CHAPTER 22
Accounting Changes and Error Analysis

LEARNING OBJECTIVES

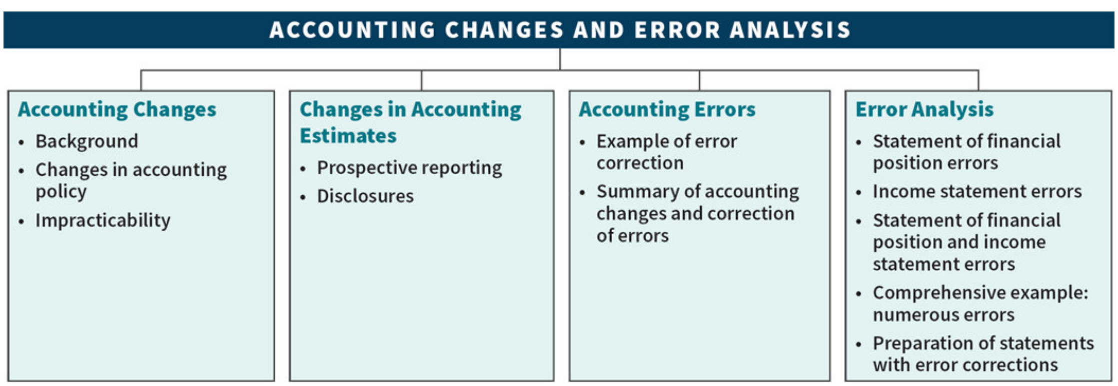
After studying this chapter, you should be able to:

1. Discuss the types of accounting changes and the accounting for changes in accounting policies.
2. Describe the accounting and reporting for changes in estimates.
3. Describe the accounting for correction of errors.
4. Analyze the effect of errors.

This chapter also includes numerous conceptual discussions that are integral to the topics presented here.

PREVIEW OF CHAPTER 22

As the following opening story indicates, changes in accounting policies and errors in financial information are significant. When these changes occur, companies must follow specific accounting and reporting requirements. To ensure comparability among companies, the IASB has standardized reporting of accounting changes, changes in accounting estimates, error corrections, and related earnings per share information. In this chapter, we discuss these reporting standards, which help investors better understand a company's financial condition. The content and organization of the chapter are as follows.



Needed: Valid Comparisons

The IASB's Conceptual Framework describes comparability (including consistency) as one of the qualitative characteristics that contribute to the usefulness of accounting information. Unfortunately, companies are finding it difficult to maintain comparability and consistency due to the numerous changes in accounting policies mandated by the IASB.

Presented below is a condensed version of the change in accounting policy note of **United Business Media (UBM)** (IRL) in a recent annual report.

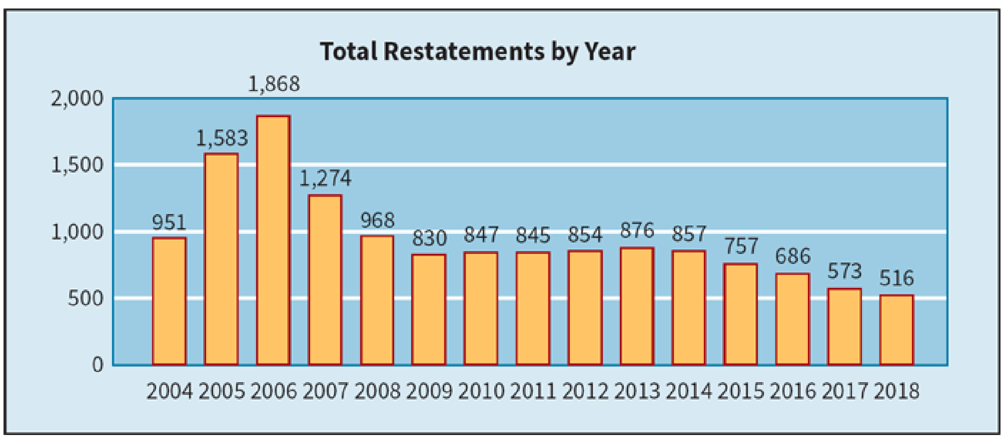
New and amended IFRSs (in part)

The following new and amended IFRSs may have an impact on the Group's consolidated financial statements:

IFRS 9 Financial Instruments—Financial assets will be measured at amortised cost or fair value. Liabilities will be measured in accordance with the existing requirements of *IAS 39*, but the portion of the change in fair value of a liability arising from changes in the entity's own credit risk will be presented in other comprehensive income, rather than in the income statement.

IFRS 15 Revenue Recognition and IFRS 15 (amendment)—*IFRS 15* applies to all contracts with customers excluding those covered by other IFRSs such as lease contracts, insurance contracts, and financial instruments. Core principle of the standard: Recognise revenue to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services.

IFRS 16 Leases—*IFRS 16* specifies how an IFRS reporter will recognise, measure, present and disclose leases. The standard provides a single lessee accounting model, requiring lessees to recognise assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Lessors continue to classify leases as operating or finance, with *IFRS 16*'s approach to lessor accounting substantially unchanged from its predecessor, *IAS 17*.



What these excerpts indicate is that the IASB is constantly attempting to improve financial reporting as conditions change in the financial world. And as you have learned in our study of impairment of financial assets, revenue, and leases in Chapters 17, 18 and 21, we are experiencing a period of significant accounting change and related implementation challenges.

Beyond accounting changes, a number of companies have faced restatements due to errors in their financial statements. This accompanying chart shows the total restatements per year since 2004. There is much good news in the chart. In 2007, restatements declined by 32 percent (from 1,868 to 1,274). In 2008, restatements declined another 24 percent (from 1,274 to 968). Although the declining trend continued in 2009, restatements stabilized from 2010–2014 but then saw additional declines from 2015–2018. The overall decline is attributed to improved reliability of internal controls, but some observers suspect that the drop may also be due to relaxed enforcement by market regulators.

The trend in restatements is a positive development. However, when restatements and accounting changes arise, financial statement users still need high-quality accounting information to make valid comparisons of financial performance to performance in periods before the accounting change or restatement.

Review and Practice

Go to the **Review and Practice** section at the end of the chapter for a targeted summary review and practice problem with solution. Multiple-choice questions with annotated solutions, as well as additional exercises and practice problem with solutions, are also available online.

Accounting Changes

LEARNING OBJECTIVE 1

Discuss the types of accounting changes and the accounting for changes in accounting policies.

Background

Accounting alternatives diminish the comparability of financial information between periods and between companies; they also obscure useful historical trend data. For example, if **Toyota** (JPN) revises its estimates for equipment useful lives, depreciation expense for the current year will not be comparable to depreciation expense reported by Toyota in prior years. Similarly, if **Tesco** (GBR) changes to FIFO inventory pricing while **Marks and Spencer plc** (GBR) uses the retail method, it will be difficult to compare these companies' reported results. A reporting framework helps preserve comparability when there is an accounting change.

The IASB has established a reporting framework that involves two types of accounting changes. **[1]** (See the Authoritative Literature References section near the end of the chapter.) The two types of accounting changes are:

1. **Change in accounting policy.** A change from one accepted accounting policy to another one. For example, **Alcatel Lucent Enterprise** (FRA) changed its method of accounting for actuarial gains and losses from using the corridor approach to immediate recognition.
2. **Change in accounting estimate.** A change that occurs as the result of new information or additional experience. As an example, **Daimler AG** (DEU) recently revised its estimates of the useful lives of its depreciable property due to modifications in its productive processes.

A third category necessitates changes in accounting, though it is not classified as an accounting change.

3. **Errors in financial statements.** Errors result from mathematical mistakes, mistakes in applying accounting policies, or oversight or misuse of facts that existed when preparing the financial statements. For example, a company may incorrectly apply the retail inventory method for determining its final inventory value.

The IASB classifies changes in these categories because each category involves different methods of recognizing changes in the financial statements. In this chapter, we discuss these classifications. We also explain how to report each item in the accounts and how to disclose the information in comparative statements.

Changes in Accounting Policy

By definition, a **change in accounting policy** **involves a change from one accepted accounting policy to another**. For example, a company might change the basis of inventory pricing from average-cost to FIFO. Or it might change its method of revenue recognition for long-term construction contracts from the cost-recovery to the percentage-of-completion method.

Companies must carefully examine each circumstance to ensure that a change in policy has actually occurred. **Adoption of a new policy** in recognition of events that have occurred for the first time, or that were previously immaterial, is not a change in accounting policy. For example, a change in accounting policy has not occurred when a company adopts an inventory method (e.g., FIFO) for **newly** acquired items of inventory, even if FIFO differs from that used for **previously recorded** inventory. Another example: certain marketing expenditures that were previously immaterial and expensed in the period incurred. It is not considered a change in accounting policy if they become material and should properly be deferred and amortized.

Finally, what if a company previously followed an accounting policy that was not acceptable? Or what if the company applied a policy incorrectly? In such cases, this type of change is **a correction of an error**. For example, a switch from the cash (income tax) basis of accounting to the accrual basis is a correction of an error. Or if a company deducted residual value when computing double-declining depreciation on plant assets and later recomputed depreciation without deducting estimated residual value, it has corrected an error.

There are three possible approaches for reporting changes in accounting policies:

1. **Report changes currently.** In this approach, companies report the cumulative effect of the change in the current year's income statement. The **cumulative effect** represents the difference in prior years' income between the newly adopted and prior accounting policy. Under this approach, the effect of the change on prior years' income appears only in the current-year income statement. The company does not alter **prior-year financial statements**.

   Advocates of this position argue that changing prior years' financial statements results in a loss of confidence in financial reports. How do investors react when told that the earnings computed three years ago are now entirely different? Changing prior periods, if permitted, also might upset contractual arrangements based on the old figures. For example, profit-sharing arrangements computed on the old basis might have to be recomputed and completely new distributions made, creating numerous legal problems. Many practical difficulties also exist: The cost of changing prior period financial statements may be excessive, or determining the amount of the prior period effect may be impossible on the basis of available data.

2. **Report changes retrospectively.** **Retrospective application** refers to the application of a different accounting policy to recast previously issued financial statements—**as if the new policy had always been used**. In other words, the company "goes back" and adjusts **prior years' statements** on a basis consistent with the newly adopted policy. The company shows any cumulative effect of the change as an adjustment to beginning retained earnings of the earliest year presented.

Advocates of this position argue that retrospective application ensures comparability. Think for a moment what happens if this approach is not used: The year *previous* to the change will be on the old method; the year *of the change* will report the entire cumulative adjustment; and the *following* year will present financial statements on the new basis without the cumulative effect of the change. Such lack of consistency fails to provide meaningful earnings-trend data and other financial relationships necessary to evaluate the business.

3. **Report changes prospectively (in the future).** In this approach, previously reported results remain. As a result, companies do not adjust opening balances to reflect the change in policy. Advocates of this position argue that once management presents financial statements based on acceptable accounting policies, they are final; management cannot change prior periods by adopting a new policy. According to this line of reasoning, the current-period cumulative adjustment is not appropriate because that approach includes amounts that have little or no relationship to the current year's income or economic events.

Given these three possible approaches, which does the accounting profession prefer? The IASB **requires that companies use the retrospective approach**. Why? Because it provides financial statement users with more useful information than the cumulative-effect or prospective approaches. [2] The rationale is that changing the prior statements so that they are on the same basis as the newly adopted policy results in greater consistency across accounting periods. Users can then better compare results from one period to the next.

What Do the Numbers Mean?

Comparison Challenges—Squared

As discussed in the opening story, accounting changes create comparability (consistency) challenges when evaluating a company over time. This explains the importance of accounting rules that ensure investors have the information to understand accounting reports prepared under different sets of rules. However, the comparability challenges can be compounded by both the number of required accounting changes as well as the variation in implementation dates. The following table provides a summary of recent accounting standards and their effective dates.

Effective Date, Year Beginning	Standards
January 1, 2019	*IFRS 16 Leases*
January 1, 2019	*IAS 12 Income Taxes*—Income tax consequences of payments on financial instruments classified as equity
January 1, 2020	*Definition of Material* (Amendments to *IAS 1* and *IAS 8*)
January 1, 2020	*The Conceptual Framework for Financial Reporting*
January 1, 2021	*IFRS 17 Insurance Contracts*

Given the range of new standards coming online (the list in the table is a sampling of new standards that became or will become effective from 2019–2021), it is easy to understand why financial statement users would find it difficult to compare accounting results, to the extent that companies are differentially affected by these new standards. Furthermore, implementation guidance for some standards allows companies to adopt early if they wish. This is the case for the changes in rules for leases in the table above. This early-adoption option further magnifies the comparability challenges in the wake of new standards.

Source: Adapted from Ernst & Young, "IFRS Update of Standards and Interpretations," *EY Core Tools* (March 31, 2019).

Retrospective Accounting Change Approach

A presumption exists that once a company adopts an accounting policy, it should not change. That presumption is understandable, given the idea that consistent use of an accounting policy enhances the usefulness of financial statements. **[3]** However, the environment continually changes, and companies change in response. Recent changes in standards, such as those for borrowing costs, operating segments, revenue recognition, and financial instruments, indicate that changes in accounting policies will continue to occur.

As a consequence, the IASB permits companies to change an accounting policy if:

1. It is required by IFRS (e.g., the IFRS on financial instruments is subject to the proper accounting for changes in accounting policy); or
2. It results in the financial statements providing more representationally faithful and relevant information about a company's financial position, financial performance, and cash flows. For example, a company may determine that changing from the average-cost method of inventory valuation to the FIFO method provides more representationally faithful and relevant information on the current value of its inventory.[1]

When a company changes an accounting policy, it should report the change using retrospective application. In general terms, here is what the company must do:

1. Adjust (recast) its financial statements for each prior period presented. Thus, financial statement information about prior periods is consistent with the new accounting policy.
2. Adjust the carrying amounts of assets and liabilities as of the beginning of the first year presented. These accounts reflect the cumulative effect of the change to new accounting policy on periods prior to those presented. The company also makes an offsetting adjustment to the opening balance of retained earnings or other appropriate component of equity or net assets as of the beginning of the first year presented.

For example, assume that **Carrefour** (FRA) decides to change its inventory valuation method in 2022 from FIFO to average-cost. It provides comparative information for 2020 and 2021 based on the new method (see **Underlying Concepts**). Carrefour would adjust its assets, liabilities, and retained earnings for periods prior to 2020 and report these amounts in the 2020 financial statements, when it prepares comparative financial statements.

Underlying Concepts

Retrospective application contributes to comparability (consistency).

Retrospective Accounting Change: Long-Term Contracts

To illustrate the retrospective approach, assume that Denson SA has accounted for its income from long-term construction contracts using the cost-recovery (zero-profit) method. In 2022, as a result of adopting the new revenue standard, the company changed to recognizing revenue over time (percentage-of-completion). For tax purposes, the company uses the cost-recovery method and plans to continue doing so in the future. (We assume a 40 percent enacted tax rate.)

Illustration 22.1 shows portions of three income statements for 2020–2022—for both the cost-recovery and percentage-of-completion methods. (There were no differences in income between the old and new accounting methods before 2020.)

Cost-Recovery Method Denson SA Income Statement (partial) For the Year Ended December 31			
	2020	2021	2022
Income before income tax	€400,000	€160,000	€190,000
Income tax (40%)	160,000	64,000	76,000
Net income	€240,000	€ 96,000	€114,000

Percentage-of-Completion Method Denson SA Income Statement (partial) For the Year Ended December 31			
	2020	2021	2022
Income before income tax	€600,000	€180,000	€200,000
Income tax (40%)	240,000	72,000	80,000
Net income	€360,000	€108,000	€120,000

ILLUSTRATION 22.1 Comparative Income Statements for Cost-Recovery versus Percentage-of-Completion Methods

To record a change from the cost-recovery to the percentage-of-completion method, we analyze the various effects, as Illustration 22.2 shows.

	Pretax Income from		Difference in Income		
Year	Percentage-of-Completion	Cost-Recovery	Difference	Tax Effect 40%	Income Effect (net of tax)
Prior to 2021	€600,000	€400,000	€200,000	€80,000	€120,000
In 2021	180,000	160,000	20,000	8,000	12,000
Total at beginning of 2022	€780,000	€560,000	€220,000	€88,000	€132,000
Total in 2022	€200,000	€190,000	€ 10,000	€ 4,000	€ 6,000

ILLUSTRATION 22.2 Data for Retrospective Change Example

The entry to record the change at the beginning of 2022 would be:

Construction in Process	220,000	
Deferred Tax Liability		88,000
Retained Earnings		132,000

The Construction in Process account increases by €220,000 (as indicated in the first column under "Difference in Income" in Illustration 22.2). The credit to Retained Earnings of €132,000 reflects the cumulative income effects prior to 2022 (third column under "Difference in Income" in Illustration 22.2). The company credits Retained Earnings because prior years' income is closed to this account each year. The credit to Deferred Tax Liability represents the adjustment to prior years' tax expense. The company now recognizes that amount, €88,000, as a tax liability for future taxable amounts. That is, in future periods, taxable income will be higher than book income as a result of current temporary differences. Therefore, Denson must report a deferred tax liability in the current year.

Reporting a Change in Policy

The disclosure of changes in accounting policies is particularly important. Financial statement users want consistent information from one period to the next. Such consistency ensures the usefulness of financial statements. The major disclosure requirements are as follows.

1. The nature of the change in accounting policy;
2. The reasons why applying the new accounting policy provides representationally faithful and more relevant information;
3. For the current period and each prior period presented, to the extent practicable, the amount of the adjustment:
    a. For each financial statement line item affected; and
    b. Basic and diluted earnings per share.
4. The amount of the adjustment relating to periods before those presented, to the extent practicable.[2]

The disclosure here relates to a voluntary change in accounting policy, such as a change from the average-cost to FIFO method of inventory measurement. The requirements for disclosure are slightly different if the change is mandated by the issuance of a new IFRS. In that case, transitional adjustments are also considered, as required by the standard.

To illustrate, Denson will prepare comparative financial statements for 2021 and 2022 using the percentage-of-completion method (the new-construction accounting method). **Illustration 22.3** indicates how Denson presents this information.

Denson SA Income Statement (partial) For the Year Ended		
	2022	2021
		As adjusted (Note A)
Income before income tax	€200,000	€180,000
Income tax (40%)	80,000	72,000
Net income	€120,000	€108,000

Note A: Change in Method of Accounting for Long-Term Contracts. The company has accounted for revenue and costs for long-term construction contracts by the percentage-of-completion (over time) method in 2022, whereas in all prior years revenue and costs were determined by the cost-recovery method (point in time). The new method of accounting for long-term contracts was adopted to recognize … [state justification for change in accounting policy] …, and financial statements of prior years have been restated to apply the new method retrospectively. For income tax purposes, the cost-recovery method has been continued. The effect of the accounting change on 2022 income was an increase of €6,000 net of related taxes, and, as previously reported, the effect on 2021 income was an increase of €12,000 net of related taxes. The balances of retained earnings for 2021 and 2022 have been adjusted for the effect of applying retrospectively the new method of accounting. As a result of the accounting change, retained earnings as of January 1, 2021, increased by €120,000 compared to that reported using the cost-recovery method.

ILLUSTRATION 22.3 Comparative Information Related to Accounting Change (Percentage-of-Completion)

As Illustration 22.3 shows, Denson SA reports net income under the newly adopted percentage-of-completion method for both 2021 and 2022. The company retrospectively adjusted the 2021 income statement to report the information on a percentage-of-completion basis. Also, the note to the financial statements indicates the nature of the change, why the company made the change, and the years affected.

In addition, companies are required to provide data on important differences between the amounts reported under percentage-of-completion versus cost-recovery. When identifying the significant differences, some companies show the *entire* financial statements and line-by-line differences between the two methods. However, most companies will show only line-by-line differences. For example, Denson would show the differences in construction in process, retained earnings, gross profit, and net income for 2021 and 2022 under the cost-recovery and percentage-of-completion methods.

Retained Earnings Adjustment

As indicated earlier, one of the disclosure requirements is to show the cumulative effect of the change on retained earnings, beginning with the earliest period presented. For Denson SA, that date is January 1, 2021. Denson disclosed that information by means of a narrative description (see Note A in Illustration 22.3). Denson also would disclose this information in its retained earnings statement. Assuming a retained earnings balance of €1,360,000 at the beginning of 2020, **Illustration 22.4** shows Denson's retained earnings statement under the cost-recovery method—that is, before giving effect to the change in accounting policy. (The income information comes from Illustration 22.1.)

Denson SA Retained Earnings Statement For the Year Ended			
	2022	2021	2020
Retained earnings, January 1	€1,696,000	€1,600,000	€1,360,000
Net income	114,000	96,000	240,000
Retained earnings, December 31	€1,810,000	€1,696,000	€1,600,000

ILLUSTRATION 22.4 Retained Earnings Statement before Retrospective Change

If Denson presents comparative statements for 2021 and 2022 under percentage-of-completion, then it must change the beginning balance of retained earnings at January 1, 2021. The difference between the retained earnings balances under cost-recovery and percentage-of-completion is computed as follows.

Retained earnings, January 1, 2021 (percentage-of-completion)	€1,720,000
Retained earnings, January 1, 2021 (cost-recovery)	1,600,000
Cumulative-effect difference	€ 120,000

The €120,000 difference is the cumulative effect. Illustration 22.5 shows a comparative retained earnings statement for 2021 and 2022, giving effect to the change in accounting policy to percentage-of-completion.

Denson SA Retained Earnings Statement For the Year Ended		
	2022	2021
Retained earnings, January 1, as reported	—	€1,600,000
Add: Adjustment for the cumulative effect on prior years of applying retrospectively the new method of accounting for construction contracts		120,000
Retained earnings, January 1, as adjusted	€1,828,000	1,720,000
Net income	120,000	108,000
Retained earnings, December 31	€1,948,000	€1,828,000

ILLUSTRATION 22.5 Retained Earnings Statement after Retrospective Application

Denson adjusted the beginning balance of retained earnings on January 1, 2021, for the excess of percentage-of-completion net income over cost-recovery net income in 2020. This comparative presentation indicates the type of adjustment that a company needs to make. It follows that this adjustment would be much larger if a number of prior periods were involved.

Retrospective Accounting Change: Inventory Methods

As a second illustration of the retrospective approach, assume that Lancer Company has accounted for its inventory using the average-cost method. In 2022, the company changes to the FIFO method because management believes this approach provides a more appropriate measure of its inventory costs. **Illustration 22.6** provides additional information related to Lancer Company.

1. Lancer Company started its operations on January 1, 2020. At that time, shareholders invested $100,000 in the business in exchange for ordinary shares.

2. All sales, purchases, and operating expenses for the period 2020–2022 are cash transactions. Lancer's cash flows over this period are as follows.

	2020	2021	2022
Sales	$300,000	$300,000	$300,000
Purchases	90,000	110,000	125,000
Operating expenses	100,000	100,000	100,000
Cash flow from operations	$110,000	$ 90,000	$ 75,000

3. Lancer has used the average-cost method for financial reporting since its inception.

4. Inventory determined under average-cost and FIFO for the period 2020–2022 is as follows.

	Average-Cost Method	FIFO Method	Difference
January 1, 2020	$ 0	$ 0	$ 0
December 31, 2020	10,000	12,000	2,000
December 31, 2021	20,000	25,000	5,000
December 31, 2022	32,000	39,000	7,000

5. Cost of goods sold under average-cost and FIFO for the period 2020–2022 is as follows.

	Cost of Goods Sold		
	Average-Cost	FIFO	Difference
2020	$ 80,000	$ 78,000	$2,000
2021	100,000	97,000	3,000
2022	113,000	111,000	2,000

6. Earnings per share information is not required on the income statement.

7. All tax effects for this illustration should be ignored.

ILLUSTRATION 22.6 Lancer Company Information

Illustration 22.7 shows Lancer Company's income statement, retained earnings statement, statement of financial position, and statement of cash flows for 2020–2022 under average-cost.

Lancer Company Income Statement For the Year Ended December 31			
	2020	2021	2022
Sales	$300,000	$300,000	$300,000
Cost of goods sold (average-cost)	80,000	100,000	113,000
Operating expenses	100,000	100,000	100,000
Net income	$120,000	$100,000	$ 87,000

Lancer Company Retained Earnings Statement For the Year Ended December 31			
	2020	2021	2022
Retained earnings (beginning)	$ 0	$120,000	$220,000
Add: Net income	120,000	100,000	87,000
Retained earnings (ending)	$120,000	$220,000	$307,000

Lancer Company Statement of Financial Position At December 31			
	2020	2021	2022
Inventory (average-cost)	$ 10,000	$ 20,000	$ 32,000
Cash	210,000	300,000	375,000
Total assets	$220,000	$320,000	$407,000
Share capital	$100,000	$100,000	$100,000
Retained earnings	120,000	220,000	307,000
Total equity	$220,000	$320,000	$407,000

Lancer Company Statement of Cash Flows For the Year Ended December 31			
	2020	2021	2022
Cash flows from operating activities			
Sales	$300,000	$300,000	$300,000
Purchases	90,000	110,000	125,000
Operating expenses	100,000	100,000	100,000
Net cash provided by operating activities	110,000	90,000	75,000
Cash flows from financing activities Issuance of ordinary shares	100,000	—	—
Net increase in cash	210,000	90,000	75,000
Cash at beginning of year	0	210,000	300,000
Cash at end of year	$210,000	$300,000	$375,000

ILLUSTRATION 22.7 Lancer Financial Statements (Average-Cost)

As Illustration 22.7 indicates, under average-cost Lancer Company reports $120,000 net income in 2020, $100,000 net income in 2021, and $87,000 net income in 2022. The amount of inventory reported on Lancer's statement of financial position reflects average-cost inventory accounting.

Illustration 22.8 shows Lancer's income statement, retained earnings statement, statement of financial position, and statement of cash flows for 2020–2022 under **FIFO**. You can see that **the cash flow statement under FIFO is the same as under average-cost**. Although the net incomes are different in each period, there is no cash flow effect from these differences in net income. (If we considered income taxes, a cash flow effect would result.)

Lancer Company **Income Statement** **For the Year Ended December 31**			
	2020	2021	2022
Sales	$300,000	$300,000	$300,000
Cost of goods sold (FIFO)	78,000	97,000	111,000
Operating expenses	100,000	100,000	100,000
Net income	$122,000	$103,000	$ 89,000

Lancer Company **Retained Earnings Statement** **For the Year Ended December 31**			
	2020	2021	2022
Retained earnings (beginning)	$ 0	$122,000	$225,000
Add: Net income	122,000	103,000	89,000
Retained earnings (ending)	$122,000	$225,000	$314,000

Lancer Company **Statement of Financial Position** **At December 31**			
	2020	2021	2022
Inventory (FIFO)	$ 12,000	$ 25,000	$ 39,000
Cash	210,000	300,000	375,000
Total assets	$222,000	$325,000	$414,000
Share capital	$100,000	$100,000	$100,000
Retained earnings	122,000	225,000	314,000
Total equity	$222,000	$325,000	$414,000

Lancer Company **Statement of Cash Flows** **For the Year Ended December 31**			
	2020	2021	2022
Cash flows from operating activities			
Sales	$300,000	$300,000	$300,000
Purchases	90,000	110,000	125,000
Operating expenses	100,000	100,000	100,000
Net cash provided by operating activities	110,000	90,000	75,000
Cash flows from financing activities Issuance of ordinary shares	100,000	—	—
Net increase in cash	210,000	90,000	75,000
Cash at beginning of year	0	210,000	300,000
Cash at end of year	$210,000	$300,000	$375,000

ILLUSTRATION 22.8 Lancer Financial Statements (FIFO)

Compare the financial statements reported in Illustration 22.7 and Illustration 22.8. You can see that, under retrospective application, the change to FIFO inventory valuation affects reported inventories, cost of goods sold, net income, and retained earnings. In the following sections, we discuss the accounting and reporting of Lancer's accounting change from average-cost to FIFO.

Given the information provided in Illustrations 22.6, 22.7, and 22.8, we now are ready to account for and report on the accounting change.

Our first step is to adjust the financial records for the change from average-cost to FIFO. To do so, we perform the analysis in **Illustration 22.9**.

	Net Income		Difference in Income
Year	Average-Cost	FIFO	
2020	$120,000	$122,000	$2,000
2021	100,000	103,000	3,000
Total at beginning of 2022	$220,000	$225,000	$5,000
Total in 2022	$ 87,000	$ 89,000	$2,000

ILLUSTRATION 22.9 Data for Recording Change in Accounting Policy

The entry to record the change to the FIFO method at the beginning of 2022 is as follows.

Inventory	5,000	
Retained Earnings		5,000

The change increases the inventory account by $5,000. This amount represents the difference between the ending inventory at December 31, 2021, under average-cost ($20,000) and the ending inventory under FIFO ($25,000). The credit to Retained Earnings indicates the amount needed to change the income from prior years, assuming that Lancer had used FIFO in previous periods.

Reporting a Change in Policy

Lancer Company will prepare comparative financial statements for 2021 and 2022 using FIFO (the new inventory method). **Illustration 22.10** indicates how Lancer might present this information.

Lancer Company
Income Statement
For the Year Ended December 31

	2022	2021 As adjusted (Note A)
Sales	$300,000	$300,000
Cost of goods sold	111,000	97,000
Operating expenses	100,000	100,000
Net income	$ 89,000	$103,000

Nature and reason for change and description of prior period information adjusted

Note A: *Change in Method of Accounting for Inventory Valuation.* On January 1, 2022, Lancer Company elected to change its method of valuing its inventory to the FIFO method; in all prior years, inventory was valued using the average-cost method. The Company adopted the new method of accounting for inventory to better report cost of goods sold in the year incurred. Comparative financial statements of prior years have been adjusted to apply the new method retrospectively. The following financial statement line items for years 2022 and 2021 were affected by the change in accounting policy.

Effect of change on each financial statement affected

	2022			2021		
Statement of Financial Position	Average-Cost	FIFO	Difference	Average-Cost	FIFO	Difference
Inventory	$ 32,000	$ 39,000	$7,000	$ 20,000	$ 25,000	$5,000
Retained earnings	307,000	314,000	7,000	220,000	225,000	5,000
Income Statement						
Cost of goods sold	$113,000	$111,000	$2,000	$100,000	$ 97,000	$3,000
Net income	87,000	89,000	2,000	100,000	103,000	3,000
Statement of Cash Flows						
(no effect)						

Cumulative effect on retained earnings

As a result of the accounting change, retained earnings as of January 1, 2021, increased from $120,000, as originally reported using the average-cost method, to $122,000 using the FIFO method.

ILLUSTRATION 22.10 Comparative Information Related to Accounting Change (FIFO)

As Illustration 22.10 shows, Lancer Company reports net income under the newly adopted FIFO method for both 2021 and 2022. The company retrospectively adjusted the 2021 income statement to report the information on a FIFO basis. In addition, the note to the financial statements indicates the nature of the change, why the company made the change, and the years affected. The note also provides data on important differences between the amounts reported under average-cost versus FIFO. (When identifying the significant differences, some companies show the *entire* financial statements and line-by-line differences between average-cost and FIFO.)

Retained Earnings Adjustment

As indicated earlier, one of the disclosure requirements is to show the cumulative effect of the change on retained earnings as of the beginning of the earliest period presented. For Lancer Company, that date is January 1, 2021. Lancer disclosed that information by means of a narrative description (see Note A in Illustration 22.10). Lancer also would disclose this information in its retained earnings statement. **Illustration 22.11** shows Lancer's retained earnings statement under average-cost—that is, before giving effect to the change in accounting policy. (This information comes from Illustration 22.7.)

	2022	2021	2020
Retained earnings, January 1	$220,000	$120,000	$ 0
Net income	87,000	100,000	120,000
Retained earnings, December 31	$307,000	$220,000	$120,000

ILLUSTRATION 22.11 Retained Earnings Statements (Average-Cost)

If Lancer presents comparative statements for 2021 and 2022 under FIFO, then it must change the beginning balance of retained earnings at January 1, 2021. The difference between the retained earnings balances under average-cost and FIFO is computed as follows.

Retained earnings, January 1, 2021 (FIFO)	$122,000
Retained earnings, January 1, 2021 (average-cost)	120,000
Cumulative effect difference	$ 2,000

The $2,000 difference is the cumulative effect. **Illustration 22.12** shows a comparative retained earnings statement for 2021 and 2022, demonstrating the effect of the change in accounting policy to FIFO.

	2022	2021
Retained earnings, January 1, as reported		$120,000
Add: Adjustment for the cumulative effect on prior years of applying retrospectively the new method of accounting for inventory		2,000
Retained earnings, January 1, as adjusted	$225,000	122,000
Net income	89,000	103,000
Retained earnings, December 31	$314,000	$225,000

ILLUSTRATION 22.12 Retained Earnings Statements after Retrospective Application

Lancer adjusted the beginning balance of retained earnings on January 1, 2021, for the excess of FIFO net income over average-cost net income in 2020. This comparative presentation indicates the type of adjustment that a company needs to make. It follows that the amount of this adjustment would be much larger if a number of prior periods were involved.

Direct and Indirect Effects of Changes

Are there other effects that a company should report when it makes a change in accounting policy? For example, when a company like Lancer has a bonus plan based on net income and the prior year's net income changes, what happens when FIFO is retrospectively applied? Should Lancer also change the reported amount of bonus expense? What happens if we do not ignore income taxes in the Lancer example? Should Lancer adjust net income, given that taxes will be different under average-cost and FIFO in prior periods? The answers depend on whether the effects are direct or indirect.

Direct Effects

The IASB takes the position that companies should retrospectively apply the **direct effects of a change in accounting policy**. An example of a **direct effect** is an adjustment to an inventory balance as a result of a change in the inventory valuation method. For example, Lancer Company should change the inventory amounts in prior periods to indicate the change to the FIFO method of inventory valuation. Another inventory-related example would be an impairment adjustment resulting from applying the lower-of-cost-or-net realizable value test to the adjusted inventory balance. Related changes, such as deferred income tax effects of the impairment adjustment, are also considered direct effects. This entry was illustrated in the Denson example, in which the change to percentage-of-completion accounting resulted in recording a deferred tax liability.

Indirect Effects

In addition to direct effects, companies can have **indirect effects related to a change in accounting policy**. An **indirect effect** is any change to current or future cash flows of a company that result from making a change in accounting policy that is applied retrospectively. An example of an indirect effect is a change in profit-sharing or royalty payment that is based on a reported amount such as revenue or net income. The IASB is silent on what to do in this situation. U.S. GAAP (likely because its standard in this area was issued after *IAS 8*) states that indirect effects do not change prior period amounts.

For example, let's assume that Lancer has an employee profit-sharing plan based on net income. As Illustration 22.9 showed, Lancer would report higher income in 2021 and 2022 under the FIFO method. In addition, let's assume that the profit-sharing plan requires that Lancer pay the incremental amount due based on the FIFO income amounts. In this situation, Lancer reports this additional expense **in the current period**; it would not change prior periods for this expense. If the company prepares comparative financial statements, it follows that it does not recast the prior periods for this additional expense.[3]

If the terms of the profit-sharing plan indicate that *no payment is necessary* in the current period due to this change, then the company need not recognize additional profit-sharing expense in the current period. Neither does it change amounts reported for prior periods.

When a company recognizes the indirect effects of a change in accounting policy, it includes in the financial statements a description of the indirect effects. In doing so, it discloses the amounts recognized in the current period and related per share information.

Impracticability

It is not always possible for companies to determine how they would have reported prior periods' financial information under retrospective application of an accounting policy change. Retrospective application is considered **impracticable** if a company cannot determine the prior period effects using every reasonable effort to do so.

Companies should not use retrospective application if one of the following conditions exists:

1. The company cannot determine the effects of the retrospective application.
2. Retrospective application requires assumptions about management's intent in a prior period.
3. Retrospective application requires significant estimates for a prior period, and the company cannot objectively verify the necessary information to develop these estimates.

If any of the above conditions exists, it is deemed impracticable to apply the retrospective approach. In this case, the company **prospectively applies** the new accounting policy at the earliest feasible date. **[6]**

For example, assume that Williams Company changed its accounting policy for depreciable assets to more fully apply component depreciation under revaluation accounting. Unfortunately, the company does not have detailed accounting records to establish a basis for the components of these assets. As a result, Williams determines it is not practicable to account for the change to full component depreciation using the retrospective application approach. It therefore applies the policy prospectively, starting at the beginning of the current year.

Williams must disclose only the effect of the change on the results of operations in the period of change. Also, the company should explain the reasons for omitting the computations of the cumulative effect for prior years. Finally, it should disclose the justification for the change to component depreciation. [7]

Changes in Accounting Estimates

LEARNING OBJECTIVE 2

Describe the accounting and reporting for changes in estimates.

To prepare financial statements, companies must estimate the effects of future conditions and events. For example, the following items require estimates.

1. Bad debts.
2. Inventory obsolescence.
3. Useful lives and residual values of assets.
4. Periods benefited by deferred costs.
5. Liabilities for warranty costs and income taxes.
6. Recoverable mineral reserves.
7. Change in depreciation estimates.
8. Fair value of financial assets or financial liabilities.

A company cannot perceive future conditions and events and their effects with certainty. Therefore, estimating requires the exercise of judgment. Accounting estimates will change as new events occur, as a company acquires more experience, or as it obtains additional information.

Prospective Reporting

Companies report prospectively changes in accounting estimates. That is, companies should not adjust previously reported results for changes in estimates. Instead, they account for the effects of all changes in estimates in (1) the period of change if the change affects that period only (e.g., a change in the estimate of the amount of bad debts affects only the current period's income), or (2) the period of change and future periods if the change affects both (e.g., a change in the estimated useful life of a depreciable asset affects depreciation expense in the current and future periods). [8] The IASB views changes in estimates as **normal recurring corrections and adjustments**, the natural result of the accounting process. It prohibits retrospective treatment.

The circumstances related to a change in estimate differ from those for a change in accounting policy. If companies reported changes in estimates retrospectively, continual adjustments of prior years' income would occur. It seems proper to accept the view that, because new conditions or circumstances exist, the revision fits the new situation (not the old one). Companies should therefore handle such a revision in the current and future periods.

To illustrate, Lao Labs purchased for ¥3,000,000 a building that it originally estimated to have a useful life of 15 years and no residual value. It recorded depreciation for five years on a straight-line basis. On January 1, 2022, Lao Labs revises the estimate of the useful life. It now considers the asset to have a total life of 25 years. (Assume that the useful life for financial reporting and tax purposes and depreciation method are the same.) **Illustration 22.13** shows the accounts at the beginning of the sixth year.

Buildings	¥3,000,000
Less: Accumulated depreciation—buildings (5 × ¥200,000)	1,000,000
Book value of building	¥2,000,000

ILLUSTRATION 22.13 Book Value After Five Years' Depreciation

Lao Labs records depreciation for the year 2022 as follows.

Depreciation Expense	100,000	
Accumulated Depreciation—Building		100,000

The company computes the ¥100,000 depreciation charge as shown in **Illustration 22.14**.

$$\text{Depreciation Charge} = \frac{\textbf{Book Value of Asset}}{\textbf{Remaining Service Life}} = \frac{¥2{,}000{,}000}{25 \text{ years} - 5 \text{ years}} = ¥100{,}000$$

ILLUSTRATION 22.14 Depreciation After Change in Estimate

Companies sometimes find it difficult to differentiate between a change in estimate and a change in accounting policy. Is it a change in policy or a change in estimate when a company changes from deferring and amortizing marketing costs to expensing them as incurred because future benefits of these costs have become doubtful? **If it is impossible to determine whether a change in policy or a change in estimate has occurred, the rule is this: Consider the change as a change in estimate.**

Another example is a change in depreciation (as well as amortization or depletion) methods. Because companies change depreciation methods based on changes in estimates about future benefits from long-lived assets, it is not possible to separate the effect of the accounting policy change from that of the estimates. **As a result, companies account for a change in depreciation methods as a change in estimate.**

A similar problem occurs in differentiating between a change in estimate and a correction of an error, although here the answer is more clear-cut. How does a company determine whether it overlooked the information in earlier periods (an error) or whether it obtained new information (a change in estimate)? Proper classification is important because the accounting treatment differs for corrections of errors versus changes in estimates. The general rule is this: **Companies should consider careful estimates that later prove to be incorrect as changes in estimates.** Only when a company obviously computed the estimate incorrectly because of lack of expertise or in bad faith should it consider the adjustment an error. There is no clear demarcation line here. Companies must use good judgment in light of all the circumstances.

What Do the Numbers Mean?

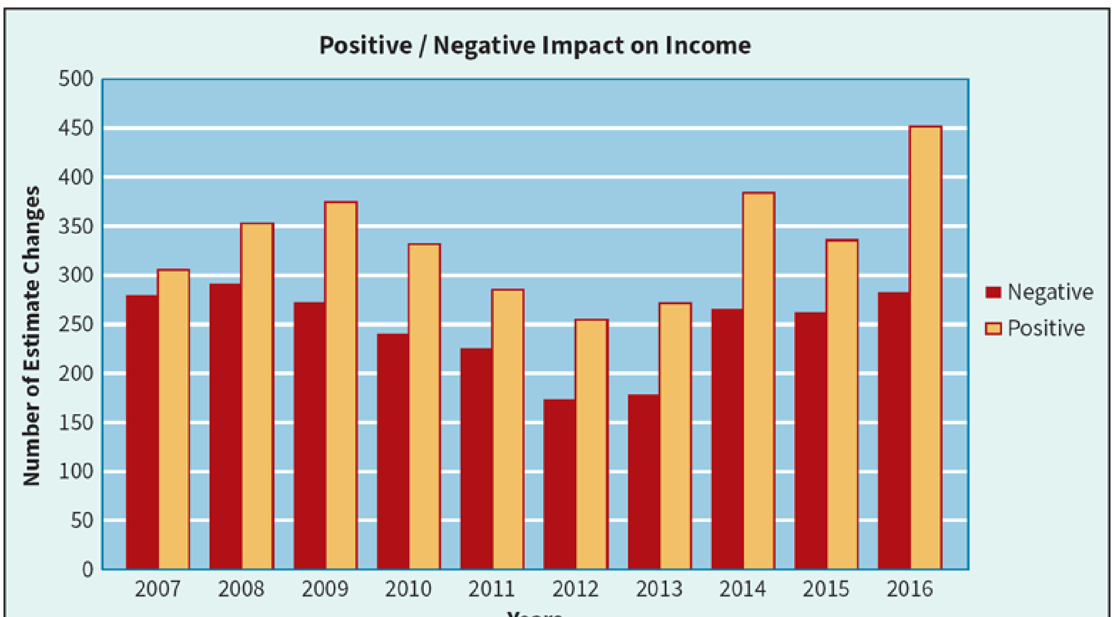
A Change for the Better?

As we have discussed, changes in accounting estimates are expected in any given year, as conditions change. The following table indicates the 10 most common changes in accounting estimates for a sampling of 10,000 accounting changes from 2000 to 2017 for large companies.

Top 10 Categories of Changes in Accounting Estimates

Estimate Category	% of Total
Depreciation, amortization, and depletion	22%
Percentage-of-completion and contract revenue recognition	12
Restructuring reserves	10
Income taxes, including valuation allowance	7
Contingencies and commitments, including litigation	6
Share-based compensation	5
Revenue recognition	5
Pension and other post-retirement benefits	4
Insurance loss reserves	4
Asset retirement obligations	3

The hope is that management changes accounting estimates in order to make the financial statements more useful. However, the following chart indicates that in each of the past eight years, the result of the accounting estimate change was an increase in income.



Source: *www.AuditAnalytics.com.*

It appears that management may be making changes in estimates in order to make financial results look better, not more useful. If so, this violates the concept of neutrality.

Source: Adapted from Accounting change and restatement data from J. Pakaluka, “Overview of 17 Years of Changes in Accounting Estimates,” *Audit Analytics* (October 24, 2017).

Disclosures

A company should disclose the nature and amount of a change in an accounting estimate that has an effect in the current period or is expected to have an effect in future periods (unless it is impracticable to estimate that effect). [9] Illustration 22.15 shows disclosure of a change in estimated useful lives, which appeared in a recent annual report of **Portugal Telecom, SGPS, S.A.** (PRT).

Portugal Telecom, SGPS, S.A.

Note 4 (in Part): Changes in Accounting Policies and Estimates

The change in estimate of the useful life of the UMTS license was effective as at June 30. According to IAS 8 this change should be applicable on a prospective basis and, on an annual basis, the impact of this change will be a reduction in depreciation and amoritization costs by €26 million.

ILLUSTRATION 22.15 **Disclosure of Change in Estimated Useful Lives**

For the most part, companies need not disclose changes in accounting estimates made as part of normal operations, such as bad debt allowances or inventory obsolescence, unless such changes are material.

Accounting Errors

LEARNING OBJECTIVE 3

Describe the accounting for correction of errors.

No business, large or small, is immune from errors. As the opening story discussed, the number of accounting errors that lead to restatement has declined. However, without accounting and disclosure guidelines for the reporting of errors, investors can be left in the dark about the effects of errors.

Certain errors, such as misclassifications of balances within a financial statement, are not as significant to investors as other errors. For example, significant errors include those resulting in overstating assets or income. However, investors should know the potential impact of all errors. Even “harmless” misclassifications can affect important ratios. Also, some errors could signal important weaknesses in internal controls that could lead to more significant errors.

In general, accounting errors include the following types:

1. A change from an accounting policy that is **not** generally accepted to an accounting policy that is acceptable. The rationale is that the company incorrectly presented prior periods

because of the application of an improper accounting policy. For example, a company may change from the cash (income tax) basis of accounting to the accrual basis.

2. Mathematical mistakes, such as incorrectly totaling the inventory count sheets when computing the inventory value.
3. Changes in estimates that occur because a company did not prepare the estimates in good faith. For example, a company may have adopted a clearly unrealistic depreciation rate.
4. An oversight, such as the failure to accrue or defer certain expenses and revenues at the end of the period.
5. A misuse of facts, such as the failure to use residual value in computing the depreciation base for the straight-line approach.
6. The incorrect classification of a cost as an expense instead of an asset, and vice versa.

Accounting errors occur for a variety of reasons. **Illustration 22.16** indicates 11 major categories of accounting errors that drive restatements.

Accounting Category	Type of Restatement
Expense recognition	Recording expenses in the incorrect period or for an incorrect amount.
Revenue recognition	Improper revenue accounting, including instances in which revenue was improperly recognized, questionable revenues were recognized, or any other number of related errors occurred that led to misreported revenue.
Misclassification	Misclassifying significant accounting items on the statement of financial position, income statement, or statement of cash flows. These include restatements due to misclassification of current or non-current accounts or those that impact cash flows from operations.
Equity—other	Improper accounting for EPS, restricted shares, warrants, and other equity instruments.
Reserves/Contingencies	Errors involving accounts receivables' bad debts, inventory reserves, income tax allowances, and loss contingencies.
Long-lived assets	Asset impairments of property, plant, and equipment; goodwill; or other related items.
Taxes	Errors involving correction of tax provision, improper treatment of tax liabilities, and other tax-related items.
Equity—other comprehensive income	Improper accounting for comprehensive income equity transactions, including foreign currency items, revaluations of plant assets, unrealized gains and losses on certain investments in debt, equity securities, and derivatives.
Inventory	Inventory costing valuations, quantity issues, and cost of sales adjustments.
Equity—share options	Improper accounting for employee share options.
Other	Any restatement not covered by the listed categories, including those related to improper accounting for acquisitions or mergers.
Sources: T. Baldwin and D. Yoo, "Restatements—Traversing Shaky Ground," *Trend Alert*, Glass Lewis & Co. (June 2, 2005), p. 8; and "2018 Financial Restatements: An Eighteen Year Comparison," *Audit Analytics Trend Reports* (August 26, 2019).	

ILLUSTRATION 22.16 Accounting-Error Types

As soon as a company discovers an error, it must correct it. Companies record **corrections of errors** from prior periods as an adjustment to the beginning balance of retained earnings in the current period. Such corrections are called **prior period adjustments**.

If it presents comparative statements, a company should restate the prior statements affected to correct for the error.[4] The company need not repeat the disclosures in the financial statements of subsequent periods.

Example of Error Correction

To illustrate, in 2023 the bookkeeper for Selectro plc discovered an error: In 2022, the company failed to record £20,000 of depreciation expense on a newly constructed building. This building is the only depreciable asset Selectro owns. The company correctly included the depreciation expense in its tax return and correctly reported its income taxes payable. Illustration 22.17

presents Selectro's income statement for 2022 (starting with income before depreciation expense) with and without the error.

Selectro plc Income Statement For the Year Ended December 31, 2022				
		Without Error		With Error
Income before depreciation expense		£100,000		£100,000
Depreciation expense		20,000		0
Income before income tax		80,000		100,000
Current	£32,000		£32,000	
Deferred	–0–	32,000	8,000	40,000
Net income		£ 48,000		£ 60,000

ILLUSTRATION 22.17 Error Correction Comparison

Illustration 22.18 shows the entries that Selectro should have made and did make for recording depreciation expense and income taxes.

Entries Company Should Have Made (Without Error)			Entries Company Did Make (With Error)		
Depreciation Expense	20,000		No entry made for depreciation		
Accumulated Depreciation—Buildings		20,000			
Income Tax Expense	32,000		Income Tax Expense	40,000	
Income Taxes Payable		32,000	Deferred Tax Liability		8,000
			Income Taxes Payable		32,000

ILLUSTRATION 22.18 Error Entries

As Illustration 22.18 indicates, the £20,000 omission error in 2022 results in the following effects.

Income Statement Effects
Depreciation expense (2022) is understated £20,000.
Income tax expense (2022) is overstated £8,000 (£20,000 × .40).
Net income (2022) is overstated £12,000 (£20,000 − £8,000).
Statement of Financial Position Effects
Accumulated depreciation—buildings is understated £20,000.
Deferred tax liability is overstated £8,000 (£20,000 × .40).

To make the proper correcting entry in 2023, Selectro should recognize that net income in 2022 is overstated by £12,000, the Deferred Tax Liability is overstated by £8,000, and Accumulated Depreciation—Buildings is understated by £20,000. The entry to correct this error in 2023 is as follows.

Retained Earnings	12,000	

Deferred Tax Liability	8,000	
Accumulated Depreciation—Buildings		20,000

The debit to Retained Earnings results because net income for 2022 is overstated. The debit to the Deferred Tax Liability is made to remove this account, which was caused by the error. The credit to Accumulated Depreciation—Buildings reduces the book value of the building to its proper amount.

Financial Statement Presentation

To demonstrate how to show this information, assume that Selectro has a beginning retained earnings balance at January 1, 2023, of £350,000. The company reports net income of £400,000 in 2023. **Illustration 22.19** shows Selectro's retained earnings statement for 2023.

Selectro plc Retained Earnings Statement For the Year Ended December 31, 2023		
Retained earnings, January 1, as reported		£350,000
Correction of an error (depreciation)	£20,000	
Less: Applicable income tax reduction	8,000	(12,000)
Retained earnings, January 1, as adjusted		338,000
Add: Net income		400,000
Retained earnings, December 31		£738,000

ILLUSTRATION 22.19 Reporting an Error—Retained Earnings Statement

The statement of financial position in 2023 will not have any deferred tax liability related to the building, and Accumulated Depreciation—Buildings is now restated at a higher amount. The income statement would not be affected.

Comparative Statements

If preparing comparative financial statements, a company should make adjustments to correct the amounts for all affected accounts reported in the statements for **all periods** reported. The company should restate the data to the correct basis for each year presented. It should **show any catch-up adjustment as a prior period adjustment to retained earnings for the earliest period it reported**. These requirements are essentially the same as those for reporting a change in accounting policy.

For example, in the case of Selectro, the error of omitting the depreciation of £20,000 in 2022, discovered in 2023, results in the restatement of the 2022 financial statements. **Illustration 22.20** shows the accounts that Selectro restates in the 2022 financial statements.

In the statement of financial position:	
Accumulated depreciation—buildings	£20,000 increase
Deferred tax liability	8,000 decrease
Retained earnings, ending balance	12,000 decrease
In the income statement:	
Depreciation expense—buildings	£20,000 increase
Income tax expense	8,000 decrease
Net income	12,000 decrease
In the retained earnings statement:	
Retained earnings, ending balance (due to lower net income for the period)	£12,000 decrease

ILLUSTRATION 22.20 Reporting an Error—Comparative Financial Statements

Selectro prepares the 2023 financial statements in comparative form with those of 2022 **as if the error had not occurred**. In addition, Selectro must disclose that it has restated its previously issued financial statements, and it must describe the nature of the error. Selectro also must disclose the following:

1. The effect of the correction on each financial statement line item and any per share amounts affected for each prior period presented.
2. The cumulative effect of the change on retained earnings or other appropriate components of equity or net assets in the statement of financial position, as of the beginning of the earliest period presented.

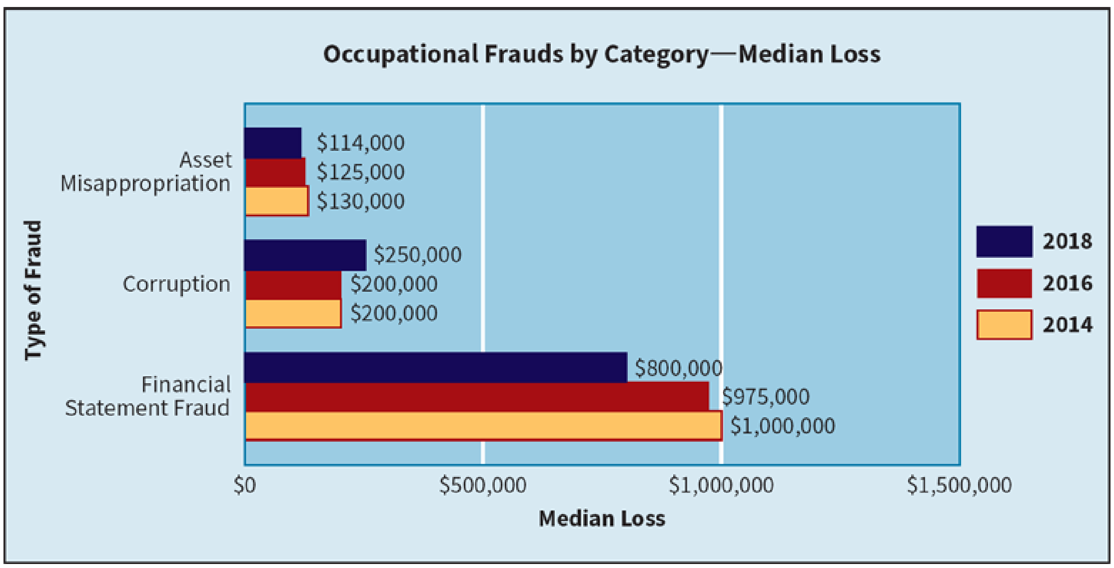
As indicated earlier, it is sometimes impracticable to adjust comparative information for one or more prior periods for changes in accounting policies. It is also sometimes impracticable to correct a prior period error through retrospective restatement. For example, the company may have made errors in computing fringe-benefit amounts in prior years but is unable to now reconstruct this information fully. As a result, any adjustment is made at the beginning of the earliest period for which retrospective application is applicable.

What Do the Numbers Mean?

Guard the Financial Statements!

Restatements sometimes occur because of financial fraud. Financial frauds involve the intentional misstatement or omission of material information in the organization's financial reports. Common methods of financial fraud manipulation include recording fictitious revenues, concealing liabilities or expenses, and artificially inflating reported assets. Financial malfeasance made up around 8 percent of the frauds in a recent study on occupational fraud but caused a median loss of just under $1 million—by far the most costly category of fraud. The following chart compares loss amounts for 2018, 2016 and 2014 for financial statement fraud, corruption, and asset misappropriation.

While the trend in the dollar amount of losses is going in the right direction, another recent study indicates that the number of fraud reports at 1,400 companies in the "Quarterly Corporate Fraud Index" has climbed—from 2,348 reported frauds 10 years ago to over 7,800 in a recent quarter. While there is some debate about whether the reporting of fraud has increased because of regulation that provides whistleblower protections (i.e., the incidence of fraud is not increasing as much as the reporting of fraud), companies must increase their efforts to protect their statements from the negative effects of fraud.



Sources: C. McDonald, "Fraud Reports Climb Still Higher," [CFO.com](CFO.com) (September 26, 2012); and *Report to the Nations on Occupational Fraud and Abuse, 2018 Global Fraud Study,* Association of Certified Fraud Examiners (2018).

Summary of Accounting Changes and Correction of Errors

Having guidelines for reporting accounting changes and corrections has helped resolve several significant and long-standing accounting problems. Yet, because of diversity in situations and characteristics of the items encountered in practice, use of professional judgment is of paramount importance. In applying these guidelines, the primary objective is to serve the users of the financial statements. Achieving this objective requires accuracy and full disclosure, which guard against users making incorrect inferences based on the accounting reports.

Illustration 22.21 summarizes the main distinctions and treatments presented in the discussion in this chapter.

Changes in accounting policy

Employ the **retrospective** approach by:

a. Changing the financial statements of all prior periods presented.

b. Disclosing in the year of the change the effect on net income and earnings per share for all prior periods presented.

c. Reporting an adjustment to the beginning retained earnings balance in the statement of retained earnings in the earliest year presented.

If impracticable to determine the prior period effect:

a. Do not change prior years' income.

b. Use opening asset balance in the year the method is adopted as the base-year balance for all subsequent computations.

c. Disclose the effect of the change on the current year, and the reasons for omitting the computation of the cumulative effect and amounts for prior years.

Changes in accounting estimate

Employ the current and **prospective** approach by:

a. Reporting current and future financial statements on the new basis.

b. Presenting prior period financial statements as previously reported.

c. Making no adjustments to current-period opening balances for the effects in prior periods.

Changes due to error

Employ the **restatement** approach by:

a. Correcting all prior period statements presented.

b. Restating the beginning balance of retained earnings for the first period presented when the error effects occur in a period prior to the first period presented.

ILLUSTRATION 22.21 Summary of Guidelines for Accounting Changes and Errors

Changes in accounting policy are appropriate **only** when a company demonstrates that the newly adopted generally accepted accounting policy is more representationally faithful and relevant than the existing one. Companies and accountants determine usefulness on the basis of whether the new policy constitutes an **improvement in financial reporting**, not on the basis of the income tax effect alone.

But it is not always easy to determine an improvement in financial reporting. **How does one measure preferability or improvement?** For example, a change from average-cost to FIFO because the accounting system is now computerized and has scanning capabilities seems justifiable. However, determining an improved method requires some "standard" or "objective." Because no universal standard or objective is generally accepted, the problem of determining improvement continues to be difficult and requires good judgment.

What Do the Numbers Mean?

What's Your Motivation?

Difficult as it is to determine which accounting standards have the strongest conceptual support, other complications make the process even more complex. These complications stem from the fact that managers naturally wish to show their company's financial performance in the best light. Research provides insights into why companies may prefer certain accounting methods. Some of these reasons are as follows.

1. **Political costs.** As companies become larger and more politically visible, politicians and regulators devote more attention to them. The larger the firm, the more likely it is to become subject to antitrust regulation, and the more likely it is to be required to pay higher taxes. Therefore, companies that are politically visible may seek to report low income numbers to avoid the scrutiny of regulators. In addition, other constituents, such as labor unions, may be less willing to ask for wage increases if reported income is low. Researchers have found that the larger the company, the more likely it is to adopt income-decreasing approaches in selecting accounting methods.
2. **Capital structure.** A number of studies have indicated that the capital structure of the company can affect the selection of accounting methods. For example, a company with a high debt to equity ratio is more likely to be constrained by debt covenants. The debt covenant may indicate that the company cannot pay dividends if retained earnings fall below a certain level. As a result, such a company is more likely to select accounting methods that will increase net income.
3. **Bonus payments.** Studies have found that if compensation plans tie managers' bonus payments to income, management will select accounting methods that maximize their bonus payments.
4. **Smooth earnings.** Substantial earnings increases attract the attention of politicians, regulators, and competitors. In addition, large increases in income are difficult to achieve in subsequent years. Further, executive compensation plans would use these higher numbers as a baseline and make it difficult for managers to earn bonuses in subsequent years. Conversely, investors and competitors might view large decreases in earnings as a signal that the company is in financial trouble. Also, substantial decreases in income raise concerns on the part of shareholders, lenders, and other interested parties about the competency of management. For all these reasons, companies have an incentive to "manage" or "smooth" earnings. In general, management tends to believe that a steady 10 percent annual growth is much better than a 30 percent growth one year and a 10 percent decline the next. In other words, managers usually prefer a gradually increasing income report and sometimes change accounting methods to ensure such a result.

Management pays careful attention to the accounting it follows and often changes accounting methods for economic, not conceptual, reasons. As indicated throughout this text, such rationales have become known as **economic consequences** arguments, which focus on the alleged impact of an accounting method on the behavior of investors, creditors, competitors, governments, or managers of the reporting companies themselves. To counter these pressures, standard-setters such as the IASB have declared, as part of their conceptual framework, that they will assess the merits of proposed standards from a position of **neutrality**. They evaluate the soundness of standards on the basis of conceptual soundness, not on the grounds of possible impact on behavior. It is not the IASB's place to choose standards according to the kinds of behavior it wishes to promote and the kinds it wishes to discourage.

Sources: Ross L. Watts and Jerold L. Zimmerman, "Positive Accounting Theory: A Ten-Year Perspective," *The Accounting Review* (January 1990); and O. Douglas Moses, "Income Smoothing and Incentives: Empirical Tests Using Accounting Changes," *The Accounting Review* (April 1987).

Error Analysis

LEARNING OBJECTIVE 4

Analyze the effect of errors.

In this section, we show some additional types of accounting errors. Companies generally do not correct for errors that do not have a significant effect on the presentation of the financial statements. For example, should a company with a total annual payroll of $1,750,000 and net income of $940,000 correct its financial statements if it finds it failed to record accrued wages of $500? No—it would not consider this error significant (material).

Obviously, defining materiality is difficult, and managers and auditors must use experience and judgment to determine whether adjustment is necessary for a given error. We assume **all errors discussed in this section to be material and to require adjustment**. (Also, we ignore all tax effects in this section.)

Companies must answer three questions in error analysis:

1. What type of error is involved?
2. What entries are needed to correct for the error?
3. After discovery of the error, should financial statements be restated? If so, how?

As indicated earlier, companies treat errors **as prior period adjustments and report them in the current year as adjustments to the beginning balance of Retained Earnings**. When a company presents comparative statements, it restates the prior affected statements to correct for the error.

Statement of Financial Position Errors

Statement of financial position errors affect only the presentation of asset, liability, or equity accounts. Examples are the classification of a short-term receivable as part of the investment section, the classification of a note payable as an account payable, and the classification of plant assets as inventory.

When the error is discovered, the company reclassifies the item to its proper position. If the company prepares comparative statements that include the error year, it should correctly restate the statement of financial position for the error year.

Income Statement Errors

Income statement errors involve the improper classification of revenues or expenses. Examples include recording interest revenue as part of sales, purchases as bad debt expense, and depreciation expense as interest expense. An income statement classification error has no effect on the statement of financial position and **no effect on net income**.

A company must make a reclassification entry when it discovers the error if it makes the discovery in the same year in which the error occurs. If the error occurred in prior periods, the company does not need to make a reclassification entry at the date of discovery because the accounts for the current year are correctly stated. (Remember that the company has closed the income statement accounts from the prior period to retained earnings.) If the company prepares comparative statements that include the error year, it restates the income statement for the error year.

Statement of Financial Position and Income Statement Errors

The third type of error involves both the statement of financial position and the income statement. For example, assume that the bookkeeper overlooked accrued wages payable at the end of the accounting period. The effect of this error is to understate expenses, understate liabilities, and overstate net income for that period of time. This type of error affects both the statement of financial position and the income statement. We classify this type of error in one of two ways—counterbalancing or non-counterbalancing.

Counterbalancing errors are those that will be offset or corrected over two periods. For example, the failure to record accrued wages is a counterbalancing error, because over a two-year period the error will no longer be present. In other words, the failure to record accrued wages in the previous period means (1) net income for the first period is overstated, (2) accrued wages payable (a liability) is understated, and (3) wages expense is understated. In the next period, net income is understated, accrued wages payable (a liability) is correctly stated, and wages expense is overstated. For the two **years combined** (1) net income is correct, (2) wages expense is correct, and (3) accrued wages payable at the end of the second year is correct. Most errors in accounting that affect both the statement of financial position and income statement are counterbalancing errors.

Non-counterbalancing errors are those that are not offset in the next accounting period. An example is the failure to capitalize equipment that has a useful life of five years. If we expense this asset immediately, expenses will be overstated in the first period but understated in the next four periods. At the end of the second period, the effect of the error is not fully offset. Net income is correct in the aggregate only at the end of five years because the asset is fully depreciated at this point. Thus, **non-counterbalancing errors are those that take longer than two periods to correct themselves**.

Only in rare instances is an error never reversed. An example is if a company initially expenses land. Because land is not depreciable, theoretically the error is never offset, unless the land is sold.

Counterbalancing Errors

We illustrate the usual types of counterbalancing errors on the following pages. In studying these illustrations, keep in mind a couple of points, discussed below.

First, determine whether the company has closed the books for the period in which the error is found:

1. **If the company has closed the books in the current year:**
    a. If the error is already counterbalanced, no entry is necessary.

   b. If the error is not yet counterbalanced, make an entry to adjust the present balance of retained earnings.
2. **If the company has not closed the books in the current year:**
   a. If the error is already counterbalanced, make an entry to correct the error in the current period and to adjust the beginning balance of Retained Earnings.
   b. If the error is not yet counterbalanced, make an entry to adjust the beginning balance of Retained Earnings.

Second, if the company presents comparative statements, it must restate the amounts for comparative purposes. **Restatement is necessary even if a correcting journal entry is not required.**

To illustrate, assume that Sanford's Cement failed to accrue revenue in 2020 when it fulfilled its performance obligation but recorded the revenue in 2021 when it received payment. The company discovered the error in 2023. It does not need to make an entry to correct for this error because the effects have been counterbalanced by the time Sanford discovered the error in 2023. However, if Sanford presents comparative financial statements for 2020 through 2023, it must **restate the accounts and related amounts for the years 2020 and 2021 for financial reporting purposes**.

The examples that follow in **Illustrations 22.22** through **22.28** demonstrate the accounting for the usual types of counterbalancing errors.

Failure to Record Accrued Wages

Facts: On December 31, 2022, Hurley Enterprises did not accrue wages in the amount of $1,500.

***Question:* What is the entry on December 31, 2023, to correct this error, assuming Hurley has not closed the books?**

Solution: The entry to correct this error is as follows.

Retained Earnings	1,500	
Salaries and Wages Expense		1,500

The rationale for this entry is:

1. When Hurley pays the 2022 accrued wages in 2023, it makes an additional debit of $1,500 to 2023 Salaries and Wages Expense.
2. Salaries and Wages Expense in 2023 is overstated by $1,500.
3. Because the company did not record 2022 accrued wages as Salaries and Wages Expense in 2022, the net income for 2022 is overstated by $1,500.
4. Because 2022 net income is overstated by $1,500, the Retained Earnings account is overstated by $1,500 (because net income is closed to Retained Earnings).

ILLUSTRATION 22.22 Errors—Accrued Wages

If Hurley has closed the books for 2023, it makes no entry, because the error is counterbalanced.

Failure to Record Prepaid Expenses

Facts: In January 2022, Hurley Enterprises purchased a 2-year insurance policy costing $1,000. It debited Insurance Expense and credited Cash. The company made no adjusting entries at the end of 2022.

***Question:* What is the entry on December 31, 2023, to correct this error, assuming Hurley has not closed the books for 2023?**

Solution: The entry to correct this error on December 31, 2023, is as follows.

Insurance Expense	500	
Retained Earnings		500

ILLUSTRATION 22.23 Errors—Prepaid Expenses

If Hurley has closed the books for 2023, it makes no entry, because the error is counterbalanced.

Understatement of Unearned Revenue

Facts: On December 31, 2022, Hurley Enterprises received $50,000 as a prepayment for renting certain office space for the following year. At the time of receipt of the rent payment, the company recorded a debit to Cash and a credit to Rent Revenue. It made no adjusting entry as of December 31, 2022.

***Question:* What is the entry on December 31, 2023, to correct this error, assuming Hurley has not closed the books for 2023?**

Solution: The entry to correct this error on December 31, 2023, is as follows.

Retained Earnings	50,000	
Rent Revenue		50,000

ILLUSTRATION 22.24 Errors—Unearned Revenues

If Hurley has closed the books for 2023, it makes no entry, because the error is counterbalanced.

Overstatement of Accrued Revenue

Facts: On December 31, 2022, Hurley Enterprises accrued as interest revenue $8,000 that applied to 2023. On that date, the company recorded a debit to Interest Receivable and a credit to Interest Revenue.

***Question:* What is the entry on December 31, 2023, to correct this error, assuming Hurley has not closed the books for 2023?**

Solution: The entry to correct this error on December 31, 2023, is as follows.

Retained Earnings	8,000	
Interest Revenue		8,000

ILLUSTRATION 22.25 Errors—Accrued Revenue

If Hurley has closed the books for 2023, it makes no entry, because the error is counterbalanced.

Overstatement of Purchases

Facts: Hurley's accountant recorded a purchase of merchandise for $9,000 in 2022 that applied to 2023. The physical inventory for 2022 was correctly stated. The company uses the periodic inventory method.

***Question:* What is the entry on December 31, 2023, to correct this error, assuming Hurley has not closed the books for 2023?**

Solution: The entry to correct this error on December 31, 2023, is as follows.

Purchases	9,000	
Retained Earnings		9,000

ILLUSTRATION 22.26 Errors—Purchases

If Hurley has closed the books for 2023, it makes no entry, because the error is counterbalanced

Non-Counterbalancing Errors

The entries for non-counterbalancing errors are more complex. Companies must make correcting entries, even if they have closed the books.

Failure to Record Depreciation

Facts: Assume that on January 1, 2022, Hurley Enterprises purchased a machine for $10,000 that had an estimated useful life of 5 years. The accountant incorrectly expensed this machine in 2022 but discovered the error in 2023.

***Question:* What is the entry on December 31, 2023, to correct this error, assuming Hurley has not closed the books for 2023?**

Solution: If we assume that Hurley uses straight-line depreciation on this asset, the entry to correct this error on December 31, 2023, is as follows.

Equipment	10,000	
Depreciation Expense	2,000	
Retained Earnings		8,000*
Accumulated Depreciation—Equipment (.20 × $10,000 × 2)		4,000
*Computations:		
Retained Earnings		
Overstatement of expense in 2022	$10,000	
Proper depreciation for 2022 (.20 × $10,000)	(2,000)	
Retained earnings understated as of Dec. 31, 2022	$ 8,000	

ILLUSTRATION 22.27 Non-Counterbalancing Errors—Depreciation

If Hurley has closed the books for 2023, the entry is:

Equipment	10,000	
Retained Earnings		6,000*
Accumulated Depreciation—Equipment		4,000
*Computations:		
Retained Earnings		
Retained earnings understated as of Dec. 31, 2022	$ 8,000	
Proper depreciation for 2023 (.20 × $10,000)	(2,000)	
Retained earnings understated as of Dec. 31, 2023	$ 6,000	

Failure to Adjust for Bad Debts

Facts: Companies sometimes use a specific charge-off method in accounting for bad debt expense when a percentage-of-receivables method is more appropriate. They then make adjustments to change from the specific write-off to some type of allowance method. For example, assume that Hurley Enterprises has recognized bad debt expense when it has the following uncollectible debts.

	2022	2023
From 2022 sales	$550	$690
From 2023 sales		700

Hurley estimates that it will charge off an additional $1,400 in 2024, of which $300 is applicable to 2022 sales and $1,100 to 2023 sales.

***Question:* What is the entry on December 31, 2023, to correct this error, assuming Hurley has not closed the books for 2023?**

Solution: The entry to correct this error on December 31, 2023, is as follows.

Bad Debt Expense	410	
Retained Earnings	990	
Allowance for Doubtful Accounts		1,400

Allowance for doubtful accounts: Additional $300 for 2022 sales and $1,100 for 2023 sales.

Bad debts and retained earnings balance:

	2022	2023
Bad debts charged for	$1,240*	$ 700
Additional bad debts anticipated in 2024	300	1,100
Proper bad debt expense	1,540	1,800
Charges currently made to each period	(550)	(1,390)
Bad debt adjustment	$ 990	$ 410

*$550 + $690 = $1,240

ILLUSTRATION 22.28 **Non-Counterbalancing Errors—Bad Debts**

If Hurley has closed the books for 2023, the entry is:

Retained Earnings	1,400	
Allowance for Doubtful Accounts		1,400

Comprehensive Example: Numerous Errors

In some circumstances, a combination of errors occurs. The company therefore prepares a worksheet to facilitate the analysis. The following problem demonstrates use of the worksheet.

The mechanics of its preparation should be obvious from the solution format. The income statements of Hudson Haulers indicate the following net incomes for the years ended December 31, 2021, 2022, and 2023.

2021	€17,400
2022	20,200
2023	11,300

An examination of the accounting records for these years indicates that Hudson made several errors in arriving at the net income amounts reported:

1. The company consistently omitted from the records wages earned by workers but not paid at December 31. The amounts omitted were:

December 31, 2021	€1,000
December 31, 2022	1,400
December 31, 2023	1,600

   When the wages were paid in the year following that in which they were earned, Hudson recorded the amounts as expenses.
2. The company overstated merchandise inventory on December 31, 2021, by €1,900, as the result of errors made in the footings and extensions on the inventory sheets.
3. On December 31, 2022, Hudson expensed unexpired insurance of €1,200, applicable to 2023.
4. The company did not record on December 31, 2022, interest receivable in the amount of €240.
5. On January 2, 2022, Hudson sold for €1,800 a piece of equipment costing €3,900. At the date of sale, the equipment had accumulated depreciation of €2,400. The company recorded the cash received as Miscellaneous Income in 2022. In addition, the company continued to record depreciation for this equipment in both 2022 and 2023 at the rate of 10 percent of cost.

The first step in preparing the worksheet is to prepare a schedule showing the corrected net income amounts for the years ended December 31, 2021, 2022, and 2023. Each correction of the amount originally reported is clearly labeled. The next step is to indicate the statement of financial position accounts affected as of December 31, 2023. **Illustration 22.29** shows the completed worksheet for Hudson Haulers.

Assuming that Hudson **has not closed the books**, correcting entries on December 31, 2023, are as follows.

To correct improper charge to Salaries and Wages Expense for 2023

Retained Earnings	1,400	
Salaries and Wages Expense		1,400

To record proper wages expense for 2023

Salaries and Wages Expense	1,600	
Salaries and Wages Payable		1,600

To record proper insurance expense for 2023

Insurance Expense	1,200	
Retained Earnings		1,200

To correct improper credit to Interest Revenue in 2023

Interest Revenue	240	
Retained Earnings		240

To record write-off of equipment in 2022 and adjustment of Retained Earnings

Retained Earnings	1,500	
Accumulated Depreciation—Equipment	2,400	
Equipment		3,900

To correct improper charge for depreciation expense in 2022 and 2023

Accumulated Depreciation—Equipment	780	
Depreciation Expense		390
Retained Earnings		390

Hudson Haulers
Worksheet to Correct Income and Statement of Financial Position Errors

	Worksheet Analysis of Changes in Net Income				Statement of Financial Position Correction at December 31, 2023		
	2021	2022	2023	Totals	Debit	Credit	Account
Net income as reported	€17,400	€20,200	€11,300	€48,900			
Wages unpaid, 12/31/21	(1,000)	1,000		–0–			
Wages unpaid, 12/31/22		(1,400)	1,400	–0–			
Wages unpaid, 12/31/23			(1,600)	(1,600)		€1,600	Salaries and Wages Payable
Inventory overstatement, 12/31/21	(1,900)	1,900		–0–			
Unexpired insurance, 12/31/22		1,200	(1,200)	–0–			
Interest receivable, 12/31/22		240	(240)	–0–			
Correction for entry made upon sale of equipment, 1/2/22[a]		(1,500)		(1,500)	€2,400		Accumulated Depreciation—Equipment
						3,900	Equipment
Overcharge of depreciation, 2022		390		390	390		Accumulated Depreciation—Equipment
Overcharge of depreciation, 2023			390	390	390		Accumulated Depreciation—Equipment
Corrected net income	€14,500	€22,030	€10,050	€46,580			
[a]Cost	€ 3,900						
Accumulated depreciation	2,400						
Book value	1,500						
Proceeds from sale	1,800						
Gain on sale	300						
Income reported	(1,800)						
Adjustment	€(1,500)						

ILLUSTRATION 22.29 Worksheet to Correct Income and Statement of Financial Position Errors

If Hudson Haulers **has closed the books** for 2023, the correcting entries are:

To record proper wages expense for 2023		
Retained Earnings	1,600	
Salaries and Wages Payable		1,600
To record write-off of equipment in 2022 and adjustment of Retained Earnings		
Retained Earnings	1,500	
Accumulated Depreciation—Equipment	2,400	
Equipment		3,900
To correct improper charge for depreciation expense in 2022 and 2023		
Accumulated Depreciation—Equipment	780	
Retained Earnings		780

Preparation of Financial Statements with Error Corrections

Until now, our discussion of error analysis has focused on identifying the type of error involved and accounting for its correction in the records. We have noted that companies must present the correction of the error on comparative financial statements.

The following example illustrates how a company would restate a typical year's financial statements, given many different errors.

Dick & Wally's Outlet is a small retail outlet in the town of Holiday. Lacking expertise in accounting, the company does not keep adequate records, and numerous errors have occurred in recording accounting information.

1. The bookkeeper inadvertently failed to record a cash receipt of $1,000 on the sale of merchandise in 2023.
2. Accrued wages expense at the end of 2022 was $2,500; at the end of 2023, $3,200. The company does not accrue for wages; all wages are charged to Administrative Expenses.
3. The company had not provided an allowance for estimated uncollectible receivables. Dick and Wally decided to set up such an allowance for the estimated probable losses, as of December 31, 2023, for 2022 accounts of $700, and for 2023 accounts of $1,500. They also decided to correct the charge against each year so that it showed the losses (actual and estimated) relating to that year's sales. The company has written off accounts to bad debt expense (selling expense) as follows.

	In 2022	In 2023
2022 accounts	$400	$2,000
2023 accounts		1,600

4. Unexpired insurance not recorded at the end of 2022 was $600, and at the end of 2023, $400. All insurance is charged to Administrative Expenses.
5. An account payable of $6,000 should have been a note payable.
6. During 2022, the company sold for $7,000 an asset that cost $10,000 and had a book value of $4,000. At the time of sale, Cash was debited and Miscellaneous Income was credited for $7,000.
7. As a result of the last transaction, the company overstated depreciation expense (an administrative expense) in 2022 by $800 and in 2023 b y $1,200.

Illustration 22.30 presents a worksheet that begins with the unadjusted trial balance of Dick & Wally's Outlet. You can determine the correcting entries and their effect on the financial statements by examining the worksheet.

Dick & Wally's Outlet
Worksheet Analysis to Adjust Financial Statements for the Year 2023

	Trial Balance Unadjusted		Adjustments		Income Statement Adjusted		Statement of Financial Position Adjusted	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	3,100		(1) 1,000				4,100	
Accounts Receivable	17,600						17,600	
Notes Receivable	8,500						8,500	
Inventory	34,000						34,000	
Property, Plant, and Equipment	112,000			(6) 10,000[a]			102,000	
Accumulated Depreciation—Equipment		83,500	(6) 6,000[a]					75,500
			(7) 2,000					
Investments	24,300						24,300	
Accounts Payable		14,500	(5) 6,000					8,500
Notes Payable		10,000		(5) 6,000				16,000
Share Capital		43,500						43,500
Retained Earnings		20,000	(3) 2,700[b]					
			(6) 4,000[a]	(4) 600				
			(2) 2,500	(7) 800				12,200
Sales Revenue		94,000		(1) 1,000		95,000		
Cost of Goods Sold	21,000				21,000			
Selling Expenses	22,000			(3) 500[b]	21,500			
Administrative Expenses	23,000		(2) 700	(4) 400	22,700			
			(4) 600	(7) 1,200				
Totals	265,500	265,500						
Salaries and Wages Payable				(2) 3,200				3,200
Allowance for Doubtful Accounts				(3) 2,200[b]				2,200
Unexpired Insurance			(4) 400				400	
Net Income					29,800			29,800
Totals			25,900	25,900	95,000	95,000	190,900	190,900

Computations:

[a]Machinery	
Proceeds from sale	$7,000
Book value of machinery	4,000
Gain on sale	3,000
Income credited	7,000
Retained earnings adjustment	$4,000

[b]Bad Debts	2022	2023
Bad debts charged for	$2,400	$1,600
Additional bad debts anticipated	700	1,500
	3,100	3,100
Charges currently made to each year	(400)	(3,600)
Bad debt adjustment	$2,700	$ (500)

ILLUSTRATION 22.30 **Worksheet to Analyze Effect of Errors in Financial Statements**

Review and Practice

Key Terms Review

changes in accounting estimates

change in accounting policy

corrections of an error

counterbalancing errors

cumulative effect

direct effects of a change in accounting policy

economic consequences

impracticable

indirect effects related to a change in accounting policy

non-counterbalancing errors

prior period adjustments

prospectively

retrospective application

retrospective restatement (*n*)

Learning Objectives Review

1 Discuss the types of accounting changes and the accounting for changes in accounting policies.

The two different types of accounting changes are as follows. (1) *Change in accounting policy:* a change from one accepted accounting policy to another accepted accounting policy. (2) *Change in accounting estimate:* a change that occurs as the result of new information or as additional experience is acquired.

A **change in accounting policy** involves a change from one accepted accounting policy to another. A change in accounting policy is not considered to result from the adoption of a new policy in recognition of events that have occurred for the first time or that were previously immaterial. If the accounting policy previously followed was not acceptable or if the policy was applied incorrectly, a change to an accepted accounting policy is considered a correction of an error.

The general requirement for changes in accounting policy is **retrospective application**. Under retrospective application, companies change prior years' financial statements on a basis consistent with the newly adopted policy. They treat any part of the effect attributable to years prior to those presented as an adjustment of the earliest retained earnings presented.

Retrospective application is **impracticable** if the prior period effect cannot be determined using every reasonable effort to do so. For example, in changing to average-cost, the base-year inventory for all subsequent average-cost calculations may be the opening inventory in the year the company adopts the method. There is no restatement of prior years' income because it is often too impractical.

2 Describe the accounting and reporting for changes in estimates.

Companies report changes in estimates prospectively. That is, companies should make no changes in previously reported results. They do not adjust opening balances nor change financial statements of prior periods.

3 Describe the accounting for correction of errors.

Companies must correct errors as soon as they discover them, by proper entries in the accounts, and report them in the financial statements. The profession requires that a company treat corrections of errors as **prior period adjustments**, record them in the year in which it discovered the errors, and report them in the financial statements in the proper periods. If presenting comparative statements, a company should restate the prior statements affected to correct for the errors. The company need not repeat the disclosures in the financial statements of subsequent periods.

4 Analyze the effect of errors.

Three types of errors can occur. (1) *Statement of financial position errors*, which affect only the presentation of asset, liability, or equity accounts. (2) *Income statement errors*, which affect only the presentation of revenue, expense, gain, or loss accounts in the income statement. (3) *Statement of financial position and income statement errors*, which involve both the statement of financial position and income statement. The third type of error is further classified into two types. (1) *Counterbalancing errors* are offset or corrected over two periods. (2) *Non-counterbalancing errors* are not offset in the next accounting period and take longer than two periods to correct themselves.

As an aid to understanding accounting changes, we provide the following glossary. **[10]**

Enhanced Review and Practice

Go online for multiple-choice questions with solutions, review exercises with solutions, and a full glossary of all key terms.

Key Terms Related to Accounting Changes

Accounting Policies. The specific principles, bases, conventions, rules, and practices applied by an entity in preparing and presenting financial statements.

Change in Accounting Estimate. An adjustment of the carrying amount of an asset or a liability, or the amount of the periodic consumption of an asset, that results from the assessment of the present status of, and expected future benefits and obligations associated with, assets and liabilities. Changes in accounting estimates result from new information or new developments and, accordingly, are not corrections of errors.

Direct Effects of a Change in Accounting Policy. Those recognized changes in assets or liabilities necessary to effect a change in accounting policy.

Errors. Omissions from, and misstatements in, the entity's financial statements for one or more prior periods arising from the failure to use, or misuse of, representationally faithful information that: (1) was available when financial statements for those periods were authorized for issue; and (2) could reasonably be expected to have been obtained and taken into account in the preparation and presentation of those financial statements. Such errors include the effects of mathematical mistakes, mistakes in applying accounting policies, oversights or misinterpretations of facts, and fraud.

Impracticable. Applying a requirement is impracticable when the entity cannot apply it after making every reasonable effort to do so. For a particular prior period, it is impracticable to apply a change in an accounting policy retrospectively or to make a retrospective restatement to correct an error when (1) the effects of the retrospective application or retrospective restatement are not determinable; (2) the retrospective application or retrospective restatement requires assumptions about what management's intent would have been in that period; or (3) the retrospective application or retrospective restatement requires significant estimates of amounts, and it is impossible to report objectively based on those estimates.

Indirect Effects of a Change in Accounting Policy. Any changes to current or future cash flows of an entity that result from making a change in accounting policy that is applied retrospectively.

Prospective Application. Change in accounting policy that requires (1) applying the new accounting policy to transactions, other events, and conditions occurring after the date at which the policy is changed; and (2) recognizing the effect of the change in the accounting estimate in the current and future periods affected by the change.

Retrospective Application. Applying a new accounting policy to transactions, other events, and conditions, as if that policy had always been applied.

Retrospective Restatement. Correcting the recognition, measurement, and disclosure of amounts of elements of financial statements, as if a prior period error had never occurred.

Practice Problem

Wangerin Company is in the process of adjusting and correcting its books at the end of 2022. In reviewing its records, the following information is compiled.

1. At December 31, 2022, Wangerin decided to change the depreciation method on its office equipment from double-declining-balance to straight-line. The equipment had an original cost of $200,000 when purchased on January 1, 2020. It has a 10-year useful life and no residual value. Depreciation expense recorded prior to 2022 under the double-declining-balance method was $72,000. Wangerin has already recorded 2022 depreciation expense of $25,600 using the double-declining-balance method.
2. Before 2022, Wangerin accounted for its income from long-term construction contracts using the zero-profit method. Early in 2022, Wangerin changed to the percentage-of-completion basis for accounting purposes. It continues to use the zero-profit method for tax purposes. Income for 2022 has been recorded using the percentage-of-completion method. The following information is available.

	Pretax Income	
	Percentage-of-Completion	Completed-Contract
Prior to 2022	$450,000	$315,000
2022	180,000	60,000

3. Insurance for a 12-month period purchased on November 1 of this year was charged to insurance expense in the amount of $3,300 because “the amount of the check is about the same every year.”
4. Reported sales revenue for the year is $1,908,000. This includes all sales taxes collected for the year. The sales tax rate is 6%. Because the sales tax is forwarded to the Department of Revenue, the Sales Tax Expense account is debited. The bookkeeper thought that “the sales tax is a selling expense.” At the end of the current year, the balance in the Sales Tax Expense account is $103,400.

Instructions

Prepare the journal entries necessary at December 31, 2022, to record the above corrections and changes. The books are still open for 2022. The income tax rate is 40%. Wangerin has not yet recorded its 2022 income tax expense and payable amounts so current-year tax effects may be ignored. Prior-year tax effects must be considered in item 2.

Solution

1.	Accumulated Depreciation—Equipment	9,600	
	Depreciation Expense		9,600*
	*Equipment cost	$200,000	
	Depreciation before 2022	(72,000)	
	Book value	$128,000	
	Depreciation recorded	$ 25,600	
	Depreciation to be taken ($128,000 ÷ 8)	(16,000)	
	Difference	$ 9,600	
2.	Construction in Process	135,000	
	Deferred Tax Liability		54,000*
	Retained Earnings		81,000
	*($450,000 – $315,000) × .40		

3.	Prepaid Insurance ($3,300 × 10⁄12)	2,750	
	Insurance Expense		2,750
4.	Sales Revenue [$1,908,000 ÷ (1.00 + .06) × .06]	108,000	
	Sales Taxes Payable		108,000
	Sales Taxes Payable	103,400	
	Sales Tax Expense		103,400

Exercises, Problems, Problem Solution Walkthrough Videos, Data Analytics Activities, and many more assessment tools and resources are available for practice in Wiley's online courseware.

Questions

1. In recent years, the financial press has indicated that many companies have changed their accounting policies. What are the major reasons why companies change accounting policies?

2. State how each of the following items is reflected in the financial statements.

a. Change from FIFO to average-cost method for inventory valuation purposes.

b. Charge for failure to record depreciation in a previous period.

c. Litigation won in current year, related to prior period.

d. Change in the realizability of certain receivables.

e. Impairment of receivables.

f. Change from the percentage-of-completion to the cost-recovery method for reporting net income.

3. Discuss briefly the three approaches that have been suggested for reporting changes in accounting policies.

4. Identify and describe the approach the IASB requires for reporting changes in accounting policies.

5. What is an indirect effect of a change in accounting policy? Briefly describe the approach to reporting the indirect effects of a change in accounting policy.

6. Define a change in estimate and provide an illustration.

7. Lenexa State Bank has followed the practice of capitalizing certain marketing costs and amortizing these costs over their expected life. In the current year, the bank determined that the future benefits from these costs were doubtful. Consequently, the bank adopted the policy of expensing these costs as incurred. How should the bank report this accounting change in the comparative financial statements?

8. Indicate how the following items are recorded in the accounting records in the current year of Coronet Co.

a. Impairment of goodwill.

b. A change in depreciating plant assets from the accelerated to the straight-line method.

c. Large write-off of inventories because of obsolescence.

d. Change from the cash basis to the accrual basis of accounting.

e. Change from average-cost to FIFO method for inventory valuation purposes.

f. Change in the estimate of service lives for plant assets.

9. Whittier Construction had followed the practice of expensing all materials assigned to a construction job without recognizing any residual inventory. On December 31, 2022, it was determined that residual inventory should be valued at CHF52,000. Of this amount, CHF29,000 arose during the current year. How does this information affect the financial statements to be prepared at the end of 2022?

10. Parsons Inc. wishes to change from the cost-recovery to the percentage-of-completion method for financial reporting purposes. The auditor indicates that a change would be permitted only if it is to a preferable method. What difficulties develop in assessing preferability?

11. Discuss how a change in accounting policy is handled when it is impracticable to determine previous amounts.

12. What relevance do political costs have to accounting changes?

13. What are some of the key motivations that managers might have to change accounting policies?

14. Distinguish between counterbalancing and non-counterbalancing errors. Give an example of each.

15. Discuss and illustrate how a correction of an error in previously issued financial statements should be handled.

16. Prior to 2022, Heberling Inc. excluded manufacturing overhead costs from work in process and finished goods inventory. These costs were expensed as incurred. In 2022, the company decided to change its accounting methods for manufacturing inventories to full costing by including these costs as product costs. Assuming that these costs are material, how should this change be reflected in the financial statements for 2021 and 2022?

17. Elliott AG failed to record accrued salaries for 2020, €2,000; 2021, €2,100; and 2022, €3,900. What is the amount of the overstatement or understatement of Retained Earnings at December 31, 2023?

18. In January 2021, installation costs of £6,000 on new equipment were charged to Maintenance and Repairs Expense. Other costs of this equipment of £30,000 were correctly recorded and have been depreciated using the straight-line method with an estimated life of 10 years and no residual value. At December 31, 2022, it is decided that all of the equipment has a remaining useful life of 20 years, starting with January 1, 2022. What entry or entries should be made in 2022 to correctly record transactions related to equipment, assuming the equipment has no residual value? The books have not been closed for 2022, and depreciation expense has not yet been recorded for 2022.

19. An entry to record Purchases and related Accounts Payable of ¥130,000 for merchandise purchased on December 23, 2022, was recorded in January 2023. This merchandise was not included in inventory at December 31, 2022. What effect does this error have on reported net income for 2022? What entry should be made to correct for this error, assuming that the books are not closed for 2022?

20. Equipment was purchased on January 2, 2022, for $24,000, but no portion of the cost has been charged to depreciation. The company wishes to use the straight-line method for these assets, which have been estimated to have a life of 10 years and no residual value. What effect does this error have on net income in 2022? What entry is necessary to correct for this error, assuming that the books are not closed for 2022?

Brief Exercises

BE22.1 (LO 1) Wertz Construction decided at the beginning of 2022 to change from the cost-recovery method to the percentage-of-completion method for financial reporting purposes. The company will continue to use the cost-recovery method for tax purposes. For years prior to 2022, pretax income under the two methods was as follows: percentage-of-completion $120,000, and cost-recovery $80,000. The tax rate is 35%. Prepare Wertz's 2022 journal entry to record the change in accounting policy.

BE22.2 (LO 1) Refer to the accounting change by Wertz Construction in BE22.1. Wertz has a profit-sharing plan, which pays all employees a bonus at year-end based on 1% of pretax income. Compute the indirect effect of Wertz's change in accounting policy that will be reported in the 2022 income statement, assuming that the profit-sharing contract explicitly requires adjustment for changes in income numbers.

BE22.3 (LO 1) Shannon AG, changed from the average-cost to the FIFO cost flow assumption in 2022. The increase in the prior year's income before taxes is €1,200,000. The tax rate is 40%. Prepare Shannon's 2022 journal entry to record the change in accounting policy.

BE22.4 (LO 2) Tedesco Company changed depreciation methods in 2022 from double-declining-balance to straight-line. Depreciation prior to 2022 under double-declining-balance was $90,000, whereas straight-line depreciation prior to 2022 would have been $50,000. Tedesco's depreciable assets had a cost of $250,000, with a $40,000 residual value and an 8-year remaining useful life at the beginning of 2022. Prepare the 2022 journal entry, if necessary, related to Tedesco's depreciable assets.

BE22.5 (LO 2) Sesame plc purchased a computer system for £74,000 on January 1, 2020. It was depreciated based on a 7-year life and an £18,000 residual value, using straight-line depreciation. On January 1, 2022, Sesame revised these estimates to a total useful life of 4 years and a residual value of £10,000. Prepare Sesame's entry to record 2022 depreciation expense.

BE22.6 (LO 3) In 2022, Bailey SA discovered that equipment purchased on January 1, 2020, for €50,000 was expensed at that time. The equipment should have been depreciated over 5 years, with no residual value, using straight-line depreciation. The effective tax rate is 30%. Prepare Bailey's 2022 journal entry to correct the error.

BE22.7 (LO 3) At January 1, 2022, Cheng Ltd. reported retained earnings of ¥20,000,000. In 2022, Cheng discovered that 2021 depreciation expense was understated by ¥4,000,000. In 2022, net income was ¥9,000,000 and dividends declared were ¥2,500,000. The tax rate is 40%. Prepare a 2022 retained earnings statement for Cheng Ltd.

BE22.8 (LO 3, 4) Indicate the effect—Understate, Overstate, No Effect—that each of the following errors has on 2021 net income and 2022 net income.

	2021	2022
a. Equipment purchased in 2020 was expensed.	____	____
b. Wages payable were not recorded at 12/31/21.	____	____
	____	____

c. Equipment purchased in 2021 was expensed.		
d. 2021 ending inventory was overstated.	____	____
e. Patent amortization was not recorded in 2022.	____	____

BE22.9 (LO 1, 2) Roundtree Manufacturing is preparing its year-end financial statements and is considering the accounting for the following items.

1. The vice president of sales has indicated that one product line has lost its customer appeal and will be phased out over the next 3 years. Therefore, a decision has been made to lower the estimated lives on related production equipment from the remaining 5 years to 3 years.
2. The Hightone Building was converted from a sales office to offices for the Accounting Department at the beginning of this year. Therefore, the expense related to this building will now appear as an administrative expense rather than a selling expense on the current year's income statement.
3. Estimating the lives of new products in the Leisure Products Division has become very difficult because of the highly competitive conditions in this market. Therefore, the practice of deferring and amortizing preproduction costs has been abandoned in favor of expensing such costs as they are incurred.

Identify and explain whether each of the above items is a change in policy, a change in estimate, or an error.

BE22.10 (LO 1, 3) Palmer Co. is evaluating the appropriate accounting for the following items.

1. Management has decided to switch from the FIFO inventory valuation method to the average-cost inventory valuation method for all inventories.
2. When the year-end physical inventory adjustment was made for the current year, the controller discovered that the prior year's physical-inventory sheets for an entire warehouse had been mislaid and excluded from last year's count.
3. Palmer's Custom Division manufactures large-scale, custom-designed machinery on a contract basis. Management decided to switch from the cost-recovery method to the percentage-of-completion method of accounting for long-term contracts.

Identify and explain whether each of the above items is a change in accounting policy, a change in estimate, or an error.

Exercises

E22.1 (LO 1) (Change in Policy—Long-Term Contracts) Cherokee Construction Company changed from the cost-recovery to the percentage-of-completion method of accounting for long-term construction contracts during 2022. For tax purposes, the company employs the cost-recovery method and will continue this approach in the future. (*Hint:* Adjust all tax consequences through the Deferred Tax Liability account.) The appropriate information related to this change is as follows.

	Pretax Income from		

	Percentage-of-Completion	Cost-Recovery	Difference
Prior Years	$780,000	$610,000	$170,000
2022	700,000	480,000	220,000

Instructions

a. Assuming that the tax rate is 35%, what is the amount of net income that would be reported in 2022?

b. What entry or entries is/are necessary to adjust the accounting records for the change in accounting policy?

E22.2 (LO 1) (Change in Policy—Inventory Methods) Whitman SA began operations on January 1, 2019, and uses the average-cost method of pricing inventory. Management is contemplating a change in inventory methods for 2022. The following information is available for the years 2019–2021.

	Net Income Computed Using	
	Average-Cost Method	FIFO Method
2019	€16,000	€19,000
2020	18,000	21,000
2021	20,000	25,000

Instructions

(Ignore all tax effects.)

a. Prepare the journal entry necessary to record a change from the average-cost method to the FIFO method in 2022.

b. Determine net income to be reported for 2019, 2020, and 2021, after giving effect to the change in accounting policy.

E22.3 (LO 1) (Accounting Policy Change) Ramirez Co. decides at the beginning of 2022 to adopt the FIFO method of inventory valuation. Ramirez has used the average-cost method for financial reporting since its inception on January 1, 2020, and has maintained records adequate to apply the FIFO method retrospectively. Ramirez concluded that FIFO is the preferable inventory method because it reflects the current cost of inventory on the statement of financial position. The following table presents the effects of the change in accounting policy on inventory and cost of goods sold.

	Inventory Determined by		Cost of Goods Sold Determined by	
Date	Average-Cost Method	FIFO Method	Average-Cost Method	FIFO Method
January 1, 2020	$ 0	$ 0	$ 0	$ 0
December 31, 2020	100	80	800	820
December 31, 2021	200	240	1,000	940
December 31, 2022	320	390	1,130	1,100

Retained earnings reported under average-cost are as follows.

	Retained Earnings Balance

December 31, 2020	$2,200
December 31, 2021	4,200
December 31, 2022	6,070

Other information:

1. For each year presented, sales are $4,000 and operating expenses are $1,000.
2. Ramirez provides two years of financial statements.

Instructions

a. Prepare income statements under average-cost and FIFO for 2020, 2021, and 2022. Omit earnings per share.

b. Prepare income statements reflecting the retrospective application of the accounting change from the average-cost method to the FIFO method for 2022 and 2021.

c. Prepare the note to the financial statements describing the change in method of inventory valuation. In the note, indicate the income statement line items for 2022 and 2021 that were affected by the change in accounting policy.

d. Prepare comparative retained earnings statements for 2021 and 2022 under FIFO.

E22.4 (LO 1) (Accounting Policy Change) Linden plc started operations on January 1, 2017, and has used the FIFO method of inventory valuation since its inception. In 2022, it decides to switch to the average-cost method. You are provided with the following information.

	Net Income		Retained Earnings (ending balance)
	Under FIFO	Under Average-Cost	Under FIFO
2017	£100,000	£ 92,000	£100,000
2018	70,000	65,000	160,000
2019	90,000	80,000	235,000
2020	120,000	130,000	340,000
2021	300,000	293,000	590,000
2022	305,000	310,000	780,000

Instructions

a. What is the beginning retained earnings balance at January 1, 2019, if Linden presents 2-year comparative financial statements starting in 2019?

b. What is the beginning retained earnings balance at January 1, 2022, if Linden presents 2-year comparative financial statements starting in 2022?

c. What is the beginning retained earnings balance at January 1, 2023, if Linden presents 2-year single-period financial statements for 2023?

d. What is the net income reported by Linden in the 2022 income statement if it presents 2-year comparative financial statements starting with 2020?

E22.5 (LO 1) (Accounting Change) Presented below are income statements prepared on an average-cost and FIFO basis for Carlton SA, which started operations on January 1, 2021. The company presently uses the average-cost method of pricing its inventory and has decided to switch to the FIFO method in 2022. The FIFO income statement is computed in accordance with IFRS. Carlton's profit-sharing agreement with its employees indicates that the company will pay employees 5% of income before profit sharing. Income taxes are ignored.

	Average-Cost Basis		FIFO Basis	
	2022	2021	2022	2021
Sales	€3,000	€3,000	€3,000	€3,000
Cost of goods sold	1,130	1,000	1,100	940
Operating expenses	1,000	1,000	1,000	1,000
Income before profit sharing	870	1,000	900	1,060
Profit-sharing expense	44	50	45	53
Net income	€ 826	€ 950	€ 855	€1,007

Instructions

Answer the following questions.

a. If comparative income statements are prepared, what net income should Carlton report in 2021 and 2022?

b. Explain why, under the FIFO basis, Carlton reports €50 in 2021 and €48 in 2022 for its profit-sharing expense.

c. Assume that Carlton has a beginning balance of retained earnings of €8,000 at January 1, 2022, using the average-cost method. The company declared and paid dividends of €2,500 in 2022. Prepare the retained earnings statement for 2022, assuming that Carlton has switched to the FIFO method.

E22.6 (LO 2) (Accounting Changes—Depreciation) Robillard SA acquired the following assets in January 2019.

Equipment, estimated service life, 5 years; residual value, €15,000	€465,000
Building, estimated service life, 30 years; no residual value	€780,000

The equipment has been depreciated using the sum-of-the-years'-digits method for the first 3 years for financial reporting purposes. In 2022, the company decided to change the method of computing depreciation to the straight-line method for the equipment, but no change was made in the estimated service life or residual value. It was also decided to change the total estimated service life of the building from 30 years to 40 years, with no change in the estimated residual value. The building is depreciated on the straight-line method.

Instructions

a. Prepare the journal entry to record depreciation expense for the equipment in 2022.

b. Prepare the journal entry to record depreciation expense for the building in 2022. (Round to nearest euro.)

E22.7 (LO 2, 3) (Change in Estimate and Error; Financial Statements) The following are the comparative income statements for Pannebecker Inc. for the years 2021 and 2022.

	2022	2021
Sales	$340,000	$270,000

Cost of sales	200,000	142,000
Gross profit	140,000	128,000
Expenses	88,000	50,000
Net income	$ 52,000	$ 78,000
Retained earnings (Jan. 1)	$125,000	$ 72,000
Net income	52,000	78,000
Dividends	(30,000)	(25,000)
Retained earnings (Dec. 31)	$147,000	$125,000

The following additional information is provided.

1. In 2022, Pannebecker Inc. decided to switch its depreciation method from sum-of-the-years'-digits to the straight-line method. The assets were purchased at the beginning of 2021 for $90,000 with an estimated useful life of 4 years and no residual value. (The 2022 income statement contains depreciation expense of $27,000 on the assets purchased at the beginning of 2021.)
2. In 2022, the company discovered that the ending inventory for 2021 was overstated by $20,000; ending inventory for 2022 is correctly stated.

Instructions

Prepare the revised retained earnings statement for 2021 and 2022, assuming comparative statements. (Ignore income taxes.)

E22.8 (LO 1, 2, 3) (Accounting for Accounting Changes and Errors) Listed below are various types of accounting changes and errors.

________	1. Change from FIFO to average-cost inventory method.
________	2. Change due to overstatement of inventory.
________	3. Change from an accelerated to straight-line method of depreciation.
________	4. Change from average-cost to FIFO inventory method.
________	5. Change in the rate used to compute warranty costs.
________	6. Change from an unacceptable accounting policy to an acceptable accounting policy.
________	7. Change in a patent's amortization period.
________	

	8. Change from cost-recovery to percentage-of-completion method on construction contracts.
_______	9. Change in a plant asset's residual value.

Instructions

For each change or error, indicate how it would be accounted for using the following code letters:

a. Accounted for prospectively.

b. Accounted for retrospectively.

c. Neither of the above.

E22.9 (LO 2, 3) (Error and Change in Estimate—Depreciation) Yoon Ltd. purchased a machine on January 1, 2019, for ₩44,000,000. At that time, it was estimated that the machine would have a 10-year life and no residual value. On December 31, 2022, the firm's accountant found that the entry for depreciation expense had been omitted in 2020. In addition, management has informed the accountant that the company plans to switch to straight-line depreciation, starting with the year 2022. At present, the company uses the sum-of-the-years'-digits method for depreciating equipment.

Instructions

Prepare the general journal entries that should be made at December 31, 2022, to record these events. (Ignore tax effects.)

E22.10 (LO 2) (Depreciation Changes) On January 1, 2018, McElroy plc purchased a building and equipment that have the following useful lives, residual values, and costs.

Building, 40-year estimated useful life, £50,000 residual value, £1,200,000 cost

Equipment, 12-year estimated useful life, £10,000 residual value, £130,000 cost

The building was depreciated under the double-declining-balance method through 2021. In 2022, the company decided to switch to the straight-line method of depreciation. McElroy also decided to change the total useful life of the equipment to 9 years, with a residual value of £5,000 at the end of that time. The equipment is depreciated using the straight-line method.

Instructions

a. Prepare the journal entry or entries necessary to record the depreciation expense on the building in 2022.

b. Compute depreciation expense on the equipment for 2022.

E22.11 (LO 2) (Change in Estimate—Depreciation) Thurber Co. purchased for $710,000 equipment which was estimated to have a useful life of 10 years with a residual value of $10,000 at the end of that time. Depreciation has been entered for 7 years on a straight-line basis. In 2022, it is determined that the total estimated life should be 15 years with a residual value of $4,000 at the end of that time.

Instructions

a. Prepare the entry (if any) to correct the prior years' depreciation.

b. Prepare the entry to record depreciation for 2022.

E22.12 (LO 2) (Change in Estimate—Depreciation) Frederick Industries changed from the double-declining-balance to the straight-line method in 2022 on all its plant assets. There was no change in the assets' residual values or useful lives. Plant assets acquired on January 2, 2019 had an original cost of €2,400,000, with a €100,000 residual value and an 8-year estimated useful life. Income before depreciation expense was €370,000 in 2021 and €300,000 in 2022.

Instructions

a. Prepare the journal entry or entries to reflect the change in depreciation method in 2022.

b. Starting with income before depreciation expense, prepare the remaining portion of the income statement for 2021 and 2022.

E22.13 (LO 1) (Change in Policy—Long-Term Contracts) Bryant Construction Company changed from the cost-recovery to the percentage-of-completion method of accounting for long-term construction contracts during 2022. For tax purposes, the company employs the cost-recovery method and will continue this approach in the future. The information related to this change is as follows.

	Pretax Income from		
	Percentage-of-Completion	Cost-Recovery	Difference
Prior Years	$980,000	$730,000	$250,000
2022	900,000	480,000	420,000

Instructions

a. Assuming that the tax rate is 40%, what is the amount of net income that would be reported in 2022?

b. What entry or entries is/are necessary to adjust the accounting records for the change in accounting policy?

E22.14 (LO 1) (Various Changes in Policy—Inventory Methods) Following is the net income of Benchley Instrument AG, a private company, computed under the two inventory methods using a periodic system.

	FIFO	Average-Cost
2019	€26,000	€23,000
2020	30,000	25,000
2021	29,000	27,000
2022	34,000	30,000

Instructions

(Ignore tax considerations.)

a. Assume that in 2022 Benchley decided to change from the FIFO method to the average-cost method of pricing inventories. Prepare the journal entry necessary for the change that took place during 2022, and show net income reported for 2019, 2020, 2021, and 2022.

b. Assume that in 2022 Benchley, which had been using the average-cost method since beginning operations in 2019, changed to the FIFO method of pricing inventories. Prepare the journal entry necessary to record the change in 2022, and show net income reported for 2019, 2020, 2021, and 2022.

E22.15 (LO 3, 4) (Error Correction Entries) The first audit of the books of Fenimore Company was conducted for the year ended December 31, 2022. In examining the books, the auditor found that certain items had been overlooked or incorrectly handled in the last 3 years. These items were:

1. At the beginning of 2020, the company purchased a machine for $510,000 (residual value of $51,000) that had a useful life of 5 years. The bookkeeper used straight-line depreciation but failed to deduct the residual value in computing the depreciation base for the 3 years.
2. At the end of 2021, the company failed to accrue sales salaries of $45,000.
3. A tax lawsuit that involved the year 2020 was settled late in 2022. It was determined that the company owed an additional $85,000 in taxes related to 2020. The company did not record a liability in 2020 or 2021 because the possibility of loss was considered remote. Fenimore debited the $85,000 to a loss account in 2022 and credited Cash for the same amount.
4. Fenimore Company purchased a copyright from another company early in 2020 for $50,000. Fenimore had not amortized the copyright because its value had not diminished. The copyright has a useful life at purchase of 20 years.
5. In 2022, the company wrote off $87,000 of inventory considered to be obsolete; this loss was charged directly to Retained Earnings and credited to Inventory.

Instructions

Prepare the journal entries necessary in 2022 to correct the books, assuming that the books have not been closed. Disregard effects of corrections on income tax.

E22.16 (LO 3, 4) (Error Analysis and Correcting Entry) You have been engaged to review the financial statements of Longfellow Lumber. In the course of your examination, you conclude that the bookkeeper hired during the current year is not doing a good job. You notice a number of irregularities.

1. Year-end salaries and wages payable of €3,400 were not recorded because the bookkeeper thought that "they were immaterial."
2. Accrued vacation pay for the year of €31,100 was not recorded because the bookkeeper "never heard that you had to do that."
3. Insurance for a 12-month period purchased on November 1 of this year was charged to insurance expense in the amount of €3,300 because "the amount of the check is about the same every year."
4. Reported sales revenue for the year is €1,908,000. This includes all sales taxes collected for the year. The sales tax rate is 6%. Because the sales tax is forwarded to the Department of Revenue, the Sales Tax Expense account is debited. The bookkeeper thought that "the sales tax is a selling expense." At the end of the current year, the balance in the Sales Tax Expense account is €103,400.

Instructions

Prepare the necessary correcting entries, assuming that Longfellow uses a calendar-year basis.

E22.17 (LO 3, 4) (Error Analysis and Correcting Entry) The reported net incomes for the first 2 years of Sinclair Products, Inc., were as follows: 2021, $147,000; 2022, $185,000. Early in 2023, the following errors were discovered.

1. Depreciation of equipment for 2021 was overstated $19,000.
2. Depreciation of equipment for 2022 was understated $38,500.
3. December 31, 2021, inventory was understated $50,000.
4. December 31, 2022, inventory was overstated $14,200.

Instructions

Prepare the correcting entry necessary when these errors are discovered. Assume that the books for 2022 are closed. (Ignore income tax considerations.)

E22.18 (LO 3, 4) (Error Analysis) Emerson Tool plc's December 31 year-end financial statements contained the following errors.

	December 31, 2021	December 31, 2022
Ending inventory	£9,600 understated	£7,100 overstated
Depreciation expense	£2,300 understated	—

An insurance premium of £60,000 was prepaid in 2021 covering the years 2021, 2022, and 2023. The entire amount was charged to expense in 2021. In addition, on December 31, 2022, fully depreciated machinery was sold for £15,000 cash, but the entry was not recorded until 2023. There were no other errors during 2021 or 2022, and no corrections have been made for any of the errors. (Ignore income tax considerations.)

Instructions

a. Compute the total effect of the errors on 2022 net income.

b. Compute the total effect of the errors on the amount of Emerson's working capital at December 31, 2022.

c. Compute the total effect of the errors on the balance of Emerson's retained earnings at December 31, 2022.

E22.19 (LO 3, 4) (Error Analysis and Correcting Entries) A partial trial balance of Dickinson Ltd. is as follows on December 31, 2022.

	Dr.	Cr.
Supplies	R 2,500	
Salaries and wages payable		R 1,500
Interest receivable	5,100	
Prepaid insurance	90,000	
Unearned rent		–0–
Accrued interest payable		15,000

Additional adjusting data:

1. A physical count of supplies on hand on December 31, 2022, totaled R1,100.
2. Through oversight, the Salaries and Wages Payable account was not changed during 2022. Accrued salaries and wages on December 31, 2022, amounted to R4,400.
3. The Interest Receivable account was also left unchanged during 2022. Accrued interest on investments amounts to R4,350 on December 31, 2022.
4. The unexpired portions of the insurance policies totaled R65,000 as of December 31, 2022.
5. R24,000 was received on January 1, 2022, for the rent of a building for both 2022 and 2023. The entire amount was credited to rental income.
6. Depreciation for the year on equipment was erroneously recorded as R5,000 rather than the correct figure of R50,000.
7. A further review of depreciation calculations of prior years revealed that depreciation of R7,200 was not recorded. It was decided that this oversight should be corrected by a prior period adjustment.

Instructions

a. Assuming that the books have not been closed, what are the adjusting entries necessary at December 31, 2022? (Ignore income tax considerations.)

b. Assuming that the books have been closed, what are the adjusting entries necessary at December 31, 2022? (Ignore income tax considerations.)

E22.20 (LO 3, 4) (Error Analysis) The before-tax income for Fitzgerald Co. for 2021 was $101,000, and for 2022 was $77,400. However, the accountant noted that the following errors had been made.

1. Sales and revenue for 2021 included $38,200 which had been received in cash during 2021, but for which the related products were delivered in 2022. Title did not pass to the purchaser until 2022.
2. The inventory on December 31, 2021, was understated by $8,640.
3. In recording interest expense for both 2021 and 2022 on bonds payable, the bookkeeper made the following entry on an annual basis.

Interest Expense	15,000	
Cash		15,000

   The bonds have a face value of $250,000 and pay a stated interest rate of 6%. They were issued at a discount of $10,000 on January 1, 2021 to yield an effective-interest rate of 7%. (Assume that the effective-interest method should be used.)
4. Ordinary repairs to equipment were erroneously charged to the Equipment account during 2021 and 2022. Repairs in the amount of $8,000 in 2021 and $9,400 in 2022 were so charged. The company applies a rate of 10% to the balance in the Equipment account at the end of the year in its determination of depreciation charges.

Instructions

Prepare a schedule showing the determination of corrected income before taxes for 2021 and 2022.

E22.21 (LO 3, 4) (Error Analysis) When the records of Aoki Ltd. were reviewed at the close of 2022, the errors listed as follows were discovered. For each item, indicate by a check mark in the appropriate column whether the error resulted in an overstatement, an understatement, or had no effect on net income for the years 2021 and 2022.

	2021			2022		
Item	Over-statement	Under-statement	No Effect	Over-statement	Under-statement	No Effect
1. Failure to reflect supplies on hand on statement of financial position at end of 2021.						
2. Failure to record the correct amount of ending 2021 inventory. The amount was understated because of an error in calculation.						
3. Failure to record, until 2022, merchandise purchased in 2021. Merchandise was also omitted from ending inventory in 2021 but was not yet sold.						
4. Failure to record accrued interest on notes payable in 2021; that amount was recorded when paid in 2022.						
5. Failure to record amortization of patent in 2022.						

Problems

P22.1 (LO 2, 3) Groupwork **(Change in Estimate and Error Correction)** Holtzman Company is in the process of preparing its financial statements for 2022. Assume that no entries for depreciation have been recorded in 2022. The following information related to depreciation of fixed assets is provided to you.

1. Holtzman purchased equipment on January 2, 2019, for $85,000. At that time, the equipment had an estimated useful life of 10 years with a $5,000 residual value. The equipment is depreciated on a straight-line basis. On January 2, 2022, as a result of

additional information, the company determined that the equipment has a remaining useful life of 4 years with a $3,000 residual value.

2. During 2022, Holtzman changed from the double-declining-balance method for its building to the straight-line method. The building originally cost $300,000. It had a useful life of 10 years and a residual value of $30,000. The following computations present depreciation on both bases for 2020 and 2021.

	2021	2020
Straight-line	$27,000	$27,000
Declining-balance	48,000	60,000

3. Holtzman purchased a machine on July 1, 2020, at a cost of $120,000. The machine has a residual value of $16,000 and a useful life of 8 years. Holtzman's bookkeeper recorded straight-line depreciation in 2020 and 2021 but failed to consider the residual value.

Instructions

a. Prepare the journal entries to record depreciation expense for 2022 and correct any errors made to date related to the information provided.

b. Show comparative net income for 2021 and 2022. Income before depreciation expense was $300,000 in 2022, and was $310,000 in 2021. (Ignore taxes.)

P22.2 (LO 1, 2, 3, 4) (Comprehensive Accounting Changes and Error Analysis Problem) Botticelli SpA was organized in late 2019 to manufacture and sell hosiery. At the end of its fourth year of operation, the company has been fairly successful, as indicated by the following reported net incomes.

2019	€140,000[a]	2021	€205,000
2020	160,000	2022	276,000

[a]Includes a €10,000 increase because of change in bad debt expense rate.

The company has decided to expand operations and has applied for a sizable bank loan. The bank officer has indicated that the records should be audited and presented in comparative statements to facilitate analysis by the bank. Botticelli hired the auditing firm of Check & Doublecheck Co. and has provided the following additional information.

1. In early 2020, Botticelli changed its estimate from 2% to 1% of receivables on the amount of bad debt expense to be charged to operations. Bad debt expense for 2019, if a 1% rate had been used, would have been €10,000. The company therefore restated its net income for 2019.

2. The auditor discovered that in 2022, the company had changed its method of inventory pricing from average-cost to FIFO. The effect on the income statements for the previous years is as follows.

	2019	2020	2021	2022
Net income unadjusted—average-cost basis	€140,000	€160,000	€205,000	€276,000
Net income unadjusted—FIFO basis	155,000	165,000	215,000	260,000
	€ 15,000	€ 5,000	€ 10,000	(€ 16,000)

3. In 2022, the auditor discovered that:

a. The company incorrectly overstated the ending inventory by €14,000 in 2021.

b. A dispute developed in 2020 with the tax authorities over the deductibility of entertainment expenses. In 2019, the company was not permitted these deductions, but a tax settlement was reached in 2022 that allowed these expenses. As a result of the court's finding, tax expenses in 2022 were reduced by €60,000.

Instructions

a. Indicate how each of these changes or corrections should be handled in the accounting records. (Ignore income tax considerations.)

b. Present comparative net income numbers for the years 2019 to 2022. (Ignore income tax considerations.)

P22.3 (LO 1, 2, 3, 4) (Error Corrections and Accounting Changes) Chen Group is in the process of adjusting and correcting its books at the end of 2022. In reviewing its records, the following information is compiled.

1. Chen has failed to accrue sales commissions payable at the end of each of the last 2 years, as follows.

December 31, 2021	¥3,500,000
December 31, 2022	¥2,500,000

2. In reviewing the December 31, 2022, inventory, Chen discovered errors in its inventory-taking procedures that have caused inventories for the last 3 years to be incorrect, as follows.

December 31, 2020	Understated	¥16,000,000
December 31, 2021	Understated	¥19,000,000
December 31, 2022	Overstated	¥ 6,700,000

Chen has already made an entry that established the incorrect December 31, 2022, inventory amount.

3. At December 31, 2022, Chen decided to change the depreciation method on its office equipment from double-declining-balance to straight-line. The equipment had an original cost of ¥100,000,000 when purchased on January 1, 2020. It has a 10-year useful life and no residual value. Depreciation expense recorded prior to 2022 under the double-declining-balance method was ¥36,000,000. Chen has already recorded 2022 depreciation expense of ¥12,800,000 using the double-declining-balance method.

4. Before 2022, Chen accounted for its income from long-term construction contracts on the cost-recovery basis. Early in 2022, Chen changed to the percentage-of-completion basis for accounting purposes. It continues to use the cost-recovery method for tax purposes. Income for 2022 has been recorded using the percentage-of-completion method. The information follows.

	Pretax Income from	
	Percentage-of-Completion	Cost-Recovery
Prior to 2022	¥150,000,000	¥105,000,000
2022	60,000,000	20,000,000

Instructions

Prepare the journal entries necessary at December 31, 2022, to record the above corrections and changes. The books are still open for 2022. The income tax rate is 40%. Chen has not yet recorded its 2022 income tax expense and payable amounts, so current-year tax effects may be ignored. Prior-year tax effects must be considered in item 4.

P22.4 (LO 2) Groupwork Ethics **(Accounting Changes)** Aston plc performs year-end planning in November of each year before its calendar year ends in December. The preliminary estimated net income is £3 million. The CFO, Rita Warren, meets with the company president, J. B. Aston, to review the projected numbers. She presents the following projected information.

Aston plc **Projected Income Statement** **For the Year Ended December 31, 2022**		
Sales		£29,000,000
Cost of goods sold	£14,000,000	
Depreciation	2,600,000	
Operating expenses	6,400,000	23,000,000
Income before income tax		6,000,000
Income tax		3,000,000
Net income		£ 3,000,000

Aston plc **Selected Statement of Financial Position Information** **At December 31, 2022**	
Estimated cash balance	£ 5,000,000
Debt investments (held-for-collection)	10,000,000
Security fair value adjustment account (1/1/22)	200,000

Estimated fair value at December 31, 2022:

Investment	Cost	Estimated Fair Value
A	£ 2,000,000	£ 2,200,000
B	4,000,000	3,900,000
C	3,000,000	3,000,000
D	1,000,000	1,800,000
Total	£10,000,000	£10,900,000

Other information at December 31, 2022:

Equipment	£3,000,000
Accumulated depreciation (5-year SL)	1,200,000
New robotic equipment (purchased 1/1/22)	5,000,000
Accumulated depreciation (5-year DDB)	2,000,000

The company has never used robotic equipment before, and Warren assumed an accelerated method because of the rapidly changing technology in robotic equipment. The company normally uses straight-line depreciation for production equipment.

Aston explains to Warren that it is important for the company to show a £7,000,000 income before taxes because Aston receives a £1,000,000 bonus if the income before taxes and bonus reaches £7,000,000. Aston also does not want the company to pay more than £3,000,000 in income taxes to the government.

Instructions

a. What can Warren do within IFRS to accommodate the president's wishes to achieve £7,000,000 in income before taxes and bonus? Present the revised income statement based on your decision.

b. Are the actions ethical? Who are the stakeholders in this decision, and what effect do Warren's actions have on their interests?

P22.5 (LO 1) (Change in Policy—Inventory—Periodic) The management of Utrillo Instrument Ltd. had concluded, with the concurrence of its independent auditors, that results of operations would be more fairly presented if Utrillo changed its method of pricing inventory from FIFO to average-cost in 2022. Given below is the 5-year summary of income under FIFO and a schedule of what the inventories would be if recorded according to the average-cost method (amounts in millions, except earnings per share).

Utrillo Instrument Ltd.
Statement of Income and Retained Earnings
For the Years Ended May 31

	2018	2019	2020	2021	2022
Sales—net	¥13,964	¥15,506	¥16,673	¥18,221	¥18,898
Cost of goods sold Beginning inventory	1,000	1,100	1,000	1,115	1,237
Purchases	13,000	13,900	15,000	15,900	17,100
Ending inventory	(1,100)	(1,000)	(1,115)	(1,237)	(1,369)
Total	12,900	14,000	14,885	15,778	16,968
Gross profit	1,064	1,506	1,788	2,443	1,930
Administrative expenses	700	763	832	907	989
Income before taxes	364	743	956	1,536	941
Income taxes (50%)	182	372	478	768	471
Net income	182	371	478	768	470
Retained earnings—beginning	1,206	1,388	1,759	2,237	3,005
Retained earnings—ending	¥ 1,388	¥ 1,759	¥ 2,237	¥ 3,005	¥ 3,475
Earnings per share	¥1.82	¥3.71	¥4.78	¥7.68	¥4.70

Schedule of Inventory Balances Using Average-Cost Method
For the Year Ended May 31

2017	2018	2019	2020	2021	2022
¥1,010	¥1,124	¥1,101	¥1,270	¥1,500	¥1,720

Instructions

Prepare comparative statements for the 5 years, assuming that Utrillo changed its method of inventory costing to average-cost. Indicate the effects on net income and earnings per share for the years involved. Utrillo Instruments started business in 2017. (All amounts except EPS are rounded up to the nearest yen.)

P22.6 (LO 2, 3, 4) (Accounting Changes and Error Analysis) On December 31, 2022, before the books were closed, the management and accountants of Madrasa SA made the following determinations about three depreciable assets.

1. Depreciable asset A was purchased January 2, 2019. It originally cost €540,000 and, for depreciation purposes, the straight-line method was originally chosen. The asset was originally expected to be useful for 10 years and have a zero residual value. In 2022, the decision was made to change the depreciation method from straight-line to sum-of-the-years'-digits, and the estimates relating to useful life and residual value remained unchanged.
2. Depreciable asset B was purchased January 3, 2018. It originally cost €180,000 and, for depreciation purposes, the straight-line method was chosen. The asset was originally expected to be useful for 15 years and have a zero residual value. In 2022, the decision was made to shorten the total life of this asset to 9 years and to estimate the residual value at €3,000.
3. Depreciable asset C was purchased January 5, 2018. The asset's original cost was €160,000, and this amount was entirely expensed in 2018. This particular asset has a 10-year useful life and no residual value. The straight-line method was chosen for depreciation purposes.

Additional data:

1. Income in 2022 before depreciation expense amounted to €400,000.
2. Depreciation expense on assets other than A, B, and C totaled €55,000 in 2022.
3. Income in 2021 was reported at €370,000.
4. Ignore all income tax effects.
5. 100,000 ordinary shares were outstanding in 2021 and 2022.

Instructions

a. Prepare all necessary entries in 2022 to record these determinations.
b. Prepare comparative retained earnings statements for Madrasa SA for 2021 and 2022. The company had retained earnings of €200,000 at December 31, 2020.

P22.7 (LO 3, 4) Groupwork (Error Corrections) You have been assigned to examine the financial statements of Zarle Company for the year ended December 31, 2022. You discover the following situations.

1. Depreciation of $3,200 for 2022 on delivery vehicles was not recorded.
2. The physical inventory count on December 31, 2021, improperly excluded merchandise costing $19,000 that had been temporarily stored in a public warehouse. Zarle uses a periodic inventory system.
3. A collection of $5,600 on account from a customer received on December 31, 2022, was not recorded until January 2, 2023.

4. In 2022, the company sold for $3,700 fully depreciated equipment that originally cost $25,000. The company credited the proceeds from the sale to the Equipment account.
5. During November 2022, a competitor company filed a patent-infringement suit against Zarle claiming damages of $220,000. The company's legal counsel has indicated that an unfavorable verdict is probable and a reasonable estimate of the court's award to the competitor is $125,000. The company has not reflected or disclosed this situation in the financial statements.
6. Zarle has a portfolio of investments that it manages to profit from short-term price changes. No entry has been made to adjust to fair value. Information on cost and fair value is as follows.

	Cost	Fair Value
December 31, 2021	$95,000	$95,000
December 31, 2022	$84,000	$82,000

7. At December 31, 2022, an analysis of payroll information shows salaries and wages payable of $12,200. The Salaries and Wages Payable account has a balance of $16,000 at December 31, 2022, which was unchanged from its balance at December 31, 2021.
8. A large piece of equipment was purchased on January 3, 2022, for $40,000 and was charged to Maintenance and Repairs Expense. The equipment is estimated to have a service life of 8 years and no residual value. Zarle normally uses the straight-line depreciation method for this type of equipment.
9. A $12,000 insurance premium paid on July 1, 2021, for a policy that expires on June 30, 2024, was charged to insurance expense.
10. A trademark was acquired at the beginning of 2021 for $50,000. No amortization has been recorded since its acquisition. The maximum allowable amortization period is 10 years.

Instructions

Assume the trial balance has been prepared but the books have not been closed for 2022. Assuming all amounts are material, prepare journal entries showing the adjustments that are required. (Ignore income tax considerations.)

P22.8 (LO 3, 4) Groupwork **(Comprehensive Error Analysis)** On March 5, 2023, you were hired by Hemingway plc, a closely held company, as a staff member of its newly created internal auditing department. While reviewing the company's records for 2021 and 2022, you discover that no adjustments have yet been made for the items listed below.

Items

1. Interest income of £14,100 was not accrued at the end of 2021. It was recorded when received in February 2022.
2. A computer costing £4,000 was expensed when purchased on July 1, 2021. It is expected to have a 4-year life with no residual value. The company typically uses straight-line depreciation for all fixed assets.
3. Research costs of £33,000 were incurred early in 2021. They were capitalized and were to be amortized over a 3-year period. Amortization of £11,000 was recorded for 2021 and £11,000 for 2022.

4. On January 2, 2021, Hemingway leased a building for 5 years at a monthly rental of £8,000. On that date, the company paid the following amounts, which were expensed when paid.

Security deposit	£20,000
First month's rent	8,000
Last month's rent	8,000
	£36,000

5. The company received £36,000 from a customer at the beginning of 2021 for services that it is to perform regularly over a 3-year period beginning in 2021. None of the amount received was reported as unearned revenue at the end of 2021.
6. Merchandise inventory costing £18,200 was in the warehouse at December 31, 2021, but was incorrectly omitted from the physical count at that date. The company uses the periodic inventory method.

Instructions

Indicate the effect of any errors on the net income figure reported on the income statement for the year ending December 31, 2021, and the retained earnings figure reported on the statement of financial position at December 31, 2022. Assume all amounts are material and ignore income tax effects. Using the following format, enter the appropriate dollar amounts in the appropriate columns. Consider each item independent of the other items. It is not necessary to total the columns on the grid.

	Net Income for 2021		Retained Earnings at 12/31/22	
Item	Understated	Overstated	Understated	Overstated

P22.9 (LO 3, 4) (Error Analysis) Lowell AG has used the accrual basis of accounting for several years. A review of the records, however, indicates that some expenses and revenues have been handled on a cash basis because of errors made by an inexperienced bookkeeper. Income statements prepared by the bookkeeper reported €29,000 net income for 2021 and €37,000 net income for 2022. Further examination of the records reveals that the following items were handled improperly.

1. Rent was received from a tenant in December 2021. The amount, €1,000, was recorded as income at that time even though the rental pertained to 2022.
2. Salaries and wages payable on December 31 have been consistently omitted from the records of that date and have been entered as expenses when paid in the following year. The amounts of the accruals recorded in this manner were:

December 31, 2020	€1,100
December 31, 2021	1,200
December 31, 2022	940

3. Invoices for office supplies purchased have been charged to expense accounts when received. Inventories of supplies on hand at the end of each year have been ignored, and no entry has been made for them.

December 31, 2020	€1,300
December 31, 2021	940

December 31, 2022	1,420

Instructions

Prepare a schedule that will show the corrected net income for the years 2021 and 2022. All items listed should be labeled clearly. (Ignore income tax considerations.)

P22.10 (LO 3, 4) (Error Analysis and Correcting Entries) You have been asked by a client to review the records of Roberts Company, a small manufacturer of precision tools and machines. Your client is interested in buying the business, and arrangements have been made for you to review the accounting records. Your examination reveals the following information.

1. Roberts Company commenced business on April 1, 2019, and has been reporting on a fiscal year ending March 31. The company has never been audited, but the annual statements prepared by the bookkeeper reflect the following income before closing and before deducting income taxes.

Year Ended March 31	Income Before Taxes
2020	$ 71,600
2021	111,400
2022	103,580

2. A relatively small number of machines have been shipped on consignment. These transactions have been recorded as ordinary sales and billed as such. On March 31 of each year, machines billed and in the hands of consignees amounted to:

2020	$6,500
2021	none
2022	5,590

   The sales prices above were determined by adding 25% to cost. Assume that the consigned machines are sold the following year.

3. On March 30, 2021, two machines were shipped to a customer on a C.O.D. basis. The sale was not entered until April 5, 2021, when cash was received for $6,100. The machines were not included in the inventory at March 31, 2021. (Title passed on March 30, 2021.)

4. All machines are sold subject to a 5-year warranty. It is estimated that the expense ultimately to be incurred in connection with the warranty will amount to ½ of 1% of sales. The company has charged an expense account for warranty costs incurred.

   Sales per books and warranty costs were as follows.

Year Ended March 31	Sales	Warranty Expense for Sales Made in			Total
		2020	2021	2022	
2020	$ 940,000	$760			$ 760
2021	1,010,000	360	$1,310		1,670
2022	1,795,000	320	1,620	$1,910	3,850

5. Bad debts have been recorded on a direct write-off basis. Experience of similar enterprises indicates that losses will approximate ¼ of 1% of receivables. Bad debts written off were:

	Bad Debts Incurred on Sales Made in			Total

	2020	2021	2022	
2020	$750			$ 750
2021	800	$ 520		1,320
2022	350	1,800	$1,700	3,850

6. The bank deducts 6% on all contracts financed. Of this amount, ½% is placed in a reserve to the credit of Roberts Company, which is refunded to Roberts as finance contracts are paid in full. The reserve established by the bank has not been reflected in the books of Roberts. The excess of credits over debits (net increase) to the Dealer Fund Reserve account with Roberts on the books of the bank for each fiscal year were as follows.

2020	$ 3,000
2021	3,900
2022	5,100
	$12,000

7. Commissions on sales have been entered when paid. Commissions payable on March 31 of each year were as follows.

2020	$1,400
2021	900
2022	1,120

8. A review of the company minutes reveals the manager is entitled to a bonus of 1% of the income before deducting income taxes and the bonus. The bonuses have never been recorded or paid. (Use Salaries and Wages accounts.)

Instructions

a. Present a schedule showing the revised income before income taxes for each of the years ended March 31, 2020, 2021, and 2022. (Make computations to the nearest whole dollar.)

b. Prepare the journal entry or entries you would give the bookkeeper to correct the books. Assume the books have not yet been closed for the fiscal year ended March 31, 2022. Disregard correction of income taxes.

Concepts for Analysis

CA22.1 (LO 1, 2, 3, 4) Groupwork (Analysis of Various Accounting Changes and Errors) Joblonsky Jewelry has recently hired a new independent auditor, Karen Ogleby, who says she wants "to get everything straightened out." Consequently, she has proposed the following accounting changes in connection with Joblonsky's 2022 financial statements.

1. At December 31, 2021, the client had a receivable of €820,000 from Hendricks SA on its statement of financial position. Hendricks SA has gone bankrupt, and no recovery is expected. The client proposes to write off the receivable as a prior period item.
2. The client proposes the following changes in depreciation policies.
    a. For office furniture and fixtures, it proposes to change from a 10-year useful life to an 8-year life. If this change had been made in prior years, retained earnings at December 31, 2021, would have been €250,000 less. The effect of the change on 2022 income alone is a reduction of €60,000.

b. For its equipment in the leasing division, the client proposes to adopt the sum-of-the-years'-digits depreciation method. The client had never used SYD before. The first year the client operated a leasing division was 2022. If straight-line depreciation were used, 2022 income would be €110,000 greater.

3. In preparing its 2021 statements, one of the client's bookkeepers overstated ending inventory by €235,000 because of a mathematical error. The client proposes to treat this item as a prior period adjustment.
4. In the past, the client has spread preproduction costs in its furniture division over 5 years. Because its latest furniture is of the "fad" type, it appears that the largest volume of sales will occur during the first 2 years after introduction. Consequently, the client proposes to amortize preproduction costs on a per-unit basis, which will result in expensing most of such costs during the first 2 years after the furniture's introduction. If the new accounting method had been used prior to 2022, retained earnings at December 31, 2021, would have been €375,000 less.
5. For the nursery division, the client proposes to switch from FIFO to average-cost inventories because it believes that average-cost will provide a better matching of current costs with revenues. The effect of making this change on 2022 earnings will be an increase of €320,000. The client says that the effect of the change on December 31, 2021, retained earnings cannot be determined.
6. To achieve a better measure of income in its building construction division, the client proposes to switch from the cost-recovery method of accounting to the percentage-of-completion method. Had the percentage-of-completion method been employed in all prior years, retained earnings at December 31, 2021, would have been €1,075,000 greater.

Instructions

a. For each of the changes described above, decide whether:
   1. The change involves an accounting policy, accounting estimate, or correction of an error.
   2. Restatement of opening retained earnings is required.

b. What is the proper adjustment to the December 31, 2021, retained earnings?

CA22.2 (LO 1, 2, 3, 4) (Analysis of Various Accounting Changes and Errors) Various types of accounting changes can affect the financial statements of a business differently. Assume that the following list describes changes that have a material effect on the financial statements for the current year of your business.

1. A change from the cost-recovery method to the percentage-of-completion method of accounting for long-term construction-type contracts.
2. A change in the estimated useful life of previously recorded fixed assets as a result of newly acquired information.
3. A change from deferring and amortizing preproduction costs to recording such costs as an expense when incurred because future benefits of the costs have become doubtful. The new accounting method was adopted in recognition of the change in estimated future benefits.
4. A change from including the employer share of taxes with payroll tax expenses to including it with "Retirement benefits" on the income statement.

5. Correction of a mathematical error in inventory pricing made in a prior period.
6. A change in the method of accounting for leases for tax purposes to conform with the financial accounting method. As a result, both deferred and current taxes payable changed substantially.
7. A change from the FIFO method of inventory pricing to the average-cost method of inventory pricing.

Instructions

Identify the type of change that is described in each item above and indicate whether the prior year's financial statements should be retrospectively adjusted or restated when presented in comparative form with the current year's financial statements.

CA22.3 (LO 1, 2, 3) (Analysis of Three Accounting Changes and Errors) The following are three independent, unrelated sets of facts relating to accounting changes.

Situation 1: Sanford Company is in the process of having its first audit. The company has used the cash basis of accounting for revenue recognition. Sanford president, B. J. Jimenez, is willing to change to the accrual method of revenue recognition.

Situation 2: Hopkins plc decides in January 2022 to change from FIFO to weighted-average pricing for its inventories.

Situation 3: Marshall SE determined that the depreciable lives of its fixed assets are too long at present to fairly match the cost of the fixed assets with the revenue produced. The company decided at the beginning of the current year to reduce the depreciable lives of all of its existing fixed assets by 5 years.

Instructions

For each of the situations described, provide the information indicated below.

a. Type of accounting change.
b. Manner of reporting the change under IFRS, including a discussion, where applicable, of how amounts are computed.
c. Effect of the change on the statement of financial position and income statement.

CA22.4 (LO 1, 2, 3, 4) Writing (Analysis of Various Accounting Changes and Errors) Katherine Irving, controller of Lotan Corp., is aware that IFRS has issued a pronouncement on accounting changes. After reading the pronouncement, she is confused about what action should be taken on the following items related to Lotan Corp. for the year 2022.

1. In 2022, Lotan decided to change its policy on accounting for certain marketing costs. Previously, the company had chosen to defer and amortize all marketing costs over at least 5 years because Lotan believed that a return on these expenditures did not occur immediately. Recently, however, the time differential has considerably shortened, and Lotan is now expensing the marketing costs as incurred.
2. In 2022, the company examined its entire policy relating to the depreciation of plant equipment. Plant equipment had normally been depreciated over a 15-year period, but recent experience has indicated that the company was using too short a period in its estimates and that the assets should be depreciated over a 20-year period.

3. One division of Lotan Corp., Hawthorne Co., has consistently shown an increasing net income from period to period. On closer examination of its operating statement, it is noted that bad debt expense and inventory obsolescence charges are much lower than in other divisions. In discussing the situation with the controller of this division, information emerges that the controller has increased his net income each period by knowingly making low estimates related to the write-off of receivables and inventory.
4. In 2022, the company purchased new machinery that should increase production dramatically. The company has decided to depreciate this machinery on an accelerated basis even though other machinery is depreciated on a straight-line basis.
5. All equipment sold by Lotan is subject to a 3-year warranty. It has been estimated that the expense ultimately to be incurred on these machines is 1% of sales. In 2022, because of a production breakthrough, it is now estimated that ½ of 1% of sales is sufficient. In 2020 and 2021, warranty expense was computed as $64,000 and $70,000, respectively. The company now believes that these warranty costs should be reduced by 50%.
6. In 2022, the company decided to change its method of inventory pricing from average-cost to the FIFO method. The effect of this change on prior years is to increase 2020 income by $65,000 and increase 2021 income by $20,000.

Instructions

Katherine Irving has come to you, as her accountant, for advice about the situations above. Prepare a report, indicating the appropriate accounting treatment that should be given each of these situations.

CA22.5 (LO 2) Writing **(Changes in Estimate)** As a public accountant, you have been contacted by Joe Davison, CEO of Sports-Pro Athletics, a manufacturer of a variety of athletic equipment. He has asked you how to account for the following changes.

1. Sports-Pro appropriately changed its depreciation method for its production machinery from the double-declining-balance method to the production method effective January 1, 2022.
2. Effective January 1, 2022, Sports-Pro appropriately changed the residual values used in computing depreciation for its office equipment.

Instructions

Write a 1–1.5 page letter to Joe Davison, explaining how each of the above changes should be presented in the December 31, 2022, financial statements.

CA22.6 (LO 2) Ethics **(Change in Estimate, Ethics)** Mike Crane, audit senior of a large public accounting firm, has just been assigned to the Frost Corporation's annual audit engagement. Frost has been a client of Crane's firm for many years. Frost is a fast-growing business in the commercial construction industry. In reviewing the fixed asset ledger, Crane discovered a series of unusual accounting changes, in which the useful lives of assets, depreciated using the straight-line method, were substantially lowered near the midpoint of the original estimate. For example, the useful life of one dump truck was changed from 10 to 6 years during its fifth year of service. Kevin James, Frost's accounting manager tells Mike, "I don't really see your problem. After all, it's perfectly legal to change an accounting estimate. Besides, our CEO likes to see big earnings!"

Instructions

Answer the following questions.

a. What are the ethical issues concerning Frost's practice of changing the useful lives of fixed assets?
b. Who could be harmed by Frost's unusual accounting changes?
c. What should Crane do in this situation?

Using Your Judgment

Financial Reporting Problem

Marks and Spencer plc (M&S)

The financial statements of **M&S** (GBR) are presented in Appendix A. The complete annual report, including the notes to the financial statements, is available online.

Instructions

Refer to M&S's financial statements and the accompanying notes to answer the following questions.

a. Were there changes in accounting policies reported by M&S during the two years covered by its income statements (2018–2019)? If so, describe the nature of the change and the year of change.
b. What types of estimates did M&S discuss in 2019?

Comparative Analysis Case

adidas and Puma

The financial statements of **adidas** (DEU) and **Puma** (DEU) are presented in Appendices B and C, respectively. The complete annual reports, including the notes to the financial statements, are available online.

Instructions

Use the companies' financial information to answer the following questions.

a. Identify the changes in accounting policies reported by Puma during the 2 years covered by its income statements (2017–2018). Describe the nature of the change and the year of change.
b. Identify the changes in accounting policies reported by adidas during the 2 years covered by its income statements (2017–2018). Describe the nature of the change and the year of change.
c. For each change in accounting policy by adidas and Puma, identify, if possible, the cumulative effect of each change on prior years and the effect on operating results in the year of change.

Accounting, Analysis, and Principles

In preparation for significant international operations, ABC Co. has adopted a plan to gradually shift to the same accounting policies as used by its international competitors. Part of this plan includes a switch from average-cost inventory accounting to FIFO. ABC decides to make the switch to FIFO at January 1, 2022. The following data pertains to ABC's 2022 financial statements.

Sales	$550
Inventory purchases	350
12/31/22 inventory (using FIFO)	580
Compensation expense	17

All sales and purchases were with cash as were all of 2022's compensation expense (ignore taxes). ABC's plant, property, and equipment cost $400 and has an estimated useful life of 10 years with no residual value.

ABC Co. reported the following for fiscal 2021 (amounts are in millions).

ABC Co.
Statement of Financial Position
At December 31, 2021

	2021	2020		2021	2020
Plant, property, and equipment	$ 400	$ 400	Retained earnings	$ 685	$ 540
Accumulated depreciation	(80)	(40)	Share capital	500	500
Inventory	500	480			
Cash	365	200			
Total assets	$1,185	$1,040	Total equity	$1,185	$1,040

ABC Co.
Income Statement
For the Year Ended December 31, 2021

Sales	$ 500
Cost of goods sold	(300)
Depreciation expense	(40)
Compensation expense	(15)
Net income	$145

Summary of Significant Accounting Policies

Inventory: The company accounts for inventory by the average-cost method. The current cost of the company's inventory, which approximates FIFO, was $60 and $50 higher at the end of fiscal 2021 and 2020, respectively, than those reported in the statement of financial position.

Accounting

Prepare ABC's December 31, 2022, statement of financial position and an income statement for the year ended December 31, 2022. In columns beside 2022's numbers, include 2021's numbers *as they would appear in the 2022 financial statements* for comparative purposes.

Analysis

Compute ABC's inventory turnover for 2021 under both average-cost and FIFO. Assume averages are equal to year-end balances. What causes the differences in this ratio between average-cost and FIFO?

Principles

Briefly explain, in terms of the policies discussed in Chapter 22, why IFRS requires that companies that change accounting policies restate the prior year's financial statement data.

Bridge to the Profession

Authoritative Literature References

[1] International Accounting Standard 8, *Accounting Policies, Changes in Accounting Estimates, and Errors* (London, U.K.: International Accounting Standards Committee Foundation, 2003).

[2] International Accounting Standard 8, *Accounting Policies, Changes in Accounting Estimates, and Errors* (London, U.K.: International Accounting Standards Committee Foundation, 2003), paras. 19–22.

[3] International Accounting Standard 8, *Accounting Policies, Changes in Accounting Estimates, and Errors* (London, U.K.: International Accounting Standards Committee Foundation, 2003), par. 13.

[4] International Accounting Standard 8, *Accounting Policies, Changes in Accounting Estimates, and Errors* (London, U.K.: International Accounting Standards Committee Foundation, 2003), paras. 11–12.

[5] International Accounting Standard 8, *Accounting Policies, Changes in Accounting Estimates, and Errors* (London, U.K.: International Accounting Standards Committee Foundation, 2003), par. 29.

[6] International Accounting Standard 8, *Accounting Policies, Changes in Accounting Estimates, and Errors* (London, U.K.: International Accounting Standards Committee Foundation, 2003), par. 24.

[7] International Accounting Standard 8, *Accounting Policies, Changes in Accounting Estimates, and Errors* (London, U.K.: International Accounting Standards Committee Foundation, 2003), par. 29(e).

[8] International Accounting Standard 8, *Accounting Policies, Changes in Accounting Estimates, and Errors* (London, U.K.: International Accounting Standards Committee Foundation, 2003), paras. 37–38.

[9] International Accounting Standard 8, *Accounting Policies, Changes in Accounting Estimates, and Errors* (London, U.K.: International Accounting Standards Committee Foundation, 2003), par. 39.

[10] International Accounting Standard 8, *Accounting Policies, Changes in Accounting Estimates, and Errors* (London, U.K.: International Accounting Standards Committee Foundation, 2003), par. 5.

Research Case

As part of the year-end accounting process and review of operating policies, Cullen Group is considering changing from the straight-line method to an accelerated method when accounting for its equipment. Your supervisor wonders how the company will report this change. It has been a few years since he took intermediate accounting, and he cannot remember whether this change would be treated in a retrospective or prospective manner. Your supervisor wants you to research the authoritative guidance on a change in accounting policy related to depreciation methods.

Instructions

Access the IFRS authoritative literature at the IFRS website (you may register for free IFRS access at this site). When you have accessed the documents, you can use the search tool in your Internet browser to respond to the following questions. (Provide paragraph citations.)

a. What are the accounting and reporting guidelines for a change in accounting related to depreciation methods?

b. What conditions justify a change in depreciation method, as contemplated by Cullen Group?

Global Accounting Insights

LEARNING OBJECTIVE 5

Compare the procedures for accounting changes and error analysis under IFRS and U.S. GAAP.

The FASB has issued guidance on changes in accounting policies, changes in estimates, and corrections of errors. These changes essentially converge U.S. GAAP with *IAS 8*.

Relevant Facts

Following are the key similarities and differences between U.S. GAAP and IFRS related to the accounting for accounting changes.

Similarities

- The accounting for changes in estimates is similar between U.S. GAAP and IFRS.
- Both U.S. GAAP and IFRS use the retrospective approach for accounting for a change in accounting policy (principle).
- Under U.S. GAAP and IFRS, if determining the effect of a change in accounting policy is considered impracticable, then a company should report the effect of the change in the period in which it believes it practicable to do so, which may be the current period.

Differences

- One area in which U.S. GAAP and IFRS differ is the reporting of error corrections in previously issued financial statements. While both sets of standards require restatement, U.S. GAAP is an absolute standard—there is no exception to this rule.
- Under U.S. GAAP, the impracticability exception applies only to changes in accounting principle (policy). Under IFRS, this exception applies both to changes in accounting principles (policies) and to the correction of errors.
- U.S. GAAP has detailed guidance on the accounting and reporting of indirect effects. As indicated in the chapter, IFRS (*IAS 8*) does not specifically address the accounting and reporting for indirect effects of changes in accounting principles.

About the Numbers

A tangential discussion of accounting changes concerns how companies that follow IFRS report financial information related to the equity method of accounting. Under the equity method, the investor increases its investment for the pro-rata share of the net income of the investee (often referred to as an associated company under IFRS). On the other hand, the investor reduces its investment for any dividends received from the investee. Both IFRS and U.S. GAAP follow this accounting approach.

However, there is a subtle difference between IFRS and U.S. GAAP in how the investor evaluates the accounting policies of the investee. To illustrate, assume that Kirkland Company (the investor company) uses the FIFO inventory method, and Margo Company (the investee company) uses average-cost for its inventory valuation. If Kirkland follows IFRS, Kirkland must conform the accounting policies of Margo to its own accounting policies. Therefore, Kirkland adjusts the net income of Margo so its net income is reported on the FIFO basis.

This procedure is not used under U.S. GAAP. Under U.S. GAAP, Kirkland ignores the fact that Margo uses a different method of inventory valuation. Kirkland records its pro-rata share of the net income of Margo without adjusting for the fact that Margo uses a different inventory valuation method. As a result, under U.S. GAAP there is a lack of comparability in the inventory methods used to report net income for Kirkland Company.

On the Horizon

Because U.S. GAAP and IFRS are, for the most part, similar in the area of accounting changes and reporting the effects of errors, there is no active project in this area. A related development involves the presentation of comparative data. U.S. GAAP (SEC) requires comparative information for a three-year period. Under IFRS, when a company prepares financial statements on a new basis, two years of comparative data are reported. Use of the shorter comparative data period must be addressed before U.S. companies can adopt IFRS. The IASB has a project related to materiality and accounting changes, which could lead to additional differences in the accounting for this area relative to U.S. GAAP. See the IFRS website for more information.

GAAP Self-Test Questions

1. Which of the following is **false**?

a. U.S. GAAP and IFRS have the same absolute standard regarding the reporting of error corrections in previously issued financial statements.

b. The accounting for changes in estimates is similar between U.S. GAAP and IFRS.

c. Under IFRS, the impracticability exception applies both to changes in accounting principles and to the correction of errors.

d. U.S. GAAP has detailed guidance on the accounting and reporting of indirect effects; IFRS does not.

2. Which of the following is **not** classified as an accounting change by U.S. GAAP?

a. Change in accounting policy.

b. Change in accounting estimate.

c. Errors in financial statements.

d. None of the above.

3. U.S. GAAP requires companies to use which of the following methods for reporting changes in accounting policies?

a. Cumulative effect approach.

b. Retrospective approach.

c. Prospective approach.

d. Averaging approach.

4. Under U.S. GAAP, the retrospective approach should **not** be used if:

a. retrospective application requires assumptions about management's intent in a prior period.

b. the company does not have trained staff to perform the analysis.

c. the effects of the change have counterbalanced.

d. the effects of the change have not counterbalanced.

5. Which of the following is **true** regarding whether U.S. GAAP specifically addresses the accounting and reporting for effects of changes in accounting policies?

	Direct effects	Indirect effects
a.	Yes	Yes
b.	No	No
c.	No	Yes
d.	Yes	No

GAAP Concepts and Application

GAAP22.1 What is the major difference in accounting for errors under IFRS versus U.S. GAAP?

GAAP22.2 How are direct and indirect changes in accounting policy reported under U.S. GAAP?

GAAP22.3 What is the difference in approach between U.S. GAAP and IFRS regarding the equity method of accounting for the investor?

Answers to GAAP Self-Test Questions

1. a **2.** c **3.** b **4.** a **5.** a

Notes

1 In some cases, a particular transaction is not specifically addressed by IFRS. In this situation, *IAS 8* sets out a hierarchy of guidance to be considered in the selection of an accounting policy. The primary requirement is that management must use judgment to develop information that is relevant and representationally faithful. In making that judgment, it should use the following sources in descending order: (1) the requirements and guidance in IFRS dealing with similar and related issues; (2) the definitions, recognition criteria, and measurement concepts for the elements in the Conceptual Framework; and (3) other materials, such as standards from other countries, that use a similar conceptual framework. **[4]**

2 Financial statements of subsequent periods need not repeat these disclosures. **[5]**

3 The rationale for this approach is that companies should recognize, in the period the adoption of the new accounting policy occurs (not the prior period), the effect on cash flows. That is, the accounting change is a necessary "past event" in the definition of an asset or liability that gives rise to the accounting recognition of the indirect effect in the current period.

4 The term **retrospective restatement** is used for the process of revising previously issued financial statements to reflect a correction of an error. This term distinguishes an error correction from a change in accounting policy, referred to as retrospective application.

Source: Adapted from "2018 Financial Restatements: An Eighteen Year Comparison," *Audit Analytics Trend Reports* (August 26, 2019).