WILEY

Reading 21: Understanding Income Statements

Learning Outcome Statements

- Covered
 - 21a, 21b, 21c, 21d, 21e, 21f, 21g, 21h, 21i, 21j, 21k, 21l
- Not Covered
 - None

Presentation Formats of the Income Statement

Under IFRS, the income statement may be presented as:

- A section of a single statement of comprehensive income; or
- A separate statement (showing all revenues and expenses) followed by a statement of comprehensive income that begins with net income.

Under **US GAAP**, the income statement may be presented as:

- A section of a single statement of comprehensive income.
- A separate statement followed by a statement of comprehensive income that begins with net income.
- A separate statement with the components of other comprehensive income presented in the statement of changes in shareholders' equity.

Exhibit 1 (shown ahead) shows the income statement of Van Dort Inc. (a European company). **Exhibit 2** (shown ahead) shows the income statement of Johnson Inc. (an American company).

Exhibit 1

VANDORT INCORPORATED

Income Statement
For the Year Ended December 31, 2008

		2007	2008
		€	€
1 ←	Net revenue	55,000	59,240
	Cost of goods sold	-39,000	-41,240
	Selling expenses	-6,500	-7,150
	General and administrative expenses	-2,240	-3,350
	Research and development expenses	-1,050	-1,100
	Other revenue (expense)	-675	-650
	Trading operating income	5,524	5,750
	Other operating income (expense)	-105	240
3 ←	Operating income	5,420	6,000
	Interest revenue	60	85
	Interest expense	-350	-275
	Cost of net debt	-290	-190
	Other financial revenue expense	-450	-750
	Income before tax	4,680	5,060
	Income tax	-2,124	-1,950
	Income from fully consolidated companies	2,555	3,110
	Share of profits from associates	20	-50
	Net income from continuing operations	2,575	3,060
	Net income from discontinued operations	235	0
5 ←	NET INCOME	2,810	3,060
	Attributable to the group	2,529	2,754
4	Attributable to minority interests	281	306

Exhibit 2

JOHNSON INCORPORATED

Income Statement

For the Year Ended December 31, 2008

		2008	2007
		\$;
1	Net revenues	15,000	13,500
	Cost of sales	11,050	10,075
2 ←	Gross profit	3,950	3,424
	Marketing, administrative, and research expenses	975	695
	Loss (gain) on sale of equipment	250	0
	Impairment expense	175	105
	Loss (gain) on sale of old vehicles	225	275
	Amortization of intangibles	25	55
3 ←	Operating income	2,300	2,295
	Net interest expense	450	430
	Earnings from continuing operations before income taxes	1,850	1,865
	Provision for income taxes	240	135
	Earnings from continuing operations	1,610	1,730
	Earnings and gain from discontinued operations, net of income taxes	0	55
5 ←	Net earnings	1,610	1,785
4 -	Noncontrolling interest	16	18
	Net earnings attributable to Johnson Incorporated	1,594	1,767

Understanding the Income Statement

- **1** ← Revenue:
 - First line of the income statement.
 - Revenues are amounts charged for goods.
 - Net revenue is total revenue adjusted for returns.
- - Difference between revenues and cost of goods that were sold.

Understanding the Income Statement

3 ← Operating income:

- Revenues minus expenses
- Profit earned during ordinary business
- Evaluates just the profits earned during the companies' core business operations

Exhibits 1 and 2 contain income statements of nonfinancial companies. For financial firms, interest income and expense are part of ordinary business activities, so they are included in operating income.

Understanding the Income Statement

- △ A majority-owned subsidiary necessitates consolidated statements.
 - Combine all revenues and expenses.
 - Noncontrolling interest deducted.

5 ← Net income

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Net income = Revenue - Expenses in the ordinary activities of the business + Other income - Other expenses + Gains - Losses
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- It is the "bottom line" of the income statement.
- Operating income plus nonoperating net income.

Which of the following is *least likely* another name for the income statement?

- A. Statement of financial position
- B. Statement of operations
- C. Statement of earnings

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- B. Statement of operations
- C. Statement of earnings

Answer: A

Statement of financial position refers to the **balance sheet**.

Core Principle of Revenue Recognition

Converged standards seek to provide principles-based approach to revenue recognition

Steps:

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

Which of the following is *not* a step in the converged revenue recognition standard?

- A. Determine transaction price.
- B. Identify the contracts with a competitor.
- C. Allocate transaction price.

Which of the following is not a step in the converged revenue recognition standard?

- A. Determine transaction price.
- B. Identify the contracts with a competitor.
- C. Allocate transaction price.

Answer: B

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

Revenue Recognition

Accounting Treatment

- When revenue is recognized, a contract asset is presented on the balance sheet.
- If all performance obligations have been satisfied but payment has not been received, a receivable appears on the seller's balance sheet.
- If payment is received in advance of transferring good(s) or service(s), the seller presents a contract liability.

Revenue may be recognized when the seller is able to satisfy the performance obligation by transferring control to the customer. Factors that determine whether the customer has obtained control of an asset at a point in time include:

- The seller has a present right to payment.
- The customer has legal title.
- The customer has physical possession.
- The customer has the significant risks and rewards of ownership.
- The customer has accepted the asset.

Examples of more complex contracts include:

- Contracts where performance obligations are met over time.
- Multiperiod contracts where terms are modified.
- Contracts where the performance obligation includes various components of goods and services, or when the compensation is variable (e.g., bonuses for timely completion).

A construction company, ABC Inc., enters into a contract with XYZ Inc. to construct a commercial building. The two parties identify several goods and services that must be provided, including pre-construction engineering, construction of the building's individual components, plumbing, electrical works, and interior finishing.

Question: When it comes to "identifying the performance obligation," can ABC treat each specific item as a separate performance obligation to which revenue can be allocated?

NO!

ABC's building construction contract with XYZ specifies consideration of \$2 million. ABC expects to incur costs amounting to \$1,700,000 to satisfy the terms of the contract. During Year 1, ABC incurs \$1,190,000 in costs.

Question: Given that costs incurred accurately reflect the completion status of the contract, how much revenue should ABC recognize for Year 1?

The converged standards state that when performance obligations will be satisfied over multiple accounting periods, revenue must be recognized over time based on progress made toward satisfying the obligation. Since ABC has incurred 70% (= 1,190,000/1,700,000) of total expected contract costs, it will recognize \$1,400,000 (70% of \$2 million) in revenue in Year 1.

Now assume that ABC's building construction contract with XYZ is worth \$2 million plus a bonus payment of \$300,000 if the project is completed within two years. ABC has limited experience with similar types of contracts, and many factors outside its control (e.g., weather, regulatory reforms, availability of materials) could delay completion. ABC expects to incur \$1,700,000 worth of costs to complete the building. It incurs \$1,190,000 in costs Year 1.

Question: Given that costs incurred provide an appropriate measure of progress toward contract completion, how much revenue should ABC recognize in Year 1?

In this example, ABC is unable to reach this conclusion due to (1) its limited experience and (2) the various factors outside its control that could delay the project. Therefore, it cannot recognize any of the bonus as revenue in Year 1.

Continuing from the previous example, now assume that at the beginning of Year 2 the two parties to the contract agree to change the building floor plan and modify the contract. As a result, the contract will now be worth \$2.2 million, and the \$300,000 bonus will now be paid out as long as the project is completed in another 1.5 years (2.5 years from initiation). The changes will result in an increase in ABC's costs amounting to \$150,000, but now, with an additional six months to earn the bonus, ABC believes that it does meet the criteria for being able to recognize the bonus as revenue.

Question: How should ABC account for the changes in the contract?

ABC's expected total revenue from the project is now \$2.5 million (\$2 million original amount + \$200,000 new consideration + \$300,000 completion bonus).

Its completion status is now at 64.32% (\$1,190,000 costs incurred/total expected costs of \$1,700,000 + \$150,000).

Based on the updated completion status and expected total revenue, ABC must recognize a total amount of \$1,608,108 (calculated as 64.32% of \$2.5 million) in revenue.

ABC has already recognized \$1,400,000 worth of revenue (from previous example, Slide 17), so it must now recognize an additional \$208,108 of revenue as a cumulative catch-up adjustment on the date of the contract modification.

Expenses

- IASB: Expenses are decreases in economic benefits or losses from ordinary activities or otherwise.
- Matching principle: Expenses recognized in same period as revenues.
- Period costs: (overhead) Not linked to specific revenue—allocated over time

Which of the following accurately describes the matching principle?

- A. Overhead expenses recorded in same period as revenues
- B. Ordinary expenses recorded in same period as revenues
- C. Expenses recorded up to level of revenues for period

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- B. Ordinary expenses recorded in same period as revenues
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Answer: B

Overhead expenses cannot be directly traced to the revenues they help generate.

Different Inventory Methods

Specific Identification Method

Used when a company can specifically identify which units of inventory have been sold over the year and which ones remain in stock (for example, automobiles).

Inventory Costing Methods

Method	Description	Cost of Goods Sold	Ending Inventory
FIFO	Costs of the earliest items purchased are included in cost of goods sold first.	Earliest purchases	Most recent purchases
LIFO	Costs of the most recent purchases are included in cost of goods sold first.	Most recent purchases	Earliest purchases
Weighted average	Distributes total costs over total units available for sale.	Average cost	Average cost

Expense Recognition Applications

Doubtful Accounts

- Accounts receivable may not be fully collected
- Firms accrue an estimate of amount that will not be collected
- Direct write-off involves waiting for actual defaults to recognize expense

Warranties

- Expected future expense of honoring warranties
- Estimate future warranty-related expenses and recognize these amounts on the income statement in the period of sale, and
- To update this amount to bring it in line with actual expenses incurred over the life of the warranty

Depreciation

- Matching cost of long-term assets with revenues they help generate
- IFRS—uses cost or revaluation model
 - Asset components separate
 - Residual estimates reviewed annually
 - Depreciation method choice depends on expected use
- GAAP—only cost model

Amortization

- Like depreciation but intangible assets
- Straight-line method if identifiable life
- Indefinite useful life tested annually for impairment
- Impairment = current value below book value

Depreciation Methods

Multiple methods possible—yearly expense will vary, total expense constant across methods

Straight-line Method

- Same expense each year
- Leaves a residual value

(Cost - Residual value) / Useful life

Accelerated Methods

- Faster initial depreciation
- Selected if asset used more heavily early in life

Depreciation Methods

Declining Balance Depreciation

- Constant rate of depreciation
- Multiply 1/lifetime's remaining book value
- Multiply by factor chosen

Double Declining Balance Method

- Factor chosen is 2
- Residual value is not considered in annual depreciation expense.
- Stop depreciating when residual value is reached.
- The asset is only depreciated until its net book value equals its residual value.

(2 / Useful life) × (Cost - Accumulated depreciation)

Discontinued Operations

Must report discontinued operations when both:

- Company disposes of component
- Component can be separately identified
- Reported net of tax, after income from continuing ops
- Should be considered separately for analysis

Unusual or Infrequent Items

- Would have to be both to be an extraordinary item
- Listed separately
- Reported above net income from continuing
- Future analysis includes if likely to reoccur

Changes in Accounting Policies

- A change in accounting policy could be required by standard setters or be decided on by management to provide a better reflection of the company's performance.
- Change in estimate only reflected in future periods
- Correction of prior-period errors generates restated statement
- All significant changes should be disclosed

Which of the following is the *most appropriate* classification of profit on sale of discontinued operations by a manufacturing firm?

- A. Gain reported as a part of continuing operations
- B. Revenue considered a part of operating activities
- C. Gain reported after continuing operations

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Answer: C

Gain on sale of discontinued operations is reported after income from continuing operations.

Simple vs. Complex Capital Structures

- Simple structure
- No securities that can be converted.
- No potentially dilutive securities
- Dilutive securities would decrease earnings per share if converted

Basic Earnings per Share

- Net income claimed by common shareholders
- Remove preferred dividends
- Find average of shares throughout year based on length of period outstanding

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Basic EPS = Net income - Preferred dividends
Weighted average number of shares outstanding
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Stock Repurchases, Stock Splits, and Stock Dividends

- Decrease shares outstanding
- Weighted average—subtract number repurchased times months left after repurchase
- Splits increase shares outstanding
- Dividends increase shares outstanding

Calculating Basic EPS

Example:

LEM Company has reported net income of \$1,850,000 for the year ended December 31, 2008. The company declared preferred dividends of \$150,000. The following information regarding shares outstanding is available:

Shares outstanding at January 1, 2008 1,000,000

2-1 stock split on April 1, 2008

Shares issued on June 30, 2008 500,000

10% stock dividend on September 1, 2008

Shares repurchased on October 1, 2008 150,000

Shares outstanding on December 31, 2000 2,600,000

Calculate 2008 basic EPS for LEM.

Calculating Basic EPS

150,000

Solution

Shares outstanding on Jan 1	1,000,000
2-for-1 stock split	1,000,000
	2,000,000
10% stock dividend	200,000
Shares outstanding since Jan 1 (for 12 months)	2,200,000
Shares issued on June 30	500,000
10% stock dividend	<u>50,000</u>
Shares outstanding since June 30 (for 6 months)	550,000

VERY IMPORTANT

When weighting the shares, assume that the new shares issued from the stock spit or stock dividend were outstanding NOT since date of split or stock dividend declaration, but from the date that the original shares were outstanding from.

Shares repurchased on October 1

Not outstanding for 3 months

Calculating Basic EPS

Solution (Cont.)

Weighted-average number of shares outstanding

=
$$(2,200,000 \times 12/12) + (550,000 \times 6/12) - (150,000 \times 3/12) = 2,437,500$$

Basic EPS =
$$\frac{\text{(Net income - Preferred dividends)}}{\text{Weighted average number of shares outstanding}}$$
Basic EPS = $(\$1,850,000 - \$150,000)/2,437,500 = \$0.70$

Common stock at the beginning of the year: 50,000 shares

Shares issued on July 1: 4,000

Preferred stock: 12,000 shares, each of them convertible into 3 shares of common stock. Dividends amounting to \$6,000 were declared on these shares.

The company reported net income of \$200,000 and paid \$10,000 as dividends to its common shareholders.

The company's basic EPS is *closest to*:

A. 3.65.

B. 3.41.

C. 3.73.

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The company reported net income of \$200,000 and paid \$10,000 as dividends to its common shareholders.

The company's basic EPS is *closest to*:

A. 3.65.

B. 3.41.

C. 3.73.

Answer: C

Basic EPS = (Net income – Preferred dividends)/Weighted-avg. no. of ordinary shares Basic EPS = (200,000 - 6,000)/(50,000 + 2,000) = \$3.731

- EPS if all actually dilutive shares converted
- If EPS is lower after conversion, include in diluted EPS
- If not, exclude from diluted EPS

Diluted EPS = Net income - Preferred dividends + Convertible preferred dividends

Weighted average number of shares outstanding + New common shares
issued upon conversion

Convertible preferred dividends
New shares issued upon conversion

Which of the following is *least likely* an example of a potentially dilutive security?

- A. Preference shares
- B. Stock options
- C. Convertible bonds

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- C. Convertible bonds

Answer: A

Preference shares are not potentially dilutive securities, as they **cannot** be converted into ordinary shares of the company. Options, warrants, convertible preference shares, and convertible bonds may be converted into ordinary shares and are, therefore, potentially dilutive.

Example:

Xingia Inc. earns profits of \$2,500,000 for the year ended December 31, 2008. Xingia has 1,000,000 weighted-average shares outstanding during the year and pays taxes at the rate of 40%. Xingia also has 1,000 convertible preferred shares outstanding, which pay a dividend of \$50 per share every year. Each convertible preferred share can be converted into 100 common shares. Calculate Xingia's basic and diluted EPS for 2008.

Solution

Basic EPS = (\$2,500,000 - \$50,000)/1,000,000 = \$2.45

Each preferred share can be converted into 100 shares of common stock. Therefore: Number of common shares issued upon conversion = $100 \times 1,000 = 100,000$

Diluted EPS = (\$2,500,000 - \$50,000 + \$50,000)/(1,000,000 + 100,000) = \$2.27

Since basic EPS equals \$2.45 and EPS assuming that convertible preferred shares are converted is lower (\$2.27), the convertible preferred shares are dilutive.

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Diluted EPS = Net income - Preferred dividends + Convertible debt interest × (1-t)

Weighted average number of shares outstanding +

New common shares issued upon conversion
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Convertible bond interest (1-t)
New shares issued upon conversion

Example:

Xingia Inc. earns profits of \$2,500,000 for the year ended December 31, 2008. Xingia has a weighted average of 1,000,000 shares outstanding during the year and pays taxes at the rate of 40%. Xingia has 1,000 preferred shares outstanding, which offer a dividend of \$50 per share every year. Xingia also has \$75,000 par of 10% convertible bonds outstanding, which are convertible into 7,000 shares of common stock. Calculate Xingia's basic and diluted EPS for 2008.

Solution

Basic EPS = (\$2,500,000 - \$50,000)/1,000,000 shares = \$2.45

To determine diluted EPS, first calculate the after-tax interest on convertible debt. After-tax interest on convertible debt = \$7,500 (1 - 0.40) = \$4,500

The convertible bonds can be converted into **7,000** shares of common stock. **Diluted EPS** = (\$2,500,000 - \$50,000 + \$4,500)/(1,000,000 + 7,000) = \$2.43

Since basic EPS is \$2.45 and EPS assuming that convertible bonds are converted is lower (\$2.43), the company's outstanding convertible bonds are dilutive, and diluted EPS for 2008 equals \$2.43.

- Use Treasury stock method with options or warrants
- Assumed exercised if in-the-money versus average price for the year
- Proceeds equal strike price times options outstanding

Example:

Xingia Inc. earns profits of \$2,500,000 for the year ended December 31, 2008. Xingia has 1,000,000 shares outstanding during the year and pays taxes at the rate of 40%. Xingia paid preference dividends amounting to \$50,000 in 2008. The average market price of Xingia's stock over the year was \$50. Xingia has 10,000 stock options outstanding, which have an exercise price of \$30. Calculate Xingia's diluted EPS for 2008.

Solution

Average market price > exercise price of the options = assumed to have been exercised

No. of common shares issued to option holders = **10,000**

Cash proceeds from exercise of options = \$300,000 (10,000 shares × \$30)

No. of shares that can be purchased at avg. market price with these funds = \$300,000/\$50 = 6,000

Solution (Cont.)

Net increase in common shares outstanding from the exercise of options = 10,000 - 6,000 = 4,000

Diluted EPS = \$2,500,000 - \$50,000 / (1,000,000 + 10,000 - 6,000) = **\$2.44**

Diluted EPS (\$2.44) is lower than basic EPS (\$2.45). Therefore, the options are dilutive and should be considered in the calculation of diluted EPS.

Common stock at the beginning of the year: 50,000 shares

Shares issued on July 1: 4,000

Preferred stock: 12,000 shares, each of them convertible into 3 shares of common stock. Dividends amounting to \$6,000 were declared on these shares.

The company reported net income of \$200,000 and paid \$10,000 as dividends to its common shareholders.

The company's diluted EPS is *closest to*:

A. 2.27.

B. 2.20.

C. 2.22.

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The company reported net income of \$200,000 and paid \$10,000 as dividends to its common shareholders.

The company's diluted EPS is closest to:

A. 2.27.

B. 2.20.

C. 2.22.

Answer: A

In calculating diluted EPS, we will assume that the convertible preferred stock is converted into common stock. Therefore, number of new shares issued will be added in the denominator and preferred dividend will not be subtracted from the numerator (as it will not be paid).

Diluted EPS = 200,000/(52,000 + 36,000) = \$2.27

Analysis of the Income Statement

- Common-size statements list each line as a percentage of sales
- Aids time-series analysis
- Effective tax rate is income taxes as percentage of pretax income
- Ratios like net profit margin should be analyzed over time and across rival companies

When an income statement explicitly shows gross profit as a subtotal, it *most likely* uses a:

- A. Multistep format.
- B. Common-size format.
- C. Single-step format.

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- B. Common-size format
- C. Single-step format

Answer: A

When the income statement shows a gross profit subtotal, it is said to use a multistep format.

Comparing an income statement ratio like net profit margin against industry rivals would be an example of:

- A. Cross-sectional analysis.
- B. Common-size analysis.
- C. Time-series analysis.

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- A. Cross-sectional analysis.
- B. Common-size analysis.
- C. Time-series analysis.

Answer: A

Comparing current-period ratios with those of competitors is a form of cross-sectional analysis.

Comprehensive Income

- Includes all changes in equity during the measurement period
- Types of income listed under comprehensive income
 - Foreign currency translation adjustments.
 - Unrealized gains or losses on derivatives contracts accounted for as hedges.
 - Unrealized holding gains and losses on a certain category of investment securities, namely, available-forsale debt securities under US GAAP and securities designated as "fair value through other comprehensive income" under IFRS. (Note: IFRS, but not US GAAP, also includes a category of equity investments designated at fair value through other comprehensive income.)
 - Certain costs of a company's defined benefit postretirement plans that are not recognized in the current period.
 - Under IFRS, certain changes in the value of long-lived assets that are measured using the revaluation model (as opposed to the cost model) at fair value are also included in other comprehensive income.

Which of the following is *least likely* to be classified as other comprehensive income under US GAAP?

- A. Changes in the value of long-lived assets that are measured using the revaluation model
- B. Unrealized holding gains and losses on available-for-sale debt securities
- C. Minimum pension liability adjustments

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- A. Changes in the value of long-lived assets that are measured using the revaluation model
- B. Unrealized holding gains and losses on available-for-sale securities
- C. Minimum pension liability adjustments

Answer: A

The revaluation model is **not** allowed under US GAAP; it uses the cost model.

A company's other comprehensive income *most likely* includes:

- A. Unrealized gains and losses from cash flow hedging derivatives.
- B. Dividends paid.
- C. Net income.

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- A. Unrealized gains and losses from cash flow hedging derivatives.
- B. Dividends paid.
- C. Net income.

Answer: A

Unrealized gains and losses from cash flow hedging derivatives are included in other comprehensive income. Net income is included in **comprehensive income** but not in other comprehensive income.