvements were made in January 2019 and have a useful life of 12 years.
 - ii. Movable assembly-line equipment costing \$15,000 was installed in the leased premises in December 2020.
 - iii. Real estate taxes of \$6,100 were paid by Gelato in 2020, but they should have been paid by the landlord under the terms of the lease agreement.

Gelato paid its rent in full during 2020. A 10-year non-renewable lease was signed on January 3, 2019, for the leased building that Gelato uses in manufacturing operations. No amortization or depreciation has been recorded on any amounts related to the lease or improvements.

6. Included in selling expenses are the following costs incurred to develop a new product. Gelato hopes to establish the technical, financial, and commercial viability of this project in fiscal 2021.

Salaries of two employees who spend approximately 50% of their time on research and development initiatives (this amount represents their full salary)	\$110,000
Materials consumed	35,000

Instructions

- a. Prepare an eight-column work sheet to adjust the accounts that require adjustment and include columns for an income statement and a statement of financial position. A separate account should be used for the accumulation of each type of amortization. Formal journal entries and financial statements are not required.
- b. Prepare Gelato's statement of financial position and income statement for the year ended December 31, 2020, in proper form.
- c. Explain how the accounting would differ if Gelato were reporting under IFRS.

(Adapted from AICPA)

P12.4 Monsecours Corp., a public company incorporated on June 28, 2019, set up a single account for all of its intangible assets. The following summary discloses the debit entries that were recorded during 2019 and 2020 in that account:

Intangible Assets—Monsecours		
July 1, 2019	8-year franchise; expiration date of June 30, 2027	\$ 35,000
Oct. 1	Advance payment on office lease (2-year lease)	25,000
Dec. 31	Net loss for 2019 including incorporation fee, \$1,000; related legal fees of organizing, \$5,000; expenses of recruiting and training staff for start-up of new business, \$3,800	17,000
Feb. 15, 2020	Patent purchased (10-year life)	65,400
Mar. 1	Direct costs of acquiring a 5-year licensing agreement	86,000
Apr. 1	Goodwill purchased (indefinite life)	287,500
June 1	Legal fee for successful defence of patent (see above)	13,350
Dec. 31	Costs of research department for year	75,000
31	Royalties paid under licensing agreement (see above)	2,775

The new business started up on July 2, 2019. No amortization was recorded for 2019 or 2020. The goodwill purchased on April 1, 2020, includes in-process development costs that meet the six development stage criteria, valued at \$175,000. The company estimates that this amount will help it generate revenues over a 10-year period.

Instructions

- a. Prepare the necessary entries to clear the Intangible Assets account and to set up separate accounts for distinct types of intangibles. Make the entries as at December 31, 2020, and record any necessary amortization so that all balances are appropriate as at that date. State any assumptions that you need to make to support your entries.
- b. **Digging Deeper** In what circumstances should goodwill be recognized? From the perspective of an investor, does the required recognition and measurement of goodwill provide useful financial statement information?

P12.5 **Excel** Fields Laboratories holds a valuable patent (No. 758-6002-1A) on a

precipitator that prevents certain types of air pollution. Fields does not manufacture or sell the products and processes it develops. Instead, it conducts research and develops products and processes that it patents, and then assigns the patents to manufacturers on a royalty basis. Occasionally it sells one of its patents. The history of Fields patent number 758-6002-1A is as follows.

Date	Activity	Cost
2011 – 2012	Research conducted to develop precipitator	\$384,000
Jan. 3, 2013	Design and construction of a prototype	87,600
Mar. 15, 2013	Testing of models	42,000
Jan. 4, 2014	Fees paid to engineers and lawyers to prepare patent application; patent granted January 4, 2014	59,500
Nov. 30, 2015	Engineering activity necessary to advance the design of the precipitator to the manufacturing stage	81,500
Dec. 31, 2016	Legal fees paid to successfully defend precipitator patent	42,000
Apr. 15, 2017	Research aimed at modifying the design of the patented precipitator	43,000
July 31, 2021	Legal fees paid in unsuccessful patent infringement suit against a competitor	34,000

Fields assumed a useful life of 17 years when it received the initial precipitator patent. On January 1, 2019, it revised its useful life estimate downward to five remaining years. The company's year ends December 31. Fields follows IFRS for reporting purposes.

Instructions

Calculate the carrying value of patent No. 758-6002-1A on each of the following dates:

- a.** December 31, 2014
- b.** December 31, 2018
- c.** December 31, 2021
- d.** How would your answers to parts (a) to (c) differ if ASPE were followed?

P12.6 During 2018, Medicine Hat Tools Ltd., a Canadian public company, purchased a building site for its product development laboratory at a cost of \$61,000. Construction of the building started in 2018. The building was completed in late December 2019 at a cost of \$185,000 and placed in service on January 2, 2020. The building's estimated useful life for depreciation purposes is 15 years. The straight-line method of depreciation is used and there is no estimated residual value. After the building went into service, several projects were begun and many are still in process.

Management estimates that about 50% of the development projects will result in long-term benefits (for at least 10 years) to the corporation. The other projects either benefited the

current period or were abandoned before completion. A summary of the different projects, their number, and the direct costs that were incurred for development activities in 2020 appears in the table that follows.

On the recommendation of its research and development group, Medicine Hat Tools Ltd. acquired a patent for manufacturing rights at a cost of \$102,500. The patent was acquired on April 1, 2019, and has an economic life of 10 years.

	Number of Projects	Salaries and Employee Benefits	Other Expenses (Excluding Building Depreciation Charges)
Development of viable products (management intent and capability, financial, technical, and commercial viability criteria were met)	15	\$125,000	\$ 81,000
Abandoned projects or projects that benefit the current period only	10	87,000	21,000
Projects in process—results uncertain	<u>5</u>	<u>52,500</u>	<u>18,500</u>
Total	<u>30</u>	<u>\$264,500</u>	<u>\$120,500</u>

Instructions

- a. How should the items above that relate to product development activities be reported under IFRS on the company's income statement and statement of financial position at December 31, 2020? Be sure to give account titles and amounts, and briefly justify your presentation.
- b. Outline the criteria that would have to be met for any development costs to qualify as an intangible asset.

(Adapted from CMA)

P12.7 In 2020, Aquaculture Incorporated applied for several commercial fishing licences for its commercial fishing vessels. The application was successful and on January 2, 2020, Aquaculture was granted 22 commercial fishing licences for a registration fee of \$18,700 per licence. According to management, each licence had a useful life of eight years from the date of registration. After the eight years, further cash flows might still be possible, but they are uncertain. There is an active market for Aquaculture's licences, which are freely transferable.

In 2021, due to an oil spill in the bordering ocean and severe commercial fishing restrictions, the value of Aquaculture's licences decreased. As at December 31, 2021, each licence had a value in use of \$9,500, fair value of \$8,300, and costs to sell of \$200. In 2023, due to much higher demand and restricted issuance of commercial fishing licences, the value of Aquaculture's licences increased. As at December 31, 2023, each licence had a value in use of

\$14,900, fair value of \$17,000, and costs to sell of \$200. Aquaculture amortizes intangible assets using the straight-line method, revalues the licences at the end of 2021 and 2023, and prepares financial statements in accordance with IFRS.

Instructions

- a. Prepare the entry to record the costs incurred on January 2, 2020.
- b. Assume that after initial recognition, Aquaculture uses the revaluation model (asset adjustment method) to measure its intangible assets. Prepare the entries required on December 31, 2021, December 31, 2022, and December 31, 2023, and calculate the carrying amount of the intangible asset, if any, as at December 31, 2023.
- c. Assume that after initial recognition, Aquaculture uses the revaluation model (proportionate method) to measure its intangible assets. Prepare the entries required on December 31, 2021, December 31, 2022, and December 31, 2023, and calculate the carrying amount of the intangible asset, if any, as at December 31, 2023. Do not round intermediate calculations but round final amounts to the nearest dollar.
- d. **Digging Deeper** Would an investor prefer Aquaculture to use the asset adjustment method or the proportionate method to apply the revaluation model?

P12.8 Meridan Golf and Sports was formed on July 1, 2020, when Steve Powerdriver purchased Old Master Golf Corporation. Old Master provides video golf instruction at kiosks in shopping malls. Powerdriver's plan is to make the instruction business part of his golf equipment and accessory stores. Powerdriver paid \$650,000 cash for Old Master. At the time of purchase, Old Master's statement of financial position reported assets of \$550,000 and liabilities of \$100,000 (shareholders' equity was \$450,000). The fair value of Old Master's identifiable assets was estimated to be \$700,000. Included in the identifiable assets was the Old Master trade name with a fair value of \$15,000 and a copyright on some instructional books with a fair value of \$25,000. The trade name had a remaining legal life of five years and can be renewed indefinitely at nominal cost. The copyright had a remaining life of 40 years.

Instructions

Assume that Meridan Golf and Sports is a private company reporting under ASPE.

- a.** Prepare the intangible assets and goodwill section of Meridan Golf and Sports at December 31, 2020. How much amortization expense is included in Meridan's income for the year ended December 31, 2020? Show all supporting calculations.
- b.** Prepare the journal entry to record the amortization expense for 2021. Prepare the intangible assets and goodwill section of Meridan Golf and Sports at December 31, 2021. (No impairment needs to be recorded in 2021.)
- c.** At the end of 2022, Powerdriver is evaluating the results of the instructional business. Due to fierce competition from Internet sites and television, the Old Master reporting unit has been losing money and has a carrying amount (including goodwill) of \$450,000 and fair value (including goodwill) of \$430,000. Powerdriver has collected the following information about the company's intangible assets:

<u>Intangible Asset</u>	<u>Expected Cash Flows (Undiscounted)</u>	<u>Fair Value</u>
Trade name	\$11,000	\$ 8,000
Copyright	30,000	25,000

Prepare the required journal entries, if any, to record impairment on Meridan's intangible assets and goodwill. (Assume that amortization for 2022 has been recorded.) Show supporting calculations.

P12.9 Use the data provided in [P12.8](#). Assume instead that Meridan Golf and Sports is a public company. The relevant information for the impairment test on December 31, 2022, is as follows:

	<u>Carrying Amount</u>	<u>Future Net Cash Flows (Undiscounted)</u>	<u>Value in Use</u>	<u>FV– Selling Costs</u>
Trade name	\$ 15,000	\$ 11,000	\$ 7,000	\$ 7,500
Copyright	23,438	30,000	27,000	24,000
Cash-generating unit	450,000	470,000	440,000	420,000
to which goodwill was allocated				

Instructions

Provide the calculations for the impairment test and any associated journal entry.

P12.10 Six examples of purchased intangible assets follow. They are reported on the consolidated statement of financial position of Powers Enterprises Limited and include information about their useful and legal lives. Powers prepares financial statements in accordance with IFRS.

Intangible 1(i) is the trade name for one of the company's subsidiaries. The trade name has a remaining legal life of 16 years, but it can be renewed indefinitely at a very low cost. The subsidiary has grown quickly and been very successful, and its name is well known to Canadian consumers. Powers management has concluded that it can identify positive

cash flows from the use of the trade name for another 25 years, and assumes the cash flows will continue even longer.

Intangible 1(ii) is the trade name as identified in 1(i), but assume instead that Powers Enterprises expects to sell this subsidiary in three years, since the subsidiary operates in an area that is not part of Powers's core activities.

Intangible 2 is a licence granted by the federal government to Powers that allows Powers to provide essential services to a key military installation overseas. The licence expires in five years, but is renewable indefinitely at little cost. Because of the profitability associated with this licence, Powers expects to renew it indefinitely. The licence is very marketable and will generate cash flows indefinitely.

Intangible 3 is a magazine subscription list. Powers expects to use this subscriber list to generate revenues and cash flows for at least 25 years. It has determined the cash flow potential of this intangible by analyzing the subscribers' renewal history, the behaviour of the group of subscribers, and their responses to questionnaires.

Intangible 4 is a non-competition covenant. Powers acquired this intangible asset when it bought out a major owner-managed competitor. The seller signed a contract in which he agreed not to set up or work for another business that was in direct or indirect competition with Powers. The projected cash flows resulting from this agreement are expected to continue for at least 25 years.

Intangible 5 is medical files. One of Powers's subsidiary companies owns several dental clinics. A recent purchase of a retiring dentist's practice required a significant payment for the practice's medical files and clients. Powers considers that this base will benefit the business for as long as it exists, providing cash flows indefinitely.

Intangible 6 is a favourable lease. Powers acquired a sublease on a large warehouse property that requires an annual rental amount that is 50% below competitive rates in the area. The lease extends for 35 years.

Instructions

For each intangible asset and situation described above, do the following:

- a. Identify the appropriate method of accounting for the asset subsequent to acquisition, and justify your answer.
- b. Provide an example of a specific situation that would cause you to test the intangible asset for impairment.

P12.11 In late July 2020, Mona Ltd., a private company, paid \$2 million to acquire all of the net assets of Lubello Corp., which then became a division of Mona. Lubello reported the following statement of financial position at the time of acquisition:

Current assets	\$ 415,000	Current liabilities	\$ 300,000
Non-current assets	1,335,000	Long-term liabilities	265,000
		Shareholders' equity	<u>1,185,000</u>
	<u>\$1,750,000</u>		<u>\$1,750,000</u>

It was determined at the date of the purchase that the fair value of the identifiable net assets of Lubello was \$1.7 million. Over the next six months of operations, the new division had

operating losses. In addition, it now appears that it will generate substantial losses for the foreseeable future. At December 31, 2020, the fair value of the Lubello Division is \$1,850,000, and the division reports the following statement of financial position information:

Current assets	\$ 462,000
Non-current assets (including goodwill recognized in purchase)	2,400,000
Current liabilities	(703,500)
Long-term liabilities	<u>(530,000)</u>
Net assets	<u>\$1,628,500</u>

Assume that Mona Ltd. prepares financial statements in accordance with ASPE.

Instructions

- Calculate the amount of goodwill, if any, that should be recognized in late July 2020.
- Determine the loss on impairment, if any, to be recognized on December 31, 2020.
- Assume that the fair value of the Lubello Division on December 31, 2020, is \$1.5 million. Determine the loss on impairment, if any, that would be recognized.
- Prepare the journal entry to record the loss on impairment, if any, in parts (b) and (c) and indicate where the loss would be reported in the income statement.
- Explain how the accounting would differ under IFRS.
- Digging Deeper** Shortly after Mona purchased Lubello, Lubello incurred losses and its future does not look promising. What advice can you provide to Mona's management team for any future acquisitions the company may be considering?

P12.12 On September 1, 2020, Madonna Lisa Corporation, a public company, acquired Jaromil Enterprises for a cash payment of \$763,000. At the time of purchase, Jaromil's statement of financial position showed assets of \$850,000, liabilities of \$430,000, and owners' equity of \$420,000. The fair value of Jaromil's identifiable assets is estimated to be \$1,080,000.

Instructions

- Calculate the amount of goodwill acquired by Madonna Lisa.
- Assume that the goodwill was allocated entirely to one cash-generating unit (CGU), as indicated below. The CGU's value in use at the statement of financial position date was \$3,850,000 and the fair value less costs to sell was \$4,250,000. Determine if the goodwill is impaired.

	<u>Plant A CGU</u>
Assets (other than goodwill)	\$4,500,000
Goodwill	<u>113,000</u>
Total carrying value of CGU	\$4,613,000

- Explain how a future reversal of impairment is accounted for under IFRS.

***P12.13 Finance** Macho Inc. has recently become interested in acquiring a South American plant to handle many of its production functions in that market. One possible candidate is De Fuentes SA, a closely held corporation, whose owners have decided to sell their business if a proper settlement can be obtained. De Fuentes's statement of financial position is as follows:

Current assets	\$125,000
Fair value-net income investments	55,000
Buildings (net)	<u>405,000</u>
Total assets	<u>\$585,000</u>
Current liabilities	\$ 85,000
Notes payable	105,000
Share capital	225,000
Retained earnings	<u>170,000</u>
Total liabilities and shareholders' equity	<u>\$585,000</u>

Macho has hired Yardon Appraisal Corporation to determine the proper price to pay for De Fuentes SA. The appraisal firm finds that the fair value-net income investments have a fair value of \$75,000 and that inventory is understated by \$40,000. All other assets and liabilities have book values that approximate their fair values. An examination of the company's income for the past four years indicates that the net income has steadily increased. In 2020, the company had a net operating income of \$110,000, and this income should increase by 15% each year over the next four years. Macho believes that a normal return in this type of business is 15% on net assets. The asset investment in the South American plant is expected to stay the same for the next four years.

Instructions

a. Yardon Appraisal Corporation has indicated that De Fuentes SA's fair value can be estimated in several ways. Prepare estimates of the value of De Fuentes SA, with the value based on each of the following independent assumptions:

1. Goodwill is based on the purchase of average excess earnings over the next four years.
2. Goodwill is equal to the capitalization of average excess earnings of De Fuentes SA at 30%.
3. Goodwill is equal to the present value of the average excess earnings over the next four years discounted at 15%. Show calculations using factor Table A.4, a financial calculator, or Excel function PV. Round final amounts to the nearest dollar.
4. The value of the business is based on the capitalization of future excess earnings of De Fuentes SA at 16%.

b. De Fuentes SA is willing to sell the business for \$1 million. What advice should Yardon Appraisal give Macho in regard to this offer?

c. Digging Deeper If Macho were to pay \$850,000 to purchase the assets and assume the liabilities of De Fuentes SA, how would this transaction be reflected on Macho's books?

***P12.14 Finance** The president of Plain Corp., Joyce Lima, is thinking of purchasing Balloon Bunch Corporation. She thinks that the offer sounds fair but she wants to consult a professional accountant to be sure. Balloon Bunch Corporation is asking for \$85,000 in excess of the fair value of the identifiable net assets. Balloon Bunch's net income figures for the past five years are as follows:

2016—\$67,000	2019—\$80,000
2017—\$50,000	2020—\$72,000
2018—\$81,000	

The company's identifiable net assets were appraised at \$400,000 on December 31, 2020.

You have done some initial research on the balloon industry and discovered that the normal rate of return on identifiable net assets is 15%. After analyzing such variables as the stability of past earnings, the nature of the business, and general economic conditions, you have decided that the average excess earnings for the past five years should be capitalized at 20% and that the excess earnings will continue for about six more years. Further research led you to discover that the Happy Balloon Corporation, a competitor of similar size and profitability, was recently sold for \$450,000, five times its average yearly earnings of \$90,000.

Instructions

- a. Prepare a schedule that includes the calculation of Balloon Bunch Corporation's goodwill and purchase price under at least three methods.
- b. Write a letter to Joyce Lima that includes all of the following:
 1. An explanation of the nature of goodwill.
 2. An explanation of the different acceptable methods of determining the fair value of goodwill. (Include with your explanation the rationale for how each method arrives at a goodwill value.)
 3. Advice for Joyce Lima on how to determine her purchase price.
 4. Considerations before relying on the earnings figure used to determine the purchase price.

P12.15 Excel On July 31, 2020, Mexico Company paid \$3 million to acquire all of the common shares of Conchita Incorporated, which became a division of Mexico. Conchita reported the following statement of financial position at the time of the acquisition.

Conchita Inc.
Statement of Financial Position
As at July 31, 2020

Current assets	\$	Current liabilities	\$
	800,000		600,000
Non-current assets	<u>2,700,000</u>	Long-term liabilities	500,000
Total assets	<u>\$3,500,000</u>	Shareholders' equity	<u>2,400,000</u>
		Total liabilities and shareholders' equity	<u>\$3,500,000</u>

It was determined at the date of the purchase that the fair value of the identifiable net assets of Conchita was \$2,750,000. Over the next six months of operations, the newly purchased division experienced operating losses. In addition, it now appears that it will generate substantial losses for the foreseeable future. At December 31, 2020, the Conchita Division reports the following SFP-related information:

Current assets	\$ 450,000
Non-current assets (including goodwill recognized in purchase)	2,400,000
Current liabilities	(700,000)
Long-term liabilities	<u>(500,000)</u>
Net assets	<u>\$1,650,000</u>

It is determined that the fair value of the Conchita Division as at December 31, 2020, is \$1,850,000. The recorded amount for Conchita's net assets (excluding goodwill) is the same as fair value, except for property, plant, and equipment, which has a fair value \$150,000 above the carrying value. Assume that Mexico follows ASPE for financial reporting purposes.

Instructions

- a.** Calculate the amount of goodwill recognized, if any, on July 31, 2020.
- b.** Determine the loss on impairment, if any, to be recorded on December 31, 2020.
- c.** Assume that fair value of the Conchita Division is \$1,600,000 instead of \$1,850,000. Determine the loss on impairment, if any, to be recorded on December 31, 2020.
- d.** Prepare the journal entry to record the loss on impairment, if any, and indicate where the loss would be reported in the income statement.

Integrated Cases

Refer to the Case Primer on the Student Website and in *WileyPLUS* to help you answer these cases.

(Hint: If there are issues here that are new, use the conceptual framework to help you support your analysis with solid reasoning.)

IC12.1 Dr. Gary Morrow, a former surgeon, is the president and owner of Morrow Medical (MM), a private Ontario company that focuses on the design and implementation of various

medical and pharmaceutical products. With the recent success of various products put to market by MM, Dr. Morrow has decided that this would be a good opportunity to sell his company and retire to the Arizona desert. Dr. Morrow has found a potential buyer for the business and an agreement has been put in place that would see MM being sold at five times the December 31, 2019 net income. The potential buyer is extremely interested in an MM product that is currently in the development stage—the MM Surgical Drill.

During 2019, MM launched into production a special latex glove for use during surgery. This glove is laced with a special antibacterial agent that significantly reduces the risk of infection during surgery. The product had been in the development phase since 2016, and in early 2018, it was approved by Health Canada for production and use.

Dr. Morrow was pleased with the initial demand for the product after trial runs conducted by surgeons during late 2018. After the success of the trial testing, MM landed contracts with several hospitals in the province and early feedback was favourable. Dr. Morrow was surprised, however, with how small the quantity of orders placed by hospitals actually was. He was certain that hospitals would quickly run out of the gloves and was beginning to fear that they would buy a competitor's product.

Since Dr. Morrow wanted to prevent hospitals from buying elsewhere, as it would result in a loss of sales for MM, for each purchase order received from a hospital, Dr. Morrow shipped several more units than were ordered. He was certain that all of the extra inventory would eventually be consumed and this was MM's way of avoiding the hospitals' running out of inventory. To prevent hospitals from returning the extra inventory, he allowed them eight months to either pay for the entire shipment or return any unused gloves in excess of the initial amount that was ordered. Dr. Morrow's first priority is always getting the product out of the warehouse and into the hospitals. Orders are generally filled and shipped within two days of receipt of a purchase order. Because MM is dealing with hospitals, there is little concern over collectibility.

During 2016, under the supervision of Dr. Morrow, MM began the research and development of a special surgical drill (the MM Surgical Drill mentioned above) that would allow for more precise handling by surgeons than any other drill currently on the market. The development of this product grew from various market surveys conducted in hospitals throughout Ontario that showed that surgeons were unhappy with the drills that were currently available.

The following costs were incurred in 2019:

Cost of setting up production lab	\$
	30,000
Testing of Surgical Drill	100,000
Design of the moulds involved in Surgical Drill technology	17,500
Testing to evaluate product alternatives	12,000
Marketing and promotion costs in connection with launching the surgical gloves	15,000

Dr. Morrow intends to capitalize all of these costs for the December 31 year end. In addition, \$25,000 of tool design costs that were expensed in 2018 will be capitalized in 2019.

MM has the technical resources available to complete the Surgical Drill project and, since testing to date has been successful, management intends to bring this product to market in

early 2021. MM has been faced with cash flow problems in the past few months but hopes that, once MM is sold, additional funding will be available to see this product into its production stage.

In early 2019, an engineer testing the Surgical Drill was severely injured as a result of a product malfunction. This glitch was subsequently identified and fixed. MM has recently been sued. The claim is for \$500,000 and alleges that MM was responsible for the engineer's injuries. MM's lawyer's best estimate of what the company will end up paying is \$100,000 to \$200,000. As the trial does not begin until 2020, MM has no intention of recording this in its December 31, 2019 financial statements.

Instructions

Audit Adopt the role of the auditor hired by MM's potential buyer and analyze the financial reporting issues.

IC12.2 Biofuel Inc. (BI) is a private company that just started up this year. The company's owner, Sarah Biorini, created a process whereby carbon dioxide (CO₂) emissions are converted into biofuel. Specifically, the CO₂ is pumped into a pond where algae are grown. The algae feed on the CO₂ and release oxygen. The algae are harvested, dried, and sold as fuel. The fuel is used by cement manufacturing companies to heat their kilns (ovens). Sarah contributed the prototype and idea to the newly formed company in return for common shares. She estimated that the prototype was worth about \$500,000. BI spent the first year developing the idea and by year end was producing and selling the fuel to several cement production companies. Cement companies not only produce large amounts of CO₂, but also need large amounts of fuel to heat their kilns.

One of the critical success factors for BI is that the algae-producing pond should be close to the source of CO₂. This reduces transportation costs. After much consideration, BI decided to build pipelines to pump CO₂ from the source (the cement company) into an adjacent algae-filled pond. The pond is excavated by BI but it sits on the cement company's land (close to the source of CO₂). Once a month, BI harvests the algae and ships it to its manufacturing plant to process into biofuel. It then sells the biofuel back to the cement companies.

The cost of constructing the pipelines is financed by the bank, as is the excavation of the ponds. The construction is done by BI and generally takes about three to six months. The finished biofuel made from the algae is priced to recover patent costs and the cost of building the pipe and the ponds, as well as any other costs. It is sold back to the cement companies. The cement companies are both customers and suppliers of the CO₂.

The bank is quite happy to continue financing additional projects as long as BI sends its financial statements to the bank every quarter, starting next year. In addition, the bank would like to see audited annual financial statements beginning with the current year. The bank and BI have agreed that the debt to equity ratio cannot exceed 3:1, or the loans become immediately due. BI's accountant is looking to produce the annual financial statements for the first year of operations. He has not yet decided whether to follow IFRS or ASPE and is interested in the differences between the two.

Instructions

Assume the role of BI's accountant and discuss the financial reporting issues relating to the

above. Use the case analysis framework presented in class, including an overview, analysis, and recommendations.

IC12.3 Finance As a recent graduate and newly hired financial analyst for the local branch office of a national brokerage firm, you are excited to get your first assignment, allowing you to use your accounting expertise. Your supervisor provides you with updated data for the most recent quarter for three companies that the firm has been recommending to its clients as “buys.” All three companies are publicly traded and use IFRS for financial reporting purposes. Each of the companies made one significant acquisition in the past that expanded their markets in their respective industries. The companies all put a high intrinsic value on the potential that these new markets would bring to the acquiring company. Each of the acquisitions was brought into the acquiring company as a new division. The new acquisitions represent at least 25% of the operations of the companies that acquired them.

The return on assets for each of the companies as a whole has outperformed their industry cohorts in the past. But, given recent challenges in their markets, coupled with unsteady performance overall in the marketplace, there is concern that the companies may experience operating challenges and lower earnings. In particular, each of the acquisitions has not performed as expected and has resulted in quarterly net losses to the companies' bottom line.

As shown by the data summarized below, each newly acquired division's market value is now lower than its corresponding book value. Your supervisor wants to understand what, if any, implications this may have for each company's future prospects, given the significance of the divisions to the overall operations of each company.

The book value reported in the table below includes the carrying value of goodwill assigned to each division at the time of its acquisition. For each company, there has been no impairment of the carrying value of goodwill previously recorded for these divisions.

(All numbers in millions, except return on assets.)

Company Name and Division	Market Value (B)	Book Value (Net Assets) (C)	Carrying Value of Goodwill (D)	Value in Use (E)	Costs to Sell (F)	ROA for the Company (%) (G)
ABC Limited, Division 1	\$36,200	\$51,500	\$30,200	\$32,300	\$1,000	3.5
DEF Limited, Division H	12,700	22,200	9,000	16,500	500	2.6
XYZ Limited, Division XX	1,800	4,000	900	3,000	200	5.2

Your supervisor suspects that the companies will need to record goodwill impairment for the acquired divisions in the near future, but is unsure about the goodwill impairment rules. She would like to know if it is likely that these companies will recognize impairment. If they will, your supervisor would like you to estimate the amount for each and explain to her where the

loss on impairment would be recorded. In addition, she would like to know how this might impact the overall return on assets ratio for each company and the impact on the “buy” recommendations.

Your supervisor would also like to know if these companies can reverse the losses on impairment recorded once the market improves and the prospect of these divisions looks promising. If a reversal is possible, the supervisor has suggested that the current year impairments may have less impact than if no reversal were available.

Your supervisor would like you to respond within two days, as the brokerage firm's clients are nervous about their portfolios and are anxious to hear about any good “buy” recommendations.

Instructions

Adopt the role of the newly hired financial analyst and prepare the report for your supervisor.

Research and Analysis

RA12.1 **Real World Emphasis** British Airways

Access the annual report for **British Airways Plc** (BA) for the year ended December 31, 2017, from its parent company's website (www.iagshares.com). British Airways is now a part of the International Airlines Group. Use the amounts in and notes to BA's group (that is, consolidated) financial statements to answer the following questions.

Instructions

- a. Does British Airways Plc report any intangible assets or goodwill in its 2017 financial statements and accompanying notes? Identify all such accounts, describe their nature, their reported balance sheet amounts at December 31, 2017, and the accounting policies that are applied to these assets, including any general impairment policies. Are there any situations where there are discrepancies with IFRS standards?
- b. What additions were made to the landing rights and software for 2017? Do you expect the landing rights are mainly for use inside or outside the European Union? Explain briefly.
- c. How is goodwill tested for impairment? Provide details on the methods and key assumptions used by the company. Is information provided on the recoverable amounts determined? Were there any losses on impairment recorded in goodwill or other intangible assets in 2017? What assumptions would make the recoverable amount equal to the carrying amount for the network airline operations?
- d. Why is the information provided in part (c) considered helpful to users?

RA12.2 **Real World Emphasis** Rights to Use Sports Celebrities' Names

Nike, Inc. has had endorsement contracts with some of the world's best-known golfers. For example, Nike has been able to gain the rights to use top golfers' names in advertising promotions and on Nike Golf apparel, footwear, golf balls, and golf equipment. Recently, Rory McIlroy's name has been added to its list.

Instructions

Conduct research on the Internet to determine the nature of the endorsement contracts that Nike has with top athletes, such as Rory McIlroy. What form do Nike's payments for such rights take? Using Nike, Inc.'s most recent financial statements (which can be found in its Form-10K filing), determine how Nike reports the cost of endorsement contracts. Does the cost qualify as an intangible asset under IAS 38? Explain briefly.

RA12.3 Intangible Issues

Kolber Manufacturing Limited designs, manufactures, and distributes safety boots. In January 2020, Kolber purchased another business that manufactures and distributes safety shoes, to complement its existing business. The total purchase price was \$10 million in cash paid immediately and another \$5 million in cash to be paid in one year's time. The company's current interest cost was 6%. The assets and liabilities purchased include accounts receivable, finished goods inventories, land and plant, manufacturing equipment and office equipment, accounts payable, and a loan that is secured by the manufacturing equipment. In addition, a trademark was included (which has six years remaining on its current legal life), as well as existing customer relationships (although there are no outstanding contracts with these customers), and a non-compete agreement with the existing owners that they will not start any similar business for the next five years. The company reports under IFRS.

Instructions

You are the controller of Kolber and have been given the task of recording the purchase in the company's books.

- a. Outline how you might go about determining how to allocate the purchase price to the intangible assets and any goodwill purchased. In addition, consider how each of these assets is subsequently reported and what the effect will be on net earnings in subsequent years given your decisions now.
- b. If this company reported under ASPE, explain how the impairment test for goodwill would differ from the IFRS method.

(Adapted from AICPA)

RA12.4 Social Media

Weaver Limited is a company that distributes hard-to-find computer supplies, such as hardware parts and cables. It sells and ships products all over the world. Recently, the board of directors approved the plan and a budget for the company to redesign its web presence. The company previously had a “canned” website with limited general information. Part of the project will involve a redesign of the company's website into two sections. One is for general information (similar to what used to be on its old website) and can be accessed by anyone. On this part of the site, the company has information about what it does and pictures of all the products sold. The other part of the website will be new and is accessible only by logging in. Customers are given passwords to enter this part of the site, where they can place their orders, which are then reviewed by the order clerks and sent on to shipping. Another part of the project will involve setting up a social media presence, including a Twitter account and daily Twitter feeds, as well as a Facebook account with daily content. The IT manager has been put in charge of managing the project and keeping track of and approving all costs incurred.

The company has incurred the following costs to develop the site: the IT manager's salary for the six months required to supervise the project; legal fees to register a new domain name; consulting costs for a feasibility study and communications specialist who will identify a strategy for daily tweets and Facebook posts; purchase of the hardware; software developers to develop the code for the application, installation, and testing of the software; graphic artist to design the layout and colour for the web pages; photographers to take pictures of the products to be shown on the site; staff time to upload all the information to the site, including the company and product descriptions; and the data required to place an order, including prices, data entry screens, and shipping options. Finally, the company has incurred costs to train the employees on using the software and on creating a meaningful media presence. Ongoing costs include updating product prices and content, making daily posts to the company's Twitter and Facebook accounts, adding new functions, and backing up the data.

Instructions

- a. You are an external auditor and have been hired by Weaver Limited to explain how these costs should be reported. Using IAS 38 and SIC 32—Intangible Assets—Web Site Costs (an Interpretation under International Financial Reporting Standards that is accessible via an Internet search), discuss the treatment of these costs, referring to the general principles in IAS 38 to support your analysis. Explain how the company must report costs incurred once the website is operating.
- b. As Weaver's external auditor, what might you be concerned about in addition to the GAAP financial accounting and reporting of the internally developed intangible asset for social media?

RA12.5 Finance Goodwill

Echo Corp., a retail propane gas distributor, has increased its annual sales volume to a level that is three times greater than the annual sales of a dealer that it purchased in 2019 in order to begin operations. Echo's board of directors recently received an offer to negotiate the sale of the company to a large competitor. As a result, the majority of the board members want to increase the stated value of goodwill on the balance sheet to reflect the larger sales volume that it developed through intensive promotion and the product's current market price. A few of the board members, however, would prefer to eliminate goodwill from the balance sheet altogether in order to prevent possible misinterpretations. Goodwill was recorded properly at the start of fiscal 2019.

Instructions

- a. Discuss the meaning of the term “goodwill.”
- b. Why are the book and fair values of Echo Corp.'s goodwill different?
- c. Discuss the appropriateness of each of the following:
 1. Increasing the stated value of goodwill prior to the negotiations
 2. Eliminating goodwill completely from the balance sheet

(Adapted from AICPA)

RA12.6 Real World Emphasis Comparative Analysis

Instructions

From the SEDAR website (www.sedar.com) choose one company from each of four different industry classifications. Choose from a variety of industries, such as real estate (such as **Crombie Real Estate Investment Trust**), food stores—merchandising (such as **Loblaw Companies Limited**), biotechnology and pharmaceuticals (such as **AEterna Zentaris Inc.**), or communications and media (such as **Quebecor Inc.**). From the companies' financial statements for their 2017 fiscal year, identify the year-end amounts reported for goodwill, intangibles, and total assets, and the accounting policies for goodwill and each type of intangible asset reported.

- a. What net amounts were reported for goodwill and for intangible assets by each company? What are the amounts of accumulated amortization reported for the intangible assets? Identify any loss on impairment reported in the current period.
- b. What percentage of total assets does each company have invested in goodwill and intangible assets?
- c. Does the type of intangible assets differ depending on the type of industry? Does the relative size of the investment in this category of asset differ among industries? Comment.
- d. Do the policies differ by type of intangible? By type of industry?
- e. Describe the type of disclosure provided for those companies that reported losses or reversals of losses on impairment.

RA12.7 Regulatory Assets

When Canadian public companies were required to apply IFRS beginning in 2011, one of the major issues faced by some of them, particularly those whose revenues were regulated by an independent body, concerned the accounting for regulatory assets. This issue remains unresolved.

Instructions

Research the financial accounting issues related to rate regulation, beginning with the IASB website (www.ifrs.org) and the “Projects” and “Work plan” link: look for Rate-regulated Activities. Answer the following questions.

- a. Provide a brief history of the IASB's rate regulation project, and explain where the project currently stands and what the future plans are for this issue.
- b. Identify the type of companies that are considered rate-regulated, and explain what regulatory assets are.
- c. Explain what the current accounting issues were with respect to reporting these assets.
- d. What choice, if any, does the IASB have for settling this issue? Identify any progress that has been made since September 2014 in reaching a decision.

Task-Based Simulation and Cumulative Coverage: Chapters 10 to 12

Templates to complete this task-based simulation are available in WileyPLUS and on the instructor website.

Fit Fixtures Incorporated (FFI) is a manufacturer of exercise equipment such as treadmills, stair climbers, and elliptical machines. The company has a December 31 year end and uses ASPE. The accounting staff member who normally looks after the capital asset accounts was on maternity leave for the year, and the company put all transactions in a temporary account called Asset Additions and Disposals.

The company policy on calculating depreciation for partial periods of ownership is to take 50% of the normal amount of depreciation in the year of addition or disposal. Due to the staff member's maternity leave, no depreciation or amortization expense has yet been taken in 2020.

1. The company completed construction of a new plant in Saskatchewan on December 15, 2020, to help it better meet the needs of its customers west of Ontario. The costs associated with this construction project were as follows:

Land	\$ 500,000
Construction contract: building, 20 years of useful life, residual value of \$50,000	1,500,000
Equipment	(See below)
Furniture	250,000
Training costs (employees learning to use equipment)	45,000
Avoidable interest calculated at 8% on financing of construction project from inception until put in use	75,000

The equipment purchased for the new plant was bought on a deferred payment contract signed on December 1. FFI issued a \$5-million, five-year, non-interest-bearing note payable to the equipment supplier at a time when the annual market rate of interest was 6%. The note will be repaid with five equal payments made on December 1 of each year, beginning in 2021. Show calculations using factor Table A.4, a financial calculator, or Excel function PV. Round final amounts to the nearest dollar.

2. FFI purchased a used computer and a printer at an auction for \$2,500. The printer needed a new drum. The cost of the new drum was \$500. The used computer's fair market value was \$2,000 if purchased separately. The printer was worth \$1,000 without a drum and \$1,500 with the drum replaced.
3. On July 1, 2020, FFI sold a delivery truck for \$10,000. The truck originally cost \$25,000, and accumulated depreciation on the truck to December 31, 2019, was \$10,000. The truck was amortized on a straight-line basis over a five-year period, with no residual value. The sale was recorded as a debit to Cash and a credit to Asset Additions and Disposals. No amortization was recorded in the current year.
4. Due to an office redesign in the Ontario building, FFI traded some old equipment for different equipment with a similar life and value in use. The fair value of the equipment disposed of was \$5,000. The cost of this equipment was \$7,000, and the accumulated depreciation on the equipment at December 31, 2019, was \$3,000. This transaction was not recorded in the books of account. No entry was made to record the exchange.

5. Shortly after the new factory was completed, vandals attacked the building and caused significant damage. The costs to correct the damage, which were not covered by insurance, included:

New paint to cover graffiti	\$ 4,000
Glass for broken windows	10,000
Improved security system	25,000

6. During the year, the company developed a new piece of exercise equipment that has a built-in video game. It was the policy to amortize development costs on a straight-line basis over three years, with 50% of the normal amount in the year of development. The costs associated with product development included:

Costs to determine how a video game would work with exercise equipment	\$ 50,000
Design, testing, and construction of prototype equipment	350,000
Costs to determine the best production process for the new equipment	40,000
Advertising costs to alert customers about the new product	47,000

7. The company has goodwill and an intangible asset as follows:

<u>Asset</u>	<u>Details</u>	<u>Original Cost as at December 31, 2019</u>	<u>Accumulated Amortization as at December 31, 2019</u>	<u>Amortization Method</u>
Goodwill	Recorded in 2015 when the company took over the business of its predecessor	\$500,000	\$0	Not applicable
Customer list	Purchased in 2015 when the company took over the business of its predecessor	\$250,000	\$112,500	Straight-line over 10 years

The customer list has lost value and will not provide benefits through to 2025, as was originally predicted. It is now expected to provide undiscounted future cash flows of \$50,000 in total over the next two years. There are no estimated costs to sell the list,

as it will not be sold, and the value in use is \$46,000. Goodwill has a recoverable value of \$700,000 as at December 31, 2020.

Instructions

Part A: New Saskatchewan plant

Determine whether each expenditure related to the new Saskatchewan plant must be capitalized or expensed or whether it could be either (depends on policy choice). Place the dollar amount in the appropriate column in the table below.

	<u>Capitalize</u>	<u>Expense</u>	<u>Policy Choice to Capitalize or Expense</u>
Land			
Building			
Equipment			
Furniture			
Training costs			
Avoidable interest			

Part B: Used equipment purchased at auction

Allocate the expenditure related to the used computer and printer bundle to each component, and identify whether each component must be capitalized or expensed or whether it could be either (depends on policy choice). Place the dollar amount allocated to each component in the appropriate column in the table below.

	<u>Capitalize</u>	<u>Expense</u>	<u>Policy Choice to Capitalize or Expense</u>
Computer			
Printer			

Part C: Delivery truck disposition

Account for the disposition of the delivery truck by preparing a journal entry in good form.

Part D: Office equipment swap

Determine the impact on the company's assets, liabilities, and net income of measuring the transaction with the carrying value versus the fair value. Write "increase," "decrease," or "no impact" in each space.

	<u>Carrying Value</u>	<u>Fair Value</u>
Assets		
Liabilities		
Net income		

Part E: Vandal attack

Determine the impact on the company's assets, liabilities, and net income of the three

expenditures related to the vandal attack. Write “increase,” “decrease,” or “no impact” in each space.

	<u>Paint</u>	<u>Glass</u>	<u>Security System</u>
Assets			
Liabilities			
Net income			

Part F: Research and development costs

Determine whether each expenditure is clearly a research cost or could potentially be a development cost (if the six criteria are met at the point when the costs are incurred). Place the dollar amount of each expenditure in the Research and Other Expenses or Potentially Development cost column.

	<u>Research and Other Expenses</u>	<u>Potentially Development</u>
Costs to determine how a video game would work with exercise equipment		
Design, testing, and construction of prototype equipment		
Costs to determine the best production process for the new equipment		
Advertising costs to alert customers about the new product		

Part G: Intangible assets and Goodwill

Determine whether the assets listed are impaired, and if so, the amount of the writedown. Place an X in the Impaired or Not Impaired column for both assets (only one X per asset). If the asset is impaired, enter the amount of the writedown in the Writedown Required (\$) column.

	<u>Not Impaired (X)</u>	<u>Impaired (X)</u>	<u>Writedown Required (\$)</u>
Customer list			
Goodwill			

Notes

¹ Jia Wertz, “Why Brick and Mortar Retailers Need E-Commerce-Style Data Tracking Methods,” *Forbes*, December 18, 2017.

² *CPA Canada Handbook*, Part II, 1582.03(j) and IFRS 3 [Appendix A](#). Copyright © IFRS

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- ³ When less than a 100% interest is acquired or the controlling interest is acquired in stages, the calculation of goodwill is more complex. This topic is left to a course in advanced financial accounting.
- ⁴ See *Business Combinations* in *CPA Canada Handbook*, Part II, Section 1582.03(k) and IFRS 3, [Appendix A](#). Copyright © IFRS Foundation. All rights reserved. Reproduced with permission.
- ⁵ IAS 38, paragraph 21 and *CPA Canada Handbook*, Part II, Section 3064.21. Copyright © IFRS Foundation. All rights reserved. Reproduced with permission.
- ⁶ IFRS 2 *Share-based Payment* is considerably more complex than is indicated here. In addition, the term “fair value” used in IFRS 2 differs from the definition of fair value in IFRS 13 *Fair Value Measurement*. When applying IFRS 2, an entity measures fair value in accordance with the definition in IFRS 2, not IFRS 13. (See IFRS 2, paragraphs 6A and 16-18.) Copyright © IFRS Foundation. All rights reserved. Reproduced with permission.
- ⁷ If control over the assets is acquired through the acquisition of voting shares, the fair value of all the identifiable assets and liabilities (identifiable net assets) is assigned as their cost through the consolidation process. Refer to [Chapter 3](#) for a discussion of how fair values are determined.
- ⁸ IAS 38, *Basis for Conclusions*: BCZ29.
- ⁹ Reprinted/adapted with permission from the *CPA Canada Handbook—Accounting* © 2018, Part II, Section 3064.08, by Chartered Professional Accountants of Canada. All rights reserved by the copyright owner.
- ¹⁰ IAS 38.56 and .59. Copyright © IFRS Foundation. All rights reserved. Reproduced with permission. Reprinted/adapted with permission from the *CPA Canada Handbook—Accounting* © 2018, Part II, Section 3064.39 and .43, by Chartered Professional Accountants of Canada. All rights reserved by the copyright owner.
- ¹¹ Under ASPE, interest or borrowing costs would be included only if this is the accounting policy chosen by the entity. See [Chapter 10](#) for a fuller discussion of the capitalization of borrowing costs.
- ¹² For a fuller discussion, see [Chapter 3](#) regarding fair value measurement and IAS 38.78 regarding active market. Copyright © IFRS Foundation. All rights reserved. Reproduced with permission.
- ¹³ For indefinite-life intangible assets, the same accounting applies except that there would be no amortization or accumulated amortization amounts.
- ¹⁴ See IAS 38.92 for further details. Copyright © IFRS Foundation. All rights reserved. Reproduced with permission.
- ¹⁵ IAS 38.56 and .59. Copyright © IFRS Foundation. All rights reserved. Reproduced with permission. Reprinted/adapted with permission from the *CPA Canada Handbook*

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¹⁶ Reprinted/adapted with permission from the *CPA Canada Handbook—Accounting* © 2018, Part II, Section 3064.59, by Chartered Professional Accountants of Canada. All rights reserved by the copyright owner. Per IAS 38.100, an active market is based on the definition found in IFRS 13. Copyright © IFRS Foundation. All rights reserved. Reproduced with permission.

¹⁷ This classification framework is used in IFRS 3 *Business Combinations*: Illustrative Examples IE16–IE44 to describe identifiable intangible assets acquired in a business combination. Copyright © IFRS Foundation. All rights reserved. Reproduced with permission.

¹⁸ Canadian Intellectual Property Office: www.ic.gc.ca.

¹⁹ To illustrate how various intangibles might arise from a specific product, consider what the Canadian creators of the highly successful game Trivial Pursuit did to protect their creation. First, they copyrighted the 6,000 questions that are at the heart of the game. Then they shielded the Trivial Pursuit name by applying for a registered trademark. As a third mode of protection, the creators obtained a design patent on the playing board's design because it represents a unique graphic creation.

²⁰ Canadian Intellectual Property Office: www.ic.gc.ca.

²¹ See Chapter c20 for a full discussion of accounting for leases by lessors and lessees.

²² Consider the opposite result: Sir Alexander Fleming, who discovered penicillin, decided not to use a patent to protect his discovery. He hoped that companies would produce it more quickly to help save sufferers. Companies, however, refused to develop it because they did not have the protection of a patent and, therefore, were afraid to make the investment.

²³ The Canadian Intellectual Property Office website indicates in its “Guide to Patents” that 90% of patents are for improvements to existing patented inventions.

²⁴ **Eli Lilly**'s well-known drug Prozac, which is used to treat depression, accounted for 43% of the company's U.S. sales in 1998. The patent on Prozac expired in 2001 and the company was unable to extend its protection with a second-use patent for the use of Prozac to treat appetite disorders. Sales of Prozac went down substantially in 2001 as generic equivalents entered the market.

²⁵ Reprinted/adapted with permission from the *CPA Canada Handbook—Accounting* © 2018, Part II, Section 3063 Impairment of Long-lived Assets, by Chartered Professional Accountants of Canada. All rights reserved by the copyright owner. See also IAS 36 Impairment of Assets.

²⁶ In reality, the Cash amounts would be netted and only \$375,000 would be transferred. If Multi-Diversified gained control over Tractorling by buying all of that company's shares instead of buying all the individual assets and liabilities making up the business, the entry

would be:

Investment in Subsidiary Company	400,000	
Cash		400,000

When Multi-Diversified prepares consolidated financial statements, the Investment account is removed from the statement of financial position and is replaced with the underlying assets and liabilities that the Investment balance represents. Regardless of the transaction's legal form, the goodwill appears on the investor's consolidated statement of financial position.

²⁷ Nadi Chlala, Diane Paul, Louise Martel, and Andrée Lavigne, *Financial Reporting in Canada, 2007* (CICA, 2007), p. 343, and Clarence Byrd, Ida Chen, and Joshua Smith, *Financial Reporting in Canada, 2005* (CICA, 2005), p. 256.

²⁸ Based on estimates from Yahoo Finance, which quoted Apple's third quarter (June 30th, 2018) financial statements as compared with its market capitalization on September 5, 2018.

²⁹ For further discussion of the challenges of classifying cryptocurrency, see “Cracking the cryptocurrency code; or what is a ‘bitcoin’ anyway?” from PWC's “IFRS news” series, available at www.pwc.lu/ifrs (accessed June 24, 2018).

³⁰ A “big bath” in accounting occurs when a company decides that, if a loss has to be reported, it might as well report a very large loss. Any loss is seen as negative but the advantage of reporting a bigger loss is that fewer costs remain in the accounts to be reported as future expenses.

³¹ If you find this unclear, try the following approach: Start with the total earnings of \$375,000 over the past five years and make the necessary adjustments. First add $5 \times \$2,000$ for the average cost/FIFO adjustment and $5 \times \$3,000$ for the depreciation, and then deduct $5 \times \$1,000$ for the patent amortization and \$25,000 for the gain on discontinued operations. The adjusted total five-year earnings of \$370,000 are then divided by 5 to get the expected future annual earnings. The result is \$74,000.

³² The following illustrates how the capitalization or discount rate might be calculated for a small business:

	%
Long-term Canadian government bond rate	3
Add: Average premium return on small company shares over government bonds	<u>5</u>
Expected total rate of return on small publicly held shares	8
Add: Premium for greater risk and illiquidity	<u>6</u>
Total required expected rate of return, including inflation component	14
Deduct: Consensus long-term inflation expectation	<u>2</u>
Capitalization rate to apply to current earnings	<u>12</u>

Adapted from Warren Kissin and Ronald Zulli, “Valuation of a Closely Held Business,” *The*

- 33 Why do we divide by the capitalization or discount rate to arrive at the goodwill amount? Recall that the present value of an ordinary annuity is equal to:

$$P \overline{n}|i = [1 - 1 \div (1 + i)^n] \div i$$

When a number is capitalized in perpetuity, $(1 + i)^n$ becomes so large that $1/(1 + i)^n$ essentially equals zero, which leaves $1/i$ or, as in the case above, $\$21,500/0.25$ or $\$21,500/0.15$.

- 34 The present value of an annuity of \$1 received in a steady stream for 10 years in the future discounted at 25% is \$3.57050. The present value of an annuity of \$21,500, therefore, is $\$21,500 \times 3.57050 = \$76,765.75$.
- 35 Business valuation is a specialist field. The Canadian Institute of Chartered Business Valuators oversees the granting of the specialist designation, Chartered Business Valuator (CBV), to professionals who meet the education, experience, and examination requirements (see cicbv.ca for information).