3. Financial Reporting and Analysis

3.1. The Role of Financial Reporting

3.1.1. 重要知识点

3.1.1.1. Role of financial reporting

- Financial statement analysis definition
  - Use financial reports prepared by companies, combined with other information, to evaluate the past, current, and potential performance and financial position of a company for the purpose of **making investment, credit, and other economic decisions**.
- The role of financial reporting by companies is to **provide information** about a company's performance, financial position, and changes in financial position that is useful to a wide range of users in making economic decisions.

3.1.2. 基础题

Q-1. Providing information about the performance of a company, its financial position, and changes in financial position that is useful to a wide range of users is most accurately described as the role of:

A. financial reporting.

B. the audit report.

C. financial statement analysis.

3.2. Other Information Sources of Financial Statements

3.2.1. 重要知识点

3.2.1.1. Financial notes and supplementary schedules

- Notes and financial statements are an integral part of the complete set of financial statements. Since it is important to understand different accounting choices between comparable, sometimes need to make necessary adjustments so that the financial statement data used are more comparable.
- **The notes** provide information that is essential to understanding the information provided in the primary statements, which clarify the explanatory information about every line item (or almost every line item) on the balance sheet and income statement
- **Note disclosures** include information about the following
  - Accounting policies, methods, and estimates;
  - Financial instruments and risks arising from financial instruments;
  - Commitments and contingencies;
  - Denominated currency;
  - Compliance of law & legal proceedings;
  - Related-party transactions;
  - Subsequent events (i.e., events that occur after the balance sheet date);
  - Business acquisitions and disposals;
  - Rounded figures & minor discrepancies;
  - Operating segments' performance.

3.2.1.2. Management's discussion and analysis (MD&A)

- **General contents (publicly held companies):** nature of the business, past results, material uncertainty and future outlook.

- **Characteristic:** MD&A is a good for understanding information in the financial statements. In particular, the forward-looking disclosures in an MD&A, can be useful in projecting a company's future performance.
- Those **content elements** include
  - The nature of the business;
  - Management's objectives and strategies;
  - The company's significant resources, risks, and relationships;
  - Results of operations;
  - Critical performance measures.

3.2.1.3. SEC requires listed companies to provide an MD&A and specifies the content.

- Form S-1
  - Registration statement filed prior to initial public offerings.
- Form 10-K
  - Financial statements reported annually.
- Form 10-Q
  - Financial statements reported quarterly.
- Form DEF-14A
  - Proxy statements.
- Form 8-K
  - Major events as acquisitions or disposals of corporate assets, corporate governance and management changes.
- Form 144
  - Notice of the proposed sale of restricted securities or securities held by an affiliate of the issuer.
- Forms 3,4,5
  - Report beneficial ownership of securities.

3.2.1.4. Other sources of information

- **Proxy statements**
  - Management compensation; stock performance; potential conflict of interests;
  - Matters that are to be put to a vote at the company's annual (or special) meeting of shareholders.
- **Interim reports**
  - Provided by the company either semiannually or quarterly, depending on the applicable regulatory requirements.
  - Interim reports generally present the four basic financial statements and condensed notes but are not audited.
  - These interim reports provide updated information on a company's performance and financial position since the last annual period.
- **Earnings announcements**
  - Followed by a conference call in which the company's senior executives
  - Describe the company's performance and answer questions posed by conference call participants.
- **External information**
  - Economy, the industry, the company, and peer (comparable) companies;

- Helpful in assessing the company's future.

3.2.2. 基础题

Q-2. Which of the following reports is the least common to be submitted to the US SEC?

A. Annual report

B. Form 10-K

C. Proxy statement

3.3. Audits of Financial Statements

3.3.1. 重要知识点

3.3.1.1. Audits of financial statements

- 定义：Audit refers to the process that an independent accounting firm examined the company's financial statements to ensure their accordance with specified auditing standards.
- 理解：Audits provide **reasonable assurance** that the financial statements are fairly presented, meaning that there is a high degree of probability that they are free of material error, fraud or illegal acts. Also, the auditors must also express an opinion on the company's internal control systems.
- Audit report 有四种类型分别是: unqualified opinion, qualified opinion, adverse opinion, disclaimer of opinion
  - **Unqualified (clean) opinion:** the financial statements are compliance with applicable accounting standards;
  - **Qualified opinion:** the statements contains several exceptions or limitations from accounting principles and the explanations of these deviations will be presented for users to determine their importance;
  - **Adverse opinion:** the statements are unfairly presented and contains material deviations from accounting standards;
  - **Disclaimer of opinion:** the limitations of financial statements hinder the auditor's ability to express an opinion.

3.3.2. 基础题

Q-3. In the audit report, an additional paragraph that explains an exception to an accounting standard is best described as a(n):

A. adverse opinion.

B. qualified opinion.

C. disclaimer of opinion.

3.4. Financial statement analysis framework

3.4.1. 重要知识点

3.4.1.1. Financial statement analysis framework

Phase	Sources of information	Output
1.Articulate the purpose and context of the analysis	Nature Needs & concern Guidelines	Statement of purposes and objectives A list of specific questions Nature and content of report to be provided Timetable & budgeted resources

2.Collect data	Financial data Discussion Visits	Organized F/S Financial data table Complete questionnaires
3.Process data	Data from previous phase	Adjusted F/S Common – size statements **Ratios** & graphs Forecasts
4.Analyze/interpret the processed data	Input data **Processed data**	Analytical results
5.Conclusions & recommendations	Analytical results Published reports	Analytical reports answering questions Recommendation
6.Follow up	Periodically repeating	Updated reports & recommendations

3.4.2. 基础题

Q-4. In the financial analysis framework, common-size financial statements are typically the output of which step?

A. Collect data

B. Analyze/interpret data

C. Process data

3.5. Related Issues in Financial Statements

3.5.1. 重要知识点

3.5.1.1. 四个报表之间的关系

Financial position	**Financial performance**	**Change in financial position**
The balanc e sheet	**The income statement**	**The cash flow statement**
Assets = liabilities + owner's equity	• **Revenue** • **Expenses** ↓ **Net income**	• **Operating cash flows** • **Investing cash flows** • **Financing cash flows** ↓ **Net cash inflow or outflow for the financial year**

The statement of changes in owner's equity

3.5.1.2. Financial statement elements

➢ **Financial statement elements are the major classifications of assets, liabilities, owners' equity, revenues, and expenses.**

■ **Assets** are resources **controlled by an enterprise** as a result of **past events** and from which **future economic benefits** to the enterprise are expected to flow. Examples: cash, inventory, receivables, etc.

- **Liabilities** are present **obligations** of an enterprise **arising from past events**, the settlement of which is expected to result in **an outflow of resources** of a company. Examples: accounts payable, financial liabilities, etc.
- **Owners' equity** is the excess of assets over liabilities; the **residual interest** of shareholders in the asset of an entity after deducting the entity's liability. Owners' equity includes: capital, retained earnings, other comprehensive income, etc.
- **Income is** the increases in economic benefits in the form of inflows or enhancements of assets, or decreases of liabilities that result in an increase in equity (other than increases resulting from contributions by owners).
- **Expenses are** outflows of economic resources or increases in liabilities that result in decreases in equity (other than decreases because of distributions to owners). Exapmle: cost of goods sold (COGS), selling, general, and administrative expenses (SG&A), etc.

Elements	Definition		Relationship
Assets	✧ Current assets ✧ Non–current assets(Long-lived assets)	The Balance sheet	Assets = liabilities + owner's equity Owner's equity = Contributed capital +Beginning retained earning +Net income (current year) -Dividend (current year) +Other comprehensive income
Liabilities	✧ Current liabilities ✧ Non–current liabilities (Long-term liabilities)		
Owner's equity	✧ Capital ✧ Additional paid-in capital ✧ Retained earnings ✧ Other comprehensive income		
Revenue		The income statement	Revenue – expenses = net income (current year)
Expenses	✧ Cost of good sold ✧ Other expense ✧ Losses		

3.5.1.3. Accounting equation 掌握公式:

- Assets = Liabilities + Owners' equity
- Assets = Liabilities + Contributed Capital + Ending retained Earnings + accumulated OCI

Assets = Liabilities + Contributed Capital + Beginning Retained Earnings + Revenue – Expenses – Dividends + accumulated OCI

3.5.2. 基础题

Q-5. At the start of the year, a company's capital contributed by owners and retained earnings accounts had balances of $10,000 and $6,000, respectively. During the year, the following events took place:

Net income earned	$4,000
Interest paid on debt	$500
Repayment of long-term debt	$1,000
Proceeds from shares issued	$2,000
Dividends paid	$600

The end-of-year owners' equity is closest to:

A. $19,900.

B. $19,400.

C. $21,400.

3.6. Accruals and Other Adjustments in Preparing Financial Statements

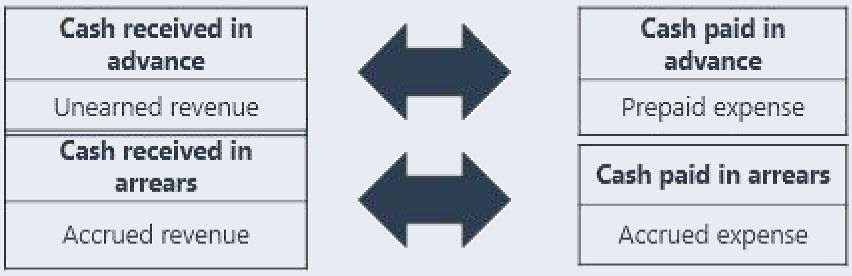
3.6.1. 重要知识点

3.6.1.1. 掌握以下几种权责发生制 (accrual basis):

- 权责发生制是以权利和责任的发生来决定收入和费用归属期的一项原则。

3.6.1.2. 收入应与为取得该收入所发生的费用、成本相匹配，以正确计算在该会计期间所获得的净损益。

3.6.1.3. 除了基本概念以外还需要掌握几个名词



- **Unearned revenue 或 deferred revenue (liability):** The firm receives cash before it provides a good or service to customers
- **Unbilled revenue 或 accrued revenue (asset):** If the revenue is earned, and it is just that the billing debt has not raised the bill, then you should take up the revenue under accrued receivables and for most purposes, they should be the same as accounts receivables.（未开票前，称为 unbilled；开票后，从 unbilled 转为 A/R）。
- **Prepaid expenses (asset):** The firm pays cash ahead of time for unanticipated expense.
- **Accrued expenses (liability):** An expense that is incurred, but not yet paid for, during a given accounting period.

3.6.2. 基础题

Q-6. Before adjusting accounting entries, a liability and a cash has been occurred in the balance sheet. This process is *most likely* to be:

A. an unearned revenue.

B. a prepaid expense.

C. an accrued expense.

3.7. IASB Conceptual Framework

3.7.1. 重要知识点

3.7.1.1. Objectives

- **The objective to provide financial information** the provision of financial information that is useful to current and potential providers of resources in making decisions.

3.7.1.2. Qualitative characteristics of financial statement under IASB

- **Fundamental qualitative characteristics**
  - **Relevance: Information is relevant if it would potentially affect or make a difference in user's decisions.**
    - Predictive value. Useful in making forecast;
    - Confirmatory value. Useful to evaluate past decisions or forecasts;
    - Materiality. Omission or misstatement of information could influence users' decisions. Materiality is a function of the nature and/or magnitude of the information.
  - **Faithful representation: Information is relevant if it would potentially affect or make a difference in user's decisions.**
    - Complete: all information necessary is depicted.
    - Neutral: no bias.
    - Free from error: no errors of commissions or omission in the description of the economic phenomenon.
- **Four enchancing qualitative characteristics**
  - **Comparability** requires the measurement and report of financial information are similar in different firms. Comparability helps analysts identify and analyze the real economic differences across companies and time periods.
  - **Verifiability** means that different knowledgeable and independent observers would agree that the information presented faithfully represents the economic phenomena it purports to represent.
  - **Timeliness** means timely information is available to decision makers prior to their decisions.
  - **Understandability** means users should be able to readily understand the information. Clear and concise presentation of information enhances understandability.

3.7.1.3. Constraints on financial statement

- **Relevant vs. timely**: There is a trade off between relevant and timely.
- **Cost vs. benefits:** The benefit users gain from the information should be greater than the cost of presenting it.
- **Non-quantifiable:** Non-quantifiable information (reputation, brand loyalty, capacity for innovation, etc.) cannot be captured directly in financial statements.

3.7.1.4. General features for preparing financial statements

- Fair presentation;
- Going concern;
- Accrual basis;
- Materiality and aggregation;
- No offsetting;
- Frequency of reporting;
- Comparative information;
- Consistency of presentation.

3.7.1.5. U.S. GAAP & IFRS

- Standard-setting bodies: make the rules, such as FASB——U.S. GAAP; IASB——IFRS.
- Regulatory authorities: enforce the rules
  - SEC——美国
  - FSA——英国
- 国际组织
  - International Organization of Securities Commissions (IOSCO)
- Barriers of universally accept standard (两个准则制定机构；三个监管机构；business groups 的施压)

3.7.1.6. Barriers to coherent of financial reporting framework

- **Valuation**: Measurement bases for valuation that require little judgment, such as historical cost, may be less relevant than a basis like fair value that requires more judgment.
- **Standard-setting approach**
  - **Principles-based:** require the preparations of financial reports and auditors to exercise considerable judgment in financial reporting — IFRS.
  - **Rules-based:** establishes specific rules for each element or transaction — U.S. GAAP.
  - The common conceptual framework is moving toward an **objectives-oriented approach.**

3.7.2. 基础题

Q-7. The International Financial Reporting Standards (IFRS) Conceptual Framework identifies fundamental qualitative characteristics that make financial information useful. Which of the following is least likely to be one of these characteristics?

A. Faithful representation

B. Relevance

C. Materiality

3.8. Revenue Recognize Criteria: General Principle

3.8.1. 重要知识点

3.8.1.1. Revenues (sales)

- Generated from selling goods or service in routine business activities.
- **Net Revenue** = Revenue - adjustments (e.g., cash discounts, volume discounts, or estimated returns);

3.8.1.2. **Expenses are** outflows of economic resources or increases in liabilities that result in decreases in equity (other than decreases because of distribution to owners); reductions in net assets associated with the creation of revenues.

- Expenses are grouped together by their nature or function
  - By nature: e.g., depreciation expenses are displayed in one account regardless of whether they come from manufacturing or administration.
  - By Function: e.g., cost of goods sold is composed of all manufacturing costs, such as raw materials, depreciation, labor, etc.

3.8.1.3. **Gross profit** is the amount of revenue available after subtracting the costs of delivering goods or services.

- **Operating profit or operating income:** operating profit results from deducting operating expenses such as selling, general, administer active, and research and development expenses from gross profit.

3.8.1.4. The standard describes the application of five steps in recognizing revenue

- Identify the contract(s) with a customer;
- Identify the separate or distinct performance obligations in the contract;
- Determine the transaction price;
- Allocate the transaction price to the performance obligations in the contract;
- Recognize revenue when (or as) the entity satisfies a performance obligation.

3.8.2. 基础题

Q-8. A company sells a two-year service contract for €400. Based on historical patterns, the company expects to incur 25% of service costs in the first year of the contract and the remainder in the second year. The amount of revenue the company recognizes in the first year is closest to:

A. €100.

B. €420.

C. €200.

3.9. Non-Recurring Items

3.9.1. 重要知识点

3.9.1.1. Non-recurring items

- **Unusual or infrequent items**
  - IFRS require that items of income or expense that are material or relevant to the understanding of the entity's financial performance should be disclosed separately. Unusual or infrequent items are likely to meet these criteria.
  - Under US GAAP, material items that are unusual or infrequent, and that are both as of reporting periods beginning after December 15, 2015, are shown as part of a company's continuing operations but are presented separately.
  - Example
    - G/L from the sale of assets or part of a business;
    - Impairments;
    - Write-offs, write-downs, and restructuring costs.
- **Discontinued operations (presented on net of tax)**

- When a company disposes of or establishes a plan to dispose of one of its component operations and will have no further involvement in the operation, the income statement reports separately the effect of this disposal as a "discontinued" operation under both IFRS and US GAAP.
    - ◆ Reported separately in the income statement
    - ◆ Net of tax, after income from continuing operations
    - ◆ On the measurement date, the company will accrue any estimated loss during the phase-out period and any estimated loss on the sale of the business. Any expected gain on the disposal cannot be reported until after the sale is completed.

3.9.1.2. Accounting changes: 包括 changes in accounting principles, changes in accounting estimates.

- **Changes in accounting principles 需要追溯调整**，即 retrospective, 放在 R/E beginning（在美国准则下这一条已经不再显示了，现在来自于这里的变动全部直接调整期初留存收益）。
- **Changes in accounting estimates** 一般是由于有了新的信息所导致的估计调整。**不需要追溯调整**，只考虑以后，即 prospective.
- **Error adjustment is recorded in prior period adjustment,也要求追溯调整。**

3.9.2. 基础题

Q-9. If practical, changes in accounting policies should be reported:

A. retrospectively.

B. prospectively.

C. retrospectively and prospectively.

3.10. Capitalize vs. Expense

3.10.1. 重要知识点

3.10.1.1. 资本化和费用化对财务报表的影响（重点掌握，经常考）

- **Net income:** 费用化的 NI 当期较低，以后较高；资本化的 NI 当期高，以后稍低，利润表随时间波动小。
- **Shareholder's equity 与 net income 的变化趋势相同。**
- **Cash flow:** 费用化的现金流支出归入 CFO，因而费用化的 CFO 低；资本化的现金流归入 CFI，所以资本化 CFI 低。
- **Financial ratios:** ROA 和 ROE 与 NI 同向变化，费用化当期 ROA 和 ROE 比较低，以后比较高，资本化当期 ROA 和 ROE 高，以后比较低，资本化 ROA 和 ROE 比较平稳。
- **Interest coverage ratio (EBIT/ interest expense):** 资本化前期 Interest coverage ratio 比较大，因为 interest expense 小，后期比较小，因为 EBIT 小；费用化前期 Interest coverage ratio 比较小，因为 interest expense 比较大，后期比较大，因为 EBIT 后期比较大。
- 如果问哪一种财务处理较保守、激进，相对应地，应该是**资本化激进，费用化保守。**

F/S	Items	Capitalizing	Expensing
B/S & ratios	Total assets	Higher	Reverse
	Shareholders' equity	Higher	
	Leverage ratios (debt/equity & debt/assets)	Lower	
I/S & ratios	Income volatility	Lower	
	Net income – first year (ROA & ROE)	Higher	
	Net income – later years (ROA & ROE)	Lower	
CFS	**Total cash flow**	**Same**	**Same**
	Cash flow from operating	Higher	Reverse
	Cash flow from investing	Lower	

3.10.1.2. 利息费用的资本化和费用化

- ➢ Interest that accrues during the construction of an asset (for a firm's own use or resale) must be capitalized (e.g., depreciation or COGS).
- ➢ **US GAAP 下不允许 netting 相关利息收入, IFRS 下要求 netting 相关利息收入**

Items / Impacts	Int. exp.	Income statement impacts	Net Income	Interest coverage ratio	CFI	CFO
Before completion	N/A	No	Higher	Higher? The same?	Understate	Overstate
After completion		Depreciation expense	Lower	Lower		

3.10.1.3. Long-term asset 资本化费用化问题

- ➢ **判断标准：**长期资产是否达到了可使用状态
- ➢ **资本化部分**
  - ■ Purchase price
  - ■ Tax, freight and insurance
  - ■ Delivery
  - ■ Installation
  - ■ Testing
  - ■ Asset enhancement cost **（特殊）**
- ➢ 费用化
  - ■ Depreciation
  - ■ Repair and maintenance
  - ■ Staff training

3.10.1.4. Research and development cost 的资本化和费用化

➢ 一般的讲，企业本身开发的无形资产的费用应该费用化。例外：R&D，software.

<table>
<tr><th>Type of Expenditure</th><th>IFRS</th><th>U.S.GAAP</th></tr>
<tr><td>Research</td><td colspan="2">Expense as incurred</td></tr>
<tr><td>Development</td><td>Capitalize if certain criteria are met.</td><td>Expense as incurred
Except for:
● Costs to develop a software

● For sales to others
✓ Expensed as incurred;
✓ Once economic feasibility is established, subsequent production costs can be capitalized.
● For own internal use
✓ Expense until it is probable that the project will be completed and that the software will be used as intended; thereafter, capitalized.</td></tr>
</table>

3.10.2. 基础题

Q-10. Assume U.S. GAAP applies unless otherwise noted. Two companies are identical except for their accounting treatment of R&D costs. One company expenses all such costs immediately, while the other capitalizes a portion of the costs. Compared with the company that capitalizes costs, the company that expenses immediately will *least likely*:

A. earn a lower return on assets.

B. have lower financial leverage.

C. report lower cash flow from operations in the statement of cash flows.

Q-11. Under IFRS, BAURU, S.A., a Brazilian corporation, borrows capital from a local bank to finance the construction of its manufacturing plant. The loan has the following conditions:

Borrowing date	1 January 2009
Amount borrowed	500 million Brazilian real (BRL)
Annual interest rate	14 percent
Term of the loan	3 years, Annual payment of interest only.
Payment method	Principal amortization is due at the end of the loan term.

The construction of the plant takes two years, during which time BAURU earned BRL 10 million by temporarily investing the loan proceeds. Which of the following is the amount of interest related to the plant construction (in BRL million) that can be capitalized in BAURU's balance sheet?

A. 130.
B. 140.
C. 210.

3.11. Basic EPS and Dilutive EPS

3.11.1. 重要知识点

3.11.1.1. EPS 掌握计算：

- 公式
  - **Basic EPS**

$$\text{Basic EPS}=\frac{\text{Net income-preferred dividednds}}{\text{Weighted average number of common shares outstanding}}$$

  - **Diluted EPS**

$$\text{Dilutive EPS}=\frac{\text{Adjusted income available for common shares}}{\text{Weighted avg. common \& potential common shares outstanding}}$$

$$=\frac{\begin{bmatrix}\text{NI}\\ \text{- div}_{\text{preferred}}\end{bmatrix}+\left[\text{div}_{\substack{\text{convertible}\\ \text{preferred}}}\right]+\left[\text{interest}_{\substack{\text{convertible}\\ \text{debt}}}\right](1-t)}{WACSO+\left[\text{shares}_{\substack{\text{conversion of}\\ \text{conv. pfd. shares}}}\right]+\left[\text{shares}_{\substack{\text{conversion of}\\ \text{conv. debt}}}\right]+\left[\text{shares}_{\substack{\text{issuable from}\\ \text{stock opt.}}}\right]}$$

    - 在有 stock option 时，如果平均的市场价格>执行价 X，则用 treasury stock method。
- **计算 Diluted EPS 步骤**
  - Firstly, calculate basic EPS
  - Then, to identify dilutive securities
  - In the end, to calculate diluted EPS
  - Diluted EPS is no higher than basic EPS
- **关键**
  - 考试中经常出现的是 weighted average number of common shares outstanding，要记得 stock dividend 和 stock split 要追溯处理，stock new issue 和 repurchase 只要时间加权
  - Dilutive EPS 的计算，就是 convertible bond，convertible preferred stock 和 stock option，warrant 是否会让 basic EPS 稀释。对于各自可稀释性债券分子，分母需要考虑什么，一定要记熟
  - 如果公司有 option 或者 warrant 的情况下，计算的 Dilutive EPS 用的是 treasury stock method，如果在考试中遇到这个称法不要觉得陌生，其实不影响计算的过程。事实上，treasury stock method 的意思是假设公司使用收入的期权实行费用来回购股票，抵消一部分稀释。 当期权执行价格低于股票市场平均价格，该期权是稀释的。
    - 注意，在计算可转债带来的稀释时，不要忽略税盾。
    - **Treasury stock 投票权问题：** treasury stock has no voting rights and does not receive dividends.

3.11.2. 基础题

Q-12. Bingo Ltd. had 900,000 average shares outstanding during all of 2022. During 2022, Bingo also had 20,000 options outstanding with exercise prices of $16 each. The average stock price of Bingo during 2022 was $20. For purposes of computing diluted earnings per share, how many shares would be used in the denominator?

A. 920,000.

B. 807,200.

C. 904,000.

Q-13. An analyst gathered the following information about a company:

- 1,000,000 common shares outstanding from the beginning of the year.
- Earnings of $1,250,000.
- 1,000 preferred stocks, which pay fixed dividend of 7% each year, and its face value is $1000 for each preferred stock
- For preferred stocks, 700 preferred stocks can be converted into 25 shares each, and these stocks are outstanding as of the beginning of the year.
- The tax rate is 40%.

The company's diluted EPS is closest to:

A. $1.21.

B. $1.18.

C. $1.15.

Q-14. In order to compute the diluted EPS for the company, which one of the security will least likely to influence the numerator?

A. Convertible debt.

B. Convertible preferred stocks.

C. Stock options.

Q-15. An investor gathers the following information about a company and the company's common shares:

Sales per share	$70.00
Net profit margin	2.3%
Operating profit margin	3.2%
Current share price	$54.00

The company's EPS is closest to:

A. $1.24.

B. $1.61.

C. $2.21.

3.12. Comprehensive Income

3.12.1. 重要知识点

Comprehensive income 的基本了解

3.12.1.1. 综合收益 comprehensive Income: <u>all changes in equity except for owner contributions and distributions,</u> 单列在 NI 后面的，不放在 I/S 中。

3.12.1.2. CI=NI + other comprehensive income（在股东权益变动表中也包含这些项目,

IFRS 下没有 CI，但有 OCI）。

3.12.1.3. Other comprehensive income 4+1 项内容

- Foreign currency translation adjustment on a foreign subsidiary;
- Unrealized G/L on derivatives contracts accounted for as cash flow hedges;
- Unrealized G/L on available for sale (FVTOCI) securities;
- Certain costs of a company's defined benefit post-retirement plans that are not recognized in the current period.
- (Solely for IFRS) changes in the value in excess of historical cost of long lived assets measured using the revaluation model rather than the cost model.

3.12.1.4. Accumulated other comprehensive income aggregates past and current OCI 并显示在 B/S 中的 equity 中（IFRS 没有明确规定在 B/S 中列出 Accumulated other comprehensive income 的数额）。

3.12.1.5. The statement of changes in equity

- A summary of all transactions within the equity accounts

3.12.2. 基础题

Q-16. Which of the following is not included in other comprehensive income?

A. Foreign currency translation adjustment on a foreign subsidiary.

B. Unrealized G/L on derivatives contracts accounted for as cash flow hedges.

C. Unrealized G/L on hold-for-maturity securities.

Q-17. An analyst gathers the following information (in £ millions) about a company for a fiscal year:

Beginning retained earnings	200
Ending retained earnings	450
Cash dividends declared and paid	10
Other comprehensive income	40
Unrealized loss on derivative contracts accounted for as hedges	15

Based only on this information, total comprehensive income (in £ millions) is:

A. 260.

B. 315.

C. 300.

Q-18. An analyst gathers the following information (in € thousands) about a company:

Net income	400
Gain from a change in fair value of investment property using the fair value model	38
Realized gains on derivatives contracts accounted for as hedges	22

Based only on this information, total comprehensive income (in € thousands) is:

A. 400.

B. 438.

C. 460.

3.13. Understanding Balance Sheet

3.13.1. 重要知识点

3.13.1.1. 掌握 balance sheet 里面的知识点：

- **Assets**
  - Provide **probable future economic benefits controlled** by an entity as a **result of previous transactions**.
  - Current and Non-current assets (Long-lived assets)
- **Liabilities**
  - Are **obligations** owed by an entity from **previous transactions** that are expected to result in an **outflow of economic benefits in the future**.
  - Current and non-current liabilities (long-term liabilities).
- **Stockholders' equity**
  - Residual interest in assets that remains after subtracting a firm's liabilities

3.13.1.2. Uses and limitations of the balance sheet in financial analysis.

- The balance sheet discloses what an entity owns(or controls), what it owes, and what the owners' claim at the specific point of time.
  - Liquidity is the company's ability to meet its short-term commitment.
  - Solvency refers to a company's ability to meet its financial obligations over the longer term.

3.13.1.3. Shareholders' equity:

Capital	Common stock, preferred stock
Additional paid-in-capital	Capital in excess of par i.e. premium
Treasury stock	✓ Stock has been reacquired by the issuing firm but not yet retired ✓ No voting rights, no dividend
Retained earnings	✓ Net Income-dividend
Accumulated other comprehensive income	✓ Foreign currency translation adjustment on a foreign subsidiary ✓ Unrealized G/L on derivatives contracts accounted for as cash flow hedges ✓ Unrealized G/L on available for sale securities ✓ Certain costs of a company's defined benefit post-retirement plans that are not recognized in the current period ✓ (Solely for IFRS) changes in the value in excess of historical cost of long lived assets measured using the revaluation model rather than the cost model.
Minority interest (MI)	✓ Group accounting

3.13.2. 基础题

Q-19. Which of the following statements is most accurate?

A. A classified balance sheet arises when in an auditor's opinion the financial statements materially depart from accounting standards and are not presented fairly.

B. Non-controlling interest on the balance sheet represents a position the company owns in other companies.

C. Treasury stock is non-voting and receives no dividends.

3.14. Accounting Treatment to Marketable Securities

3.14.1. 重要知识点

金融资产和负债的计量

3.14.1.1. 判断证券所属的种类，held-to-maturity, trading securities 还是 available-to-sale, 并了解这三种证券不同的 accounting treatment（考试常考）：

Category	Measurement	Unrealized/realized gains or losses
Held-to-maturity (amortized cost)	Amortized cost	Unrealized: not reported Realized: reported in I/S
Trading securities (FVTPL)	Fair value	Unrealized: reported in I/S Realized: reported in I/S
Available-to-sale (FVTOCI)	Fair value	Unrealized: reported in equity (OCI) Realized: reported in I/S

- Dividend and interest income and realized gains and losses are recognized in the income statement for all three classifications of securities.

3.14.1.2. 三种 marketable securities 在 U.S.GAAP 与 IFRS 下基本一致：对于 Realized gain/loss 在 I/S 中确认；对于 AFS，Unrealized G/L 在 OCI 中确认；对于 trading，Unrealized G/L 在 I/S 中确认。两者唯一的差别是，对于 Debt AFS，在 IFRS 下，对于汇率变化的影响在 I/S 中确认；在 GAAP 下，对于汇率变化的影响全部在 OCI 中确认。

3.14.2. 基础题

Q-20. Assume U.S. GARP applies unless otherwise noted. For financial assets classified as available for sale, how are unrealized gains and losses reflected in shareholders' equity?

A. They are not recognized.

B. They flow through retained earnings.

C. Other comprehensive income.

3.15. Calculation of Bad Debt

3.15.1. 重要知识点

3.15.1.1. 掌握 bad debt 的计算：

Beginning balance allowance
\+ Bad expenses
\- write-offs of bad debt allowance
= Ending balance allowance

- Bad debt 会增加 allowance for doubtful accounts（contra-assets accounts）
- Bad debt 注销会减少 gross receivable and allowance account

3.15.2. 基础题

Q-21. Based on the above information about a company's trade receivables, the bad debt expense (in millions) for 2014 is closest to:

(£ millions)	2014	2013

Accounts receivables, gross	6,620	4,840
Allowance for doubtful accounts	92	56
Write-offs during the year	84	42

A. £36.
B. £84.
C. £120.

3.16. Classification of Different Activities in Cash Flow Statement

3.16.1. 重要知识点

理解各种 activities 的区分：

3.16.1.1. 三种 activities

- **Operating activities** 和**每天的运营**相关的现金流的流进流出
- **Investing activities** 和由于**投资**引起的购买或出售相关
- **Financing activities** 包含长期借钱，还钱，发新股，回购，分红（不包括付息）, 但是对于金融公司，这些都属于 operating activities

Item	U.S. GAAP	IFRS
Interest received	CFO	CFO or CFI
Interest paid	CFO	CFO or CFF
Dividend received	CFO	CFO or CFI
Dividend paid	CFF	CFO or CFF
Taxes paid	CFO	CFO, CFI or CFF

3.16.1.2. 特别注意公司的主营业务和投资产品的主要性质

- 如果是银行，存款和贷款就是 operating activities，因为本身就是银行的主营业务
- 如果投资的产品持有期很短，高流动性，或者本身就是以交易为目的，就不考虑在 Investing activities 当中

3.16.2. 基础题

Q-22. A conversion of a face value $1 million convertible bond for $1 million of common stock would most likely be:

A. reported as a $1 million investing cash inflow and outflow.
B. reported as a $1 million financing cash outflow and inflow.
C. reported as supplementary information to the cash flow statement.

Q-23. Purchasing other companies' long-term bonds should be classified as:

A. operating activities.
B. investing activities.
C. financing activities.

Q-24. In the statement of cash flows, interest paid by a company is most likely included in:

A. either the operating or financing section under US GAAP.
B. either the operating or financing section under IFRS.
C. only the financing section under both IFRS and US GAAP.

3.17. Calculation of CFO: Direct Method and Indirect Method

3.17.1. 重要知识点

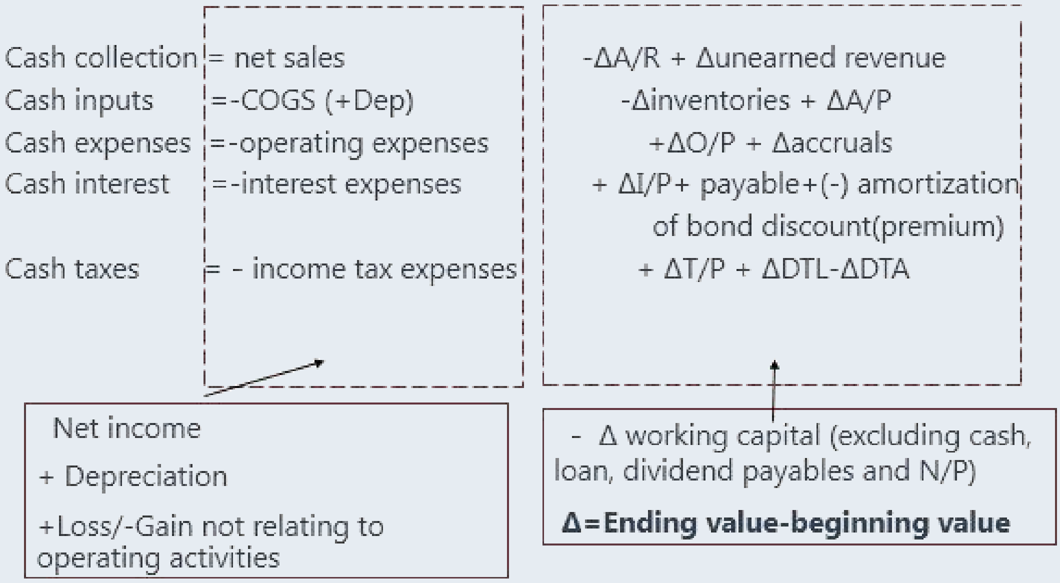
CFO 掌握概念及公式：

3.17.1.1. CFO 计算方式：直接法和间接法，熟练掌握 2 种方法 (公式)

3.17.1.2. Both IFRS and US GAAP 都鼓励使用直接法，但都可以使用间接法。在 US GAAP 下，直接法下必须披露间接法，IFRS 没有这样的要求；如果用间接法，没有要求披露直接法。

3.17.1.3. CFO 理解：第一，考题中会出现计算是无疑的；第二，考题中会考核考生对 CFO 和 NI 之间关系的掌握；第三，CFO 和 working capital 之间的关系，有时也会成为考核点。

3.17.1.4. CFO 直接法&间接法



3.17.2. 基础题

Q-25. An analyst gathers the following information about a company:

	Year 2	Year 1
Depreciation expense	$7,250	$6,739
Gain on sale of equipment	$600	$0
Dividends paid	$4,200	$3,750
Working capital	$35,950	$39,570

Under US GAAP, the adjustment to net income to arrive at Year 2 cash flow from operating activities is:

A. $10,640.

B. $10,950.

C. $10,270.

Q-26. An analyst gathered the following information from a company's 2022 financial statements (in $ millions):

Year Ended 31 December	2021	2022
Net sales	296.5	384.6
Cost of goods sold (D&A excluded)	157.4	168.3
Accounts receivable	152.3	155.5
Inventory	66.3	74.8
Accounts payable	35.5	34.1

Based only on the information above, the company's 2022 statement of cash flows in the direct format would include amounts (in $ millions) for cash received from customers and cash paid to suppliers, respectively, that are closest to:

	cash received from customers	cash paid to suppliers
A.	381.4	178.2
B.	387.8	178.2
C.	381.4	175.4

Q-27. Under GAAP, an analyst gathered the following information from a company's financial statements. Using indirect method, the company's operating cash flows are *closest* to:

Net income	$240
Decrease in inventory	$40
Depreciation	$50
Increase in account receivables	$20
Decrease in wages payable	$10
Increase in unearned revenues	$30
Increase in PP&E	$70
Gains from the sale of a segment	$4

D. $197.
E. $270.
F. $326.

Q-28. The following items are from a company's cash flow statement.

Classification of Cash	Description	Amount
Operating activities	Cash received from customers	110,000
Investing activities	Interest and dividends received	200,000
Financing activities	Net repayment of revolving credit loan	24,000

Which of the following standards and formats did the company *most likely* use in the preparation for its financial statements?

A. IFRS, indirect format.
B. Either IFRS or US GAAP, direct format.
C. IFRS, direct format.

Q-29. The following annual financial data are available for a company:

	£ millions

Beginning interest payable	40.9
Cash paid for interest	130.3
Ending interest payable	58.4

Interest expense (in millions) for the year is closest to:

A. 137.8

B. 147.8

C. 157.8

3.18. Calculation of CFI and CFF

3.18.1. 重要知识点

3.18.1.1. CFI 和 CFF 掌握理解及公式

- **理解：** CFI consist of the inflows and outflows of cash resulting from the acquisition or disposal of long-term assets and certain investments.

+CF	-CF
Sale proceeds from debt & equity investments	Acquisition of debt & equity investment
Sale proceeds from fixed assets	Acquisition of fixed assets
Principal received from loans made to others	Loans made to others

- Gain or loss = proceeds received – disposal NBV
- $BV_{end} = BV_{Begin}$ + purchase – Disposal BV – depreciation

3.18.1.2. **CFF:** cash inflows and outflows due to changes in capital structure; CFF consist of the inflows and outflows of borrowing, repayment, new issue, repurchase, div paid.

- Dividend paid = **-** Dividend declared + Δ dividend payables
- Opening R/E + Net Income – Dividend declared = Ending R/E

+CF	-CF
Proceeds from issuing stocks	Payments to reacquire stock
Principal amounts of debt issued	Principal paid on debt
	Dividends paid to shareholders

3.18.2. 基础题

Q-30. Silverago Incorporated, an international metals company, reported a loss on the sale of equipment of $2 million in 2010. In addition, the company's income statement shows depreciation expense of $8 million and the cash flow statement shows capital expenditure of $10 million, all of which was for the purchase of new equipment. Using the following information from the comparative balance sheets, how much cash did the company receive from the equipment sale?

Balance Sheet Item	12/31/2009	12/31/2010	Change
Equipment	$100 million	$105 million	$5 million
Accumulated depreciation—equipment	$40 million	$46 million	$6 million

A. $1 million.

B. $2 million.

C. $3 million.

Q-31. In 20X8, a company recorded several transactions under U.S. GAAP. The company purchased a new machine to update its manufacturing line for $150,000. During the year, $140,000 of convertible preferred stocks were exercised; $24,000 dividends were received; and $42,000 dividends were paid. The mortgage payment of the company includes $34,000 of principal. The investing cash flows and the financing cash flows of the company were *closest* to:

	CFI	CFF
A.	($10,000)	($42,000)
B.	($150,000)	($42,000)
C.	($150,000)	($76,000)

3.19. FCFE and FCFF

3.19.1. 重要知识点

3.19.1.1. FCFE & FCFF:（需要重点掌握，经常考到）

- **Formula**
  - FCFF = EBIT×(1-tax rate) + NCC – FCInv - WCInv
  - FCFF = NI + NCC + [Int× (1 - tax rate)] – FCInv – WCInv
  - FCFF = CFO＋Int×(1-t) - FCInv
  - FCFE = CFO – FCInv + Net borrowing
  - FCFE = FCFF – Int (1- tax rate)+ net borrowing

3.19.2. 基础题

Q-32. Assume U.S. GAAP applies unless otherwise noted. An analyst gathered the following annual information ($ millions) about a company that pays no dividends and has no debt:

Net income	91.6
Depreciation	36.4
Loss on sale of equipment	3.2
Decrease in accounts receivable	8.4
Increase in inventories	10.8
Increase in accounts payable	9
Capital expenditures	14.6
Proceeds from issuance of new shares	17

The company's annual free cash flow to equity ($ millions) is *closest* to:

A. 106.2.

B. 116.8.

C. 123.2.

Q-33. Which of the following is an appropriate method of computing free cash flow to the firm?

A. Add operating cash flows plus capital expenditures and deduct after-tax interest payments.

B. Add operating cash flows plus after-tax interest payments and deduct capital expenditures.

C. Deduct both after-tax interest payments and capital expenditures from operating cash flows.

Q-34. If a company capitalizes an expenditure related to capital assets instead of expensing it, ignoring taxes, the company will most likely report:

A. the same free cash flow to the firm (FCFF) in that period.

B. a lower cash flow per share in that period.
C. a higher earnings per share in future periods.

Q-35. An analyst gathers the following information (in $ millions) for two companies reporting under US GAAP for the year ended 31 December:

	Company 1	Company 2
Capital expenditure	23	11
Net debt repayment	17	29

If operating cash flow, interest paid, and the tax rate are the same for both companies, for Company 1's free cash flow to the equity is:

A. less than Company 2's free cash flow to the equity.
B. equal to Company 2's free cash flow to the equity.
C. greater than Company 2's free cash flow to the equity.

3.20. Valuation of Inventory

3.20.1. 重要知识点

Inventory 掌握公式及两种方法的比较：

3.20.1.1. Inventory BASE 法则

- Purchases = ending inventory - beginning inventory + COGS
- Beginning inventory = COGS - purchases + ending inventory
- Ending inventory = beginning inventory + purchases - COGS

3.20.1.2. Product cost vs periodic cost

- 判断标准：存货是否达到了可销售状态
- **Capitalized cost (product cost) include:** （重点掌握，很有可能考）
  - Purchase cost - trade discounts and rebates;
  - Conversion costs (e.g. labor and overhead);
  - Other costs required to make inventory in use.
- **Expensed cost (period cost):**
  - Abnormal waste of materials, labor, or overhead;
  - Storage costs (unless required as part of production);
  - Administrative and selling expenses.

3.20.1.3. Inventory valuation method

- **Specific identification:** match COGS and historical cost for each unit sold.
- **Last in first out (LIFO):** The newest goods purchased (or manufactured) are sold first and the oldest goods purchased (or manufactured), including beginning inventory, remain in ending inventory. (Only allowed under U.S. GAAP)
- **First in first out (FIFO):** The oldest goods purchased (or manufactured) are sold first and the newest goods purchased (or manufactured) remain in ending inventory.
- **Weighted average (AVCO):** The average cost of the goods available for sale (beginning inventory plus purchase, conversion, and other costs) during the accounting period to the units that are sold as well as to the units in ending inventory.

3.20.1.4. Periodic system VS perpetual system

Periodic	Perpetual

✧ "Purchase" account; ✧ Balances of inventory and COGS are reported at the end of accounting period.	✧ Balances of inventory and COGS are reported continuously.
✧ Same result for FIFO & Specific identification method; ✧ Different result for LIFO & AVCO.	

- LIFO provides the most useful estimate of COGS
- FIFO provides the most useful estimate of inventory value

3.20.2. 基础题

Q-36. After reviewing the inventory records for Argo, the following cost related to inventory were incurred:

Fixed production overhead	$540,000
Direct material purchased	$522,000
Direct labour cost	$153,000
Storage costs incurred during production	$52,000
Storage cost incurred before deliver to customers	$21,500
Normal waste costs	$5,700
Abnormal waste costs	$40,000

The inventory value capitalized in the balance sheet of Argo is closest to:

A. $1,272,700.

B. $1,294,200

C. $1,312,700

Q-37. All else being equal, in periods of increasing prices and constant inventory quantities, the LIFO inventory valuation method most likely results in a higher:

A. quick ratio than the FIFO inventory valuation method.

B. working capital turnover ratio than the FIFO inventory valuation method.

C. days of inventory on hand ratio than the FIFO inventory valuation method.

Q-38. For which of the following inventory valuation methods is the gross profit margin least likely to be the same under both a perpetual inventory system and a periodic inventory system?

A. LIFO.

B. Specific identification.

C. FIFO.

3.21. Adjustment of Valuation in Inventory

3.21.1. 重要知识点

3.21.1.1. Impairment of inventory

- **U.S. GAAP:**
  - ■ 1. LIFO or retail inventory methods: Lower of cost or market;
    - ◆ If replacement cost (RC) > NRV, market = NRV
    - ◆ If replacement cost (RC) < NRV – normal profit margin, market = NRV – normal profit margin

- ◆ If NRV – normal profit margin < RC < NRV, market = replacement cost
- ■ 2. Other methods: 类似 IFRS，Lower of cost or NRV=sales price-selling cost;
- ■ US GAAP **prohibit** the reversal of write-downs.

➢ **IFRS:**
- ■ Lower of cost or NRV= sales price-selling cost;
- ■ Reversal (limited to the amount of the original write-down) ;
- ■ The **reversal** of any write-down of inventories is recognised as a **reduction in cost of sales**.

➢ 特例：
- ■ Inventories of producers of **agricultural and forest products and minerals and mineral products or commodity broker－traders** may be measured at **net realisable value** (NRV).
- ■ **Mark-to-market** inventory accounting is allowed for **bullion**.

3.21.2. 基础题

Q-39. For a manufacturing company, its information is shown in the table below:

	$ million
Ending inventory (under FIFO)	4.3
NRV	4.1
Replacement cost	3.8
Normal profit margin	0.5

If the company is using International Financial Reporting Standards (IFRS) instead of US GAAP, its cost of goods sold (in millions) is most likely:

A. 0.3 higher
B. 0.3 lower
C. The same

Q-40. Fernando's Pasta purchased inventory and later wrote it down. The current net realisable value is higher than the value when written down. Fernando's inventory balance will most likely be:

A. higher if it complies with IFRS.
B. higher if it complies with US GAAP.
C. the same under US GAAP and IFRS.

Q-41. Zimt AG wrote down the value of its inventory in 2007 and reversed the write-down in 2008. Compared to the ratios that would have been calculated if the write-down had never occurred, Zimt's reported 2007:

A. current ratio was too high.
B. gross margin was too high.
C. inventory turnover was too high.

3.22. LIFO Conversion/Liquidation

3.22.1. 重要知识点

3.22.1.1. LIFO and FIFO 之间的转换

- **LIFO reserve**
  - The difference between the reported LIFO inventory carrying amount and the inventory amount that would have been reported if the FIFO method had been used.
  - LIFO reserve = FIFO inventory – LIFO inventory
- **LIFO to FIFO conversion**
  - $INV_F = INV_L$ + LIFO reserve
  - $COGS_F = COGS_L$ - △ LIFO reserve
  - △LIFO reserve= LIFO $reserve_1$- LIFO $reserve_0$
  - △NI = △LIFO reserve × (1-t)

3.22.1.2. LIFO liquidation

- LIFO liquidation incurs when purchased volume is less sales volume. Or, the decrease in volume or quantity of inventory:
  - In this case, the prices for goods being sold are no longer recent prices.
- Under LIFO liquidation, and if price is rising:
  - COGS does not reflect current costs;
  - LIFO reserve may decline.
- An analyst should adjust COGS for decrease in LIFO reserve.

3.22.2. 基础题

Q-42. An analyst gathers the following information (in $ millions) about a company reporting under US GAAP and using the LIFO inventory valuation method:

	Year 2	Year 1
Cost of goods sold	70	80
LIFO reserve, year-end	12	10

Cost of goods sold (in $ millions) for Year 2 under the FIFO inventory valuation method is:

A. 68

B. 82

C. 70

Q-43. To recast inventory values for a company using LIFO reporting on a FIFO basis, an analyst should:

A. Subtract the change in the LIFO reserve from the ending inventory value under LIFO.

B. Add the ending balance of the LIFO reserve to the ending inventory value under LIFO.

C. Subtract the ending balance of the LIFO reserve from the ending inventory value under LIFO.

Q-44. An analyst can *most* accurately identify a LIFO liquidation by observing a(n):

A. increase in gross margin.

B. decrease in the LIFO reserve.

C. change in inventory out of line with change in sales.

Q-45. An analyst gathers the following information about a company:

($ thousands)	2014	2013
Sales	2,125	2,003

End-of-year inventories (LIFO)	312	280
LIFO reserve	82	64
Net profit margin	4.9%	4.0%

If first-in, first-out (FIFO) instead of last-in, first-out (LIFO) is used, the net income (in $ thousands) for 2014 will be higher by an amount closest to (the tax rate is 30%):

A. 18.0.

B. 57.4.

C. 12.6.

3.23. Long-Term Asset: Depreciation Methods

3.23.1. 重要知识点

3.23.1.1. Tangible asset:

- **Tangible asset** not used in the operations of the firm should be classified as investment assets.
- **Land 不必折旧、land improvement 需折旧、lease improvement 需折旧**
- **Depreciation**: the capitalized costs of long-lived tangible assets (other than land) with finite useful lives are allocated to subsequent periods as depreciation.
  - Carrying (book) value. (carrying value or net book value) = historical cost - accumulated depreciation.
  - Historical cost (gross investment in asset). The original acquisition cost of the asset including installation and transportation costs.
  - Depreciation can be classified as operating expense.
    - No current cash expenditures though (cash outflows occurred in the past);
    - Depreciation expenses cannot be ignored.

Depreciation	
Straight-line	$\text{SL depreciation} = \dfrac{cost - residual\ value}{useful\ life}$
DDB	Depreciation expense = (2/asset life in years) × net book value at the beginning of year X
Units-of-production	unit of production depreciation $= \dfrac{original\ cost - salvage\ value}{life\ in\ unit\ output\ units} \times output\ unit\ in\ period$

- Revaluation model (only IFRS)

3.23.1.2. Component depreciation

- IFRS: each components of an asset should be depreciated separately.
- GAAP: permit separate depreciation but seldom applied.

3.23.1.3. Intangible asset: amortize 摊销

- Intangible assets with finite-life are amortized over their useful lives, and intangible assets with infinite life are making impairment test annually;
- **Goodwill 不折旧，不摊销，只做 annual impairment test（还要掌握 goodwill 的定义）**
  - Under IFRS, goodwill 的减值，直接将账面价值与 Implied value 进行比

较。

3.23.2. 基础题

Q-46. Assume U.S. GAAP applies unless otherwise noted. Which of the following adjustments to the assumed useful life and assumed salvage value of a company's assets would *most likely* decrease the company's total asset turnover ratio?

	Assumed useful life	Assumed salvage value
A.	Longer	Lower
B.	Longer	Higher
C.	Shorter	Lower

Q-47. An analyst has gathered the following information about a company's capital assets:

Year ending	2017	2016	2015
Property, plant, and equipment	€5,000	€5,000	€5,000
Accumulated depreciation	750	500	250
Net book value	4,250	4,500	4750

As of the end of 2017, the expected remaining life of the assets, in years, is closest to:

A. 6.

B. 17.

C. 20.

Q-48. At the start of the year, a company acquired new equipment at a cost of €100,000, estimated to have a three-year life and a residual value of €10,000. If the company depreciates the asset using the double declining balance method, the depreciation expense that the company will report for the third year is closest to:

A. €7,407.

B. €1,111.

C. €6,656.

3.24. Long-Term Asset: Impairment & Revaluation Model

3.24.1. 重要知识点

3.24.1.1. Impairment test

Tangible assets	Intangible assets
Held for use Impairment indicators ↓ Impairment test	**Held for use** Goodwill & Other IA with indefinite useful life ↓ Annual impairment test
Held for sale No depreciation Immediate impairment test If **Carrying value > NRV**	**Held for sale** No amortization Immediate impairment test If **Carrying value > NRV**

3.24.1.2. Impairment under US GAAP

- **Step1 Recoverability test / Impairment test**

$$\begin{pmatrix}\text{carrying}\\ \text{value}\\ \text{of assets}\end{pmatrix} > \begin{pmatrix}\text{undiscounted}\\ \text{future cash flows}\\ \text{generated by}\\ \text{the assets}\end{pmatrix}$$

- **Step2 Loss measurement**

$$\begin{pmatrix}\text{carrying}\\ \text{value}\\ \text{of assets}\end{pmatrix} - \begin{pmatrix}\text{fair market value}\\ \text{or}\\ \text{PV of future CF}\end{pmatrix}$$

- **Cannot reverse the recognized loss**

3.24.1.3. Impairment under IFRS

$$\begin{pmatrix}\text{carrying}\\ \text{value}\\ \text{of assets}\end{pmatrix} > \begin{pmatrix}\text{recoverable}\\ \text{amount}\end{pmatrix}$$

↓

The higher of	
Fair value less cost to sell	Value in use i.e. the PV of its future cash flow from continued use

- **Under cost model,** impairment can reverse the loss, but write up is not allowed.
- **Under revaluation model,** revaluation gain will be recognized in equity. Revaluing the asset's value upward is even permitted under IFRS.

3.24.1.4. Impairment effect

- **PP&E** cost (asset) decrease & **NI** decrease (due to impairment expenses).
- But NI of next year will higher caused by lower PP&E level (PP&E 的 depreciation 在后续年度会降低).
- **Impairment 对 ratio 的影响：**在确认减值的当期，ROA，ROE 较小。在以后的几期，ROA, ROE 变大（decreased depreciation).
- The impact of valuing asset upward to financial ratios: low leverage (high asset), high ROA/ROE in the period of revaluation and low ROA/ROE in subsequent periods.

Impairment Effects	
Cash flow	**--**
Assets	↓
Equity	↓
Debt/equity ratio	↑

Current net income, ROA,ROE	↓
Future depreciation expense	↓
Future net income, ROA,ROE	↑
Future asset turnover ratios	↑

3.24.1.5. Revaluation

- Upward revaluation of assets will
  - Increase assets and equity → decrease leverage ratios (D/E)
  - Increase comprehensive income in the period the revaluation occur;
  - In subsequent periods
    - Higher depreciation expense and lower profitability;
    - Lower ROA and ROE.

3.24.1.6. Derecognition of asset

- **Sale of long-lived assets**
  - Report gains or losses (I/S) =sales proceed – carrying value of long-lived asset.
- **Retirement or abandonment of long-lived assets**
  - Remove carrying value (B/S);
  - Loss on the I/S.
- **Long-lived asset is exchanged**
  - G/L = fair value of the old asset (or fair value of new asset) - book value of the old asset.

3.24.2. 基础题

Q-49. The demand of products sold by Argo has been decreased due to the market place change for the company, and this decrease is not expected to recover to the previous condition in the forseeable future. The following information is provided by Argo about a customer list:

Item description	$ (thousands)
Carrying value amount	930,000
Undiscounted expected future cash flows	960,000
Present value of expected future cash flows	886,000
Fair value if sold	890,000
Costs to sell	7,000

Which of the following statements is most accurate? As an intangible asset with indifinate life, the customer list is impaired:

A. IFRS only.

B. U.S. GAAP only.

C. both IFRS and U.S. GAAP.

Q-50. An analyst is studying the impairment of the manufacturing equipment of WLP Corp. a U.K.-based corporation that follows IFRS. He gathers the following information about the equipment:

	In thousands
Carrying value of equipment (net book value)	£500
Undiscounted expected future cash flows	£550

Fair value	£480
Present value of expected future cash flows	£440
Costs to sell	£50

The amount of the impairment loss on WLP Corp.'s income statement related to its manufacturing equipment is closest to (in thousands):

A. £0.
B. £70.
C. £60.

Q-51. An intangible asset with an indefinite useful life is:
A. not subjected to impairment testing.
B. tested at least annually for impairment.
C. only tested for impairment if there is an indication of impairment.

3.25. Investment Property

3.25.1. 重要知识点

3.25.1.1. Investment property（注意 IFRS 和 GAAP 下的区别，重点掌握）

- **Under IFRS**, as property that is owned (or, in some cases, leased under a finance lease) for the purpose of earning rentals or capital appreciation or both.
  - **Cost model**
    - The cost model is identical to the cost model used for property, plant, and equipment.
  - **Fair value model**
    - The **fair value model** differs from the revaluation model used for property, plant, and equipment.
      - Under the revaluation model, whether an asset revaluation affects net income depends on whether the revaluation initially increases or decreases the carrying amount of the asset (surplus in owner’s equity);
      - Under investment property, all changes in the fair value of the asset affect net income (gain on income statement).
  - A company must apply one model (cost or fair value) to all of its investment property.
- **U.S. GAAP** classified investment property as normal long-lived assets.

3.25.2. 基础题

Q-52. Under the fair value model, which of the following is affected by a change in the fair value of an investment property?
A. Pretax income only.
B. Other comprehensive income only.
C. Both pretax income and other comprehensive income.

Q-53. Under IFRS, Segeo owns several investment properties and these properties are valued under fair value model, based on prevailing rental market. The table shows a summary for the valuation of investment properties:

Initial cost (acquired in 2019)	$50 million
Value of property revalued at 31 Dec. 2020	$50.25 million
Value of property revalued at 31 Dec. 2021	$55.75 million
Value of property revalued at 31 Dec. 2022	$48.25 million

Which of the following most accurately describes the accounting treatment for the investment property owned by Segeo in 2022?

A. 5.25 million charged to OCI, and 1.75 million charged to net income.

B. 7.5 million charged to OCI

C. 7.5 million charged to net income.

Q-54. Equipment held for the purpose of producing a company's goods and services may be reported using the:

A. cost model or the fair value model.

B. cost model or the revaluation model.

C. revaluation model or the fair value model.

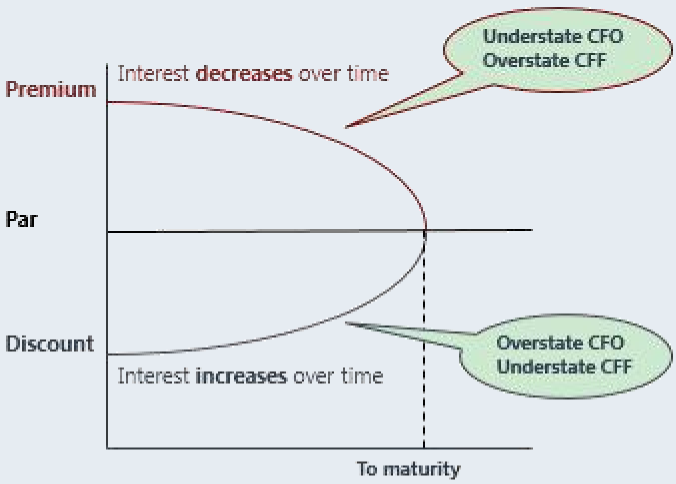
3.26. Valuation of Debt Security

3.26.1. 重要知识点

3.26.1.1. 报表记录：对于 discount bond, premium bond 的报表记录，特别掌握如何用实际利率法计算 int. exp（用 mkt. rate at issuance date）。

- Step 1: 计算 bond 的 PV
- Step 2: 计算 bond 第一期真正的 int. exp；then 计算第一期结束的 carrying value
- Step 3: 根据第一期结束的 carrying value, 计算 bond 第二期真正的 int. exp.
- 如此推导下去

3.26.1.2. Carrying value of bond on balance sheet



3.26.1.3. Amortization 对 CFO 间接法的影响

- **For premium bonds**
  - the total portion of coupon is treated as CFO in accounting basis.
  - For analytical purpose, CFO have to be the real interest expense, CFF have to be the coupon payment minus the interest expense.
  - Interest expense=coupon paid-premium amortization
- **For discount bond**

- the total portion of coupon is treated as CFO in accounting basis.
- For analytical purpose, CFO have to be the real interest expense, CFF have to be the difference between coupon payment and interest expense, but here **CFF treated as an inflow instead**.
- Interest expense=coupon paid +discount amortization

3.26.1.4. 该表格需要重点掌握，考到的几率很大

Par bonds	Premium bonds	Discount bonds
Market rate=coupon rate Cash paid=CR.×Par	Market rate<coupon rate Interest expense = cash paid - amortization of premium	Market rate>coupon rate Interest expense = cash paid + amortization of discount
Interest expense is constant	Interest decreases over time	Interest increases over time
	CFO 低估；CFF 高估	CFO 高估；CFF 低估

3.26.2. 基础题

Q-55. Fairmont Golf issued fixed rate debt when interest rates were 6 percent. Rates have since risen to 7 percent. Using only the carrying amount (based on historical cost) reported on the balance sheet to analyze the company's financial position would *most likely* cause an analyst to:

A. overestimate fairmont's economic liabilities.
B. underestimate fairmont's economic liabilities.
C. underestimate fairmont's interest coverage ratio.

Q-56. On 1 January 2022 the market rate of interest on a company's bonds is 5 percent and it issues a bond with the following characteristics:

Face value	$500 million
Coupon rate, paid annually	3%
Maturity date	December 31,2031 (10 years)
Issue price	84.56

If the company uses IFRS, its interest expense (in millions) in 2022 is closest to:

A. $18.46.
B. $21.14.
C. $24.78.

Q-57. A company issued a $10,000 face value 3-year zero-coupon bond on 1 January when the market interest rate was 5%. Using the effective interest rate method, the carrying amount at the end of Year 2 is closest to:

A. $9,524
B. $9,546
C. $10,000

3.27. Other issues in Debt

3.27.1. 重要知识点

3.27.1.1. Early repayment of bond

➢ **Gain or loss on the extinguishment of debt (I/S):** The difference between the cash required to redeem the bonds and the carrying amount of the bonds.

3.27.1.2. Issuance cost

- **U.S. GAAP**
  - Capitalized in deferred charge (asset);
  - Amortized on a straight-line basis to the relevant expense (e.g., legal fees) over the life of the bonds.
- **IFRS**
  - Subtracted as an unamortized discount from measurement of the liability, bonds payable.
- Under IFRS and US GAAP, cash outflows related to bond issuance costs are included in the financing section of the statement of cash flows (usually netted against bond proceeds).
- **G/L on the extinguishment of debt should be eliminated from day-to-day income for analytical purpose.**
- CFS adjustments
  - CFO: + loss /- gain
  - CFF: cash paid to redeem the bond (cash outflows of financing activities)

3.27.1.3. Derecognition of debt

- **A firm may choose to redeem bonds before maturity**
  - Possible reasons
    - Interest rates reduction
    - Firm has generated surplus cash through operation
    - Funds from the issuance on the equity market is available
  - A gain or loss is recognized in I/S
    - G/L (I/S) = book value of bond – redemption price; In CFS, it is reported as CFF.

3.27.1.4. Debt covenants

- **Borrowing agreements (the bond indenture) often include restrictions called covenants that protect creditors by restricting activities of the borrower;**
- **Two types of restrictions**
  - Affirmative covenants: commit to do so from borrowers.
    - Timely payments of principal and interest;
    - Target financial ratios (such as the current, debt-to-equity, and interest coverage ratios) unchanged;
    - Use collateral in working order.
  - Negative covenants: commit not to do so from borrowers.
    - Not to pay higher dividends or repurchase more shares;
    - Not to borrow more;
    - Not to engage in mergers and acquisitions.

3.27.1.5. For analytical purpose

- Stock price >conversion price, the convertible bond should be treated as equity;
- Stock price < conversion price, convertible bond should be treated as liability.

3.27.2. 基础题

Q-58. Comte Industries issues $3,000,000 worth of three-year bonds dated 1 January 2022.

The bonds pay interest of 8% annually on 31 December. The market interest rate on bonds of comparable risk and term is 6%. The sales proceeds of the bonds are $3,160,381. Under the straight-line method, the interest expense in the first year is closest to:

A. $189,620.

B. $186,540.

C. $184,520.

3.28. Financial Lease and Operating Lease: Lessee

3.28.1. 重要知识点

关于承租人和出租人的 lease

3.28.1.1. Capital lease 的条件 under US GAAP with specific conditions:

- Ownership of the leased asset transfers to the lessee at the end of the lease;
- The lease contains an option for the lessee to purchase the leased asset cheaply (bargain purchase option);
- The lease term is **75 percen**t or more of the useful life of the leased asset;
- The present value of lease payments is **90 percent** or more of the fair value of the leased asset.
- **A specialized nature.**

3.28.1.2. Accounting treatment for lease: lessee

	B/S	I/S	CFS
All IFRS lease and finance lease under US GAAP	Recognize “right-of-use” (ROU) asset and lease liability	Report depreciation expense on ROU asset	Reduction of lease liability -----CFF
		Report interest expense on lease liability	Interest payment----CFO or CFF (IFRS)
Operating lease (US GAAP)	Recognize “right-of-use” (ROU) asset and lease liability	Reporting single lease expense (a straight line allocation of lease cost)	Entire cash payment is CFO
Exceptions: short-term leases and leases where leased asset is low value (IFRS)	No effect	Report rent expense	Rent payment------CFO

3.28.1.3. 融资租赁和经营租赁对比

- **B/S：**
  - 期初 A=L=3170（未来租金折现求和的现值 PV）
  - 融资租赁：资产按折旧递减，负债端按 BASE 法则计
  - 经营租赁：资产与负债是相同数字，按 BASE 法则计，同融资租赁的负

债数计算

- **I/S：**
  - 融资租赁：
    - 资产端：直线折旧法摊销，确认每年折旧费用=3170/4=792.5
    - 负债端：BASE 法则摊销，确认利息费用（A 列）
  - 经营租赁：
    - 全额确认租赁费用（S 列）
- CFS：**确认真实租金-1000**
  - 经营租赁：
    - CFO=-1000（S 列）；
  - 融资租赁：
    - CFO=-317（A 列），
    - CFF=-683 (1000-317)

3.28.2. 基础题

Q-59. Assume U.S. GAAP applies unless otherwise noted. At the beginning of the year, a lessee company enters into a new lease agreement that is correctly classified as a finance lease, with the following terms:

Annual lease payments due at the end of the year	$100,000
Lease term	5 years
Appropriate discount rate	12%
Depreciation method	straight-line basis
Estimated salvage value	$0

With respect to the effect of the lease on the company's financial statements in the first year of the lease, which of the following is most accurate? The reduction in the company's:

A. pretax income is $72,096.

B. cash flow from financing is $56,742.

C. cash flow from operations is $72,096.

Q-60. If a lease is recognized as an operating lease instead of finance lease, the company will recognize higher:

A. Right of use asset

B. Lease liability

C. Rent expense

Q-61. A lessee that enters into a finance lease will report the:

A. lease payable on its balance sheet.

B. full lease payment on its income statement.

C. full lease payment as an operating cash flow.

3.29. Financial Lease and Operating Lease: Lessor

3.29.1. 重要知识点

3.29.1.1. 出租人(lessor)：只要能区分 direct financing & sales type under US GAAP

- 判断是什么类型的 lease：对于出租人，lease 也分为两类—operating lease 和 capital lease.
- **对于 lessor, 判断 capital lease 的判断条件**
  - Firstly, 满足对于 lessee 是 capital lease;
  - Lessor must be reasonably assured of cash collection
  - Performed substantially under the lease
- **US GAAP 下，lessor 的 capital lease 又分为两种：** sales-type (PV> fair value of leased asset)和 direct-financing.
  - **记账区别**
    - Sales-type 在期初会确认一笔毛利 gross profit= PV of MLP – (Cost of assets – PV of salvage);
    - Direct-financing 不确认毛利，而是把 PV of MLP 当做一笔借款借给承租人，将来收利息。
  - **期初现金流区别**
    - Sales-type 在期初有现金流;
    - Direct-financing 没有现金流。
  - **期中现金流区别**
    - Sales-type 和 direct-financing 有 CFO inflow，都是 int. revenue.

3.29.2. 基础题

Q-62. Under U.S. GAAP, a lessor's reported revenues at lease inception will be highest if the lease is classified as a(n):

A. sales-type lease.

B. operating lease.

C. direct financing lease.

Q-63. A company that prepares its financial statements according to IFRS leased a piece of equipment on 1 January 2020. Information relevant to the transaction is as follows:

- Five annual lease payments of $25,000, with the first payment due 1 January 2020
- Interest rate on similar company debt is currently 8%
- The fair value of the equipment is $115,000
- Useful life of the equipment is seven years
- The company depreciates other equipment in the same asset class on a straight-line basis

The total expense related to the lease on the company's 2020 income statement will be closest to:

A. $25,000.

B. $28,185.

C. $22,024.

3.30. Pension Plan

3.30.1. 重要知识点

3.30.1.1. Pension plans

- A pension is a form of deferred benefits paid to retired employees as a compensation of their services.
  - **Defined contribution plan**: a company contributes an agreed-upon (defined) amount into the plan.
    - Contribution can be based on: employment years, age of the worker, wages, profit of the company, or a proportion of the work's contribution.
  - **Defined benefit plan**: a company makes promises of future benefits to be paid to the employee during retirement.
    - Benefit can be based on the employee's service years and wages at, or near, retirement.
- **Defined benefit pension plans**
  - **Basic accounting treatment**
    - Most defined-benefit pension plans are funded through a separate legal entity, typically a pension trust fund. A company makes payments into the pension fund, and retirees are paid from the fund.
    - The payments that a company makes into the fund are invested until they are needed to pay the retirees.
    - A company reports **either a net pension asset or a net pension liability** in its balance sheet
  - **Under IFRS**
    - The change in the net pension asset or liability recognized as pension expense in profit and loss
    - **Employees' service costs**
    - **The service cost** during the period for an employee is the present value of the increase in the pension benefit earned by the employee as a result of providing one more year of service, discounted at a rate reflective of a high-quality corporate-bond yield.
    - The service cost also includes **past service costs**, which are changes in the present value of the estimated pension obligation related to employees' service in prior periods, such as might arise from changes in the plan.
    - **Net interest expense** (accrued in beginning pension liability) or income (accrued in the beginning pension asset).
      - ✓ The net interest expense or income represents the change in value of the net defined benefit pension asset or liability.
      - ✓ It is calculated as the net pension asset or liability **multiplied by the discount rate** used in estimating the present value of the pension obligation.
    - The change in the net pension asset or liability recognized in OCI: **remeasurement**.
      - ✓ Remeasurements are not amortized into profit or loss over time.

<table>
<tr><td rowspan="2">Remeasurements include</td><td rowspan="2">Actuarial gains and losses</td><td colspan="2">Actuarial gains and losses can occur when changes are made to the assumptions on which a company bases its estimated pension obligation</td></tr>
<tr><td>The assumptions include</td><td>• employee turnover
• mortality rates
• retirement ages
• compensation increases</td></tr>
</table>

	The actual return on plan assets less any return included in the net interest expense or income.	The actual return on plan assets includes interest, dividends and other income derived from the plan assets, including realized and unrealized gains or losses.
		The actual return typically differs from the amount included in the net interest expense or income.

- **Under US GAAP**
  - The change in net pension asset or liability recognized in profit and loss in the period includes
    - ✓ Employees' service costs for the period;
    - ✓ Interest expense accrued on the beginning pension obligation;
    - ✓ Expected return on plan assets, which is a reduction in the amount of expense recognized.
  - The change in the net pension asset or liability recognized in OCI include
  - Past service costs
    - ✓ Recognized in the period in which they arise.
    - ✓ Then subsequently amortized into pension expense over the future service period of the employees covered by the plan.
  - Actuarial gains and losses
    - ✓ Recognized in other comprehensive income in the period in which they occur.
    - ✓ Amortized into pension expense over time.
  - This treatment allows companies to "smooth" the effects on pension expense over time for these two components.
  - US GAAP does permit companies to immediately recognize actuarial gains and losses in profit and loss.

3.30.1.2. 养老金对比

- **Defined contribution plan:** the employee assumes all the investment risk.
- **Defined benefit plan:** the employer assumes all the investment risk.

3.30.2. 基础题

Q-64. Penben Corporation has a defined benefit pension plan. At 31 December, its pension obligation is €10 million and pension assets are €9 million. Under either IFRS or US GAAP, the reporting on the balance sheet would be *closest* to which of the following?

A. €10 million is shown as a liability, and €9 million appears as an asset.

B. €1 million is shown as a net pension obligation.

C. Pension assets and obligations are not required to be shown on the balance sheet but only disclosed in footnotes.

Q-65. The following information is available from a company's current financial data, prepared according to US GAAP:

Defined Benefit Plan:	$ Thousands
Contributions to defined benefit plan	1,500
Employees' service cost for the period	1,400
Interest expense accrued on the beginning pension obligation	200

Expected return on plan assets	400
Actuarial gains for the period	100

The pension expense (in $ thousands) reported in the current year is closest to:

A. 1,200.

B. 1,500.

C. 1,400.

3.31. Share-Based Compensation

3.31.1. 重要知识点

3.31.1.1. Pension plans

- **Stock compensation plan takes many forms:**

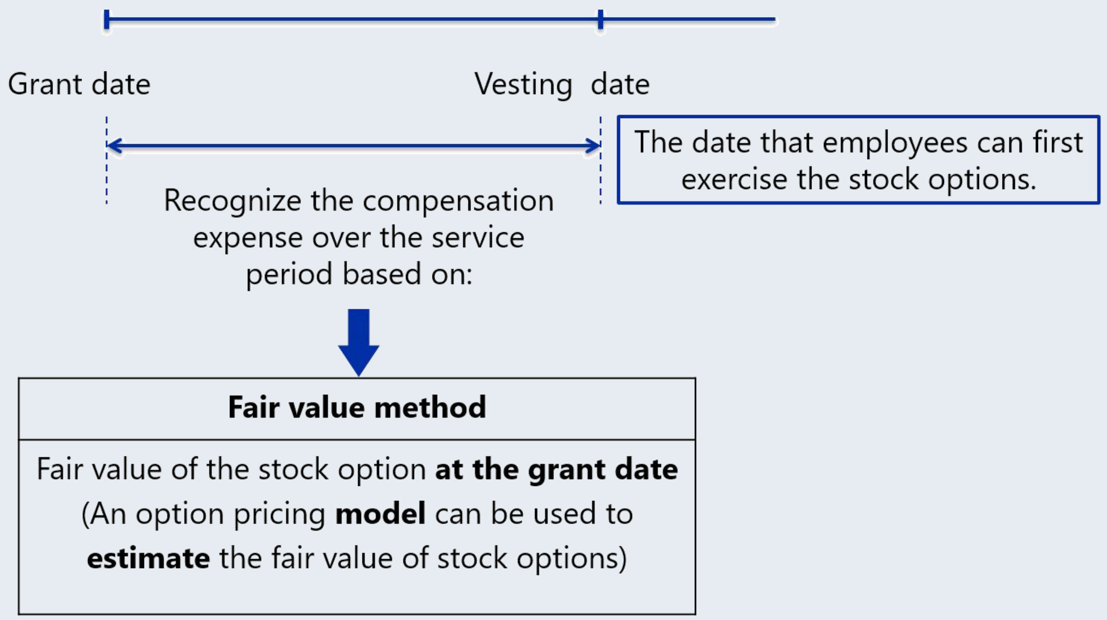
Stock options Stock grants	Equity settled
Stock appreciation rights Phantom shares	Cash settled

- **Advantages of share-Based compensation**
  - Aligning the interests of employees with shareholders.
- **Disadvantages of share-Based compensation**
  - May dilute the shareholders' interests.
  - Do not provide desired incentives as the managers may have limited influence over the market value.
  - Lead managers to be risk averse or excessive risk-taking as they cares about the market value.

3.31.1.2. Stock grants

- **Outright stock grant**
  - Compensation expense is reported on the fair value (generally the market value) of the stock on the grant date.
  - Compensation expense is allocated over the service period.
- **Restricted stock grant**
  - Employee should return those shares to the company if certain conditions are not met.
  - Compensation is measured as the fair value (usually market value) of the shares issued at the grant date.
  - This compensation expense is allocated over the employee's service period.
- **Performance shares**
  - Shares granted contingent on meeting performance goals.
  - Compensation expense is equal to the fair value (usually market value) of the shares issued at the grant date.
  - This compensation expense is allocated over the employee service period.

3.31.1.3. Stock options



- **Vesting date**
  - The vesting date is the date that employees can first exercise the stock options.
  - The vesting can be immediate or over a future period. If the share-based payments vest immediately (i.e., no further period of service is required), then expense is recognized on the grant date.
- **Exercise date**
  - The exercise date is the date when employees exercise the options and convert them to stock.
  - Upon exercise, the company increases its cash for the exercise price of the option (paid by the option holder) and credits common stock for the par value of the stock issued.
  - Additional paid-in capital is increased by the difference between the par value of the stock and the sum of the fair value of the option at the grant date and the cash received.
- **The recognition of option expense has no net impact on total equity.**

3.31.1.4. Other types of share-based compensation (cash-settled)

- **Stock appreciation rights (SARs)**
  - The potential for risk aversion is limited because employees have limited downside risk and unlimited upside potential similar to employee stock options.
  - Shareholder ownership is not diluted.
  - Valued at fair value and compensation expense is allocated over the service period of the employee.
- **Phantom stock**
  - Unlike SARs, phantom shares can be used by private companies or business units within a company that are not publicly traded or by highly illiquid companies.

3.31.2. 基础题

Q-66. Which of the following statements is true?

A. Stock grants' fair value is usually based on the market value at the grant date, while option grants require estimation for their fair value.

B. Companies record stock grants by spreading compensation expenses over the employee service period, while compensation expenses for stock options are recognized immediately.

C. Compensation expense is calculated using the stock's market value on the grant date, whereas the value of an option is determined when the employee exercises it.

Q-67. Assume GF Company, an online education company provides the following disclosure about its stock compensation plans:

"The average fair value of shares granted was USD40, USD20, and USD10 in 2022, 2021, and 2020 respectively." If the company granted 100,000 shares, with a four-year vesting period in 2022, what is the annual compensation expense for the 2022 shares granted?

A. USD1,000,000

B. USD500,000

C. USD250,000

3.32. Income Taxes: DTA/ DTL

3.32.1. 重要知识点

3.32.1.1. Tax return terminology

- Taxable income;
- Taxes payable;
- Tax base
- Income tax paid;
- Tax loss carry forward.

3.32.1.2. Financial reporting terminology

- Accounting profit
- Income tax expense.
  - **Income tax expense = taxes payable + △ DTL - △DTA**
- Carrying value
- Deferred tax liabilities and deferred tax assets.
- Valuation allowance

3.32.1.3. Temperal difference and permanent difference

- **Temporary difference**
  - Difference will reverse
- **Permanent difference**
  - Difference will not reverse, thus no deferred tax issues.

3.32.1.4. Income approach

Deferred tax assets	Deferred tax liabilities
B/S amounts that result from an excess of tax payable over income tax expense are expected to be recovered from future operations.	B/S amounts that result from an excess of income tax expense over taxes payable are expected to result in future cash outflows.
Taxes payable > income tax expense	Taxes paybele < income tax expense

3.32.1.5.

3.32.1.6. Balance sheet approach

- **Two steps for Deferred tax**
  - Step 1: identify DTL and DTA through a B/S approach;
  - Step 2: calculate deferred tax expense.
- **B/S approach**
  - Identify Accounting base and tax base for every asset and liability item on B/S.
  - Calculate the difference between two bases
    - For assets = accounting base-tax base
    - For liabilities = (-accounting base)-(-tax base)

Positive figure * tax rate = DTL
Negative figure * tax rate = DTA

3.32.1.7. U.S. GAAP vs. IFRS（相对重要的几个部分）

	IFRS	U.S.GAAP
Tax payable	将所得资产和所得税负债与其他资产和负债分开列报；	FAS109 要求，Tax payable 在 B/S 中确认为流动负债
Classification of DTA or DTL	Always non-current (net)	non-current /current
Tax rate to measure DTL or DTA	Use enacted or substantively enacted tax rate.	Use enacted tax rate
Recognition of deferred tax assets	Recognize the probable portion.	Recognize in full and then reduce by a valuation allowance, for the non-probable portion.
DTA valuation	Reverse is allowed	Reverse is prohibited

3.32.2. 基础题

Q-68. An analyst gathers the following information (in £ thousands) about a company's first year of operations:

Tax-exempt interest earned	50
Depreciation for accounting purposes	30
Depreciation for tax purposes	70
Taxable income	500

If the difference in depreciation is temporary and expected to reverse and the income tax rate is 20%, income tax expense (in £ thousands) for the year is:

A. 102.

B. 104.

C. 108.

Q-69. The following information is about a company equipment, which was purchased on 1 January 2007:

	Accounting Purposes	Tax Purposes
2007 Acquisition cost	$100,000	$100,000
Depreciation method	Straight-line	Double-declining balance method

Useful life	10 years	8 years
Salvage value	$20,000	$0
Tax rate	30%	30%

At the end of 2007, the balance sheet should occur:

A. $3,600 deferred tax liability.

B. $5,100 deferred tax asset.

C. $5,100 deferred tax liability.

Q-70. When certain expenditures result in tax credits that directly reduce taxes, the company will most likely record:

A. a deferred tax asset.

B. a deferred tax liability.

C. no deferred tax asset or liability.

Q-71. Deferred tax liabilities could arise when:

A. accounting profit is greater than taxable income.

B. the tax base of equipment is greater than its carrying value.

C. tax authorities do not allow an expense item for tax purposes.

3.33. Deferred Tax: Measurement

3.33.1. 重要知识点

3.33.1.1. 计算由于税率改变引起的 income tax expense 变化

- $\text{New DTA or DTL}=\dfrac{\text{old DTA or DTL}}{\text{old tax rate}}\times\text{new tax rate}$
- Income tax expense = tax payable + △DTL - △DTA
- Tax rate ↑ DTL↑ DTA↑
- Tax rate↓ DTL↓ DTA↓

3.33.1.2. Valuation allowance for DTA

- 当由于企业经营状况恶化，从而可能导致 DTA 未来无法回转时，要确认 Valuation allowance;
- Increasing the valuation allowance can decrease DTA, increase income tax expense and decrease net income. The net DTA can be reversed by decreasing valuation allowance, resulting in higher earing.

3.33.1.3. 在分析时，当分析师认为 DTL 不会回转时，DTL 全额视为 equity；会反转时，现值作为负债，剩余部分计入到 Equity，再计算 D/E。

3.33.1.4. Effective tax rates

$$\text{Effective tax rate} = \frac{\text{Income tax expense}}{\text{Pre - tax income (EBT)}}$$

3.33.1.5. Reversal of temporary difference

- **Treatment of DTL**
  - If unlikely to be reversed →treated as equity
  - If to be reversed →treated as true liability
  - If non-reversal/ reversal is uncertain →Ignored
- **Treatment of DTA**

- If <50% probability to be reversed →valuation allowance is created

$$DTA = DTA\text{-}\begin{pmatrix}\text{Valuation}\\ \text{Allowance}\end{pmatrix}$$

- $$\text{Asset}\downarrow \& \text{ Income}\downarrow$$

3.33.2. 基础题

Q-72. Deferred tax liabilities should be treated as equity when:

A. they are not expected to reverse.

B. the timing of tax payments is uncertain.

C. the amount of tax payments is uncertain.

Q-73. Zimt AG presents its financial statements in accordance with US GAAP. In 2007, Zimt discloses a valuation allowance of $1,101 against total deferred tax assets of $19,201. In 2006, Zimt disclosed a valuation allowance of $1,325 against total deferred tax assets of $17,325. The change in the valuation allowance *most likely* indicates that Zimt's:

A. deferred tax liabilities were reduced in 2007.

B. expectations of future earning power has increased.

C. expectations of future earning power has decreased.

Q-74. Assume U.S. GAAP applies unless otherwise noted. GF Company has a deferred tax liability balance of $1,800,000 at the end of 2022. Tax rates increased from 20 percent to 25 percent in 2022. Fred Company should increase its tax liability account and also increase its:

A. 2022 income tax expense by $120,000.

B. 2022 income tax expense by $450,000.

C. income taxes payable by $450,000.

Q-75. Carnation Corporation had a deferred tax liability of $30,000 on January 1,20X2 that is expected to reverse in 20X4. In 20X2, Carnation generated pretax financial income of $300,000 and taxable income of $150,000 due to a difference in depreciation. The tax rate for 20X2 is 30% but Carnation enacted a reduction in tax rates on January 1, 20X3 to 25%, Carnation's income tax expense for 20X2 is closest to:

A. $75,000.

B. $77,500.

C. $82,500.

3.34. Financial Reporting Quality

3.34.1. 重要知识点

3.34.1.1. Financial reporting quality

- A good financial reporting quality means the financial reports are under GAAP, decision-useful, sustainable, and adequate returns

3.34.1.2. Aggressive and conservative accounting

- **Conservative accounting**: it would delay reporting profits until the following period (so-called "hidden reserves");

- **Aggressive accounting**: it would increase the company's reported performance and financial position in the current period.

	Aggressive	**Conservative**
Current period cost	Capitalizing	Expensing
Useful life for depreciable assets	Longer time	Shorter time
Salvage values	Higher	Lower
Depreciation method	Straight line	Accelerated
Recognition of impairments	Delay recognition	Early recognition
Accrual of reserves for bad debt	Less	More
Valuation allowances for DTA	Smaller	Larger

3.34.1.3. Three conditions for issuing low quality reports

- Opportunity
  - Internal conditions can be
    - Poor internal controls;
    - Ineffective board of directors.
  - External conditions can be
    - Accounting standards that provide scope for divergent choices;
    - Minimal consequences for an inappropriate choice.
- Motivation
  - To meet or beat market expectations as reflected in analysts' forecasts and/or management's own forecasts;
  - Increase management compensation that is linked to increases in stock price or to reported earnings;
  - Career concerns and incentive compensation may motivate accounting choices;
  - Avoiding debt covenant violations can motivate managers to inflate earnings.
- Rationalization.
  - Rationalization is important because if an individual is concerned about a choice, he or she needs to be able to justify it to him- or herself.

3.34.1.4. Firms are motivated to manage

- **Earnings / Net income**
  - **Overstate net income**
    - Meet earnings expectation;
    - Remain in compliance with debt covenants;
    - Receive higher incentive compensation.
  - **Understate net income**
    - Obtain trade relief;
    - Negotiate favorable repayment term from creditors;
    - Negotiate favorable labor union contracts.
- **Balance sheet**

- Overstating assets or understating liabilities to appear more solvent.
  - E.G. lower D/E ratio
- Understating assets or overstating liabilities to enhance its performance ratios.
  - E.G. higher ROA, ROE, asset turnover ratio

3.34.1.5. The effects of different accounting methods

- Increase performance in the current period
  - Recognize revenue prematurely;
  - Use nonrecurring transactions to increase profits;
  - Defer expenses to later periods;
  - Measure and report assets at higher values;
  - Measure and report liabilities at lower values.
- Increase performance in a later period
  - Defer current income to a later period (save income for a "rainy day");
  - Recognize future expenses in a current period, setting the table for improving future performance.

3.34.1.6. 掌握几种财务警示信号及如何发现它们

- Aggressive revenue recognition
- Different growth rates of CFO and earnings
- Abnormal sales growth as compared to the economy, industry, or peers
- Abnormal inventory growth as compared to sales grow
- Boosting revenue with non-operating income and nonrecurring gains
- Delaying expense recognition
- Abnormal use of operating leases by lessees
- Hiding expenses by classifying them as extraordinary or nonrecurring

3.34.2. 基础题

Q-76. Compared with aggressive accounting, conservative accounting is most likely associated with:

A. increased sustainability of earnings.
B. higher current reported performance.
C. recognition of losses once certain.

Q-77. A high-quality financial report may reflect:

A. earnings smoothing.
B. low earnings quality.
C. understatement of asset impairment.

3.35. Financial Analysis Techniques

3.35.1. 重要知识点

3.35.1.1. Financial analysis techniques

- Common-size statement: identify different methods to create common-size income statement and common-size balance sheet.
- **Profitability ratios**
  - net profit margin $= \frac{\text{net income}}{\text{revenue}}$

- gross profit margin $= \frac{\text{gross profit}}{\text{revenue}}$
- operating profit margin $= \frac{\text{operating income}}{\text{revenue}} = \frac{\text{EBIT}}{\text{revenue}}$
- ROE (return on equty) $= \frac{\text{net income}}{\text{average equity}}$
- ROA (return on asset) $= \frac{\text{net income}}{\text{average assets}}$

  Or ROA (return on asset) $= \frac{\text{net income+interest（1−t）}}{\text{average assets}}$

> **Activity ratio (measure asset utilization): the closer these ratios to the industrial average, the better.**

- receivable turnover $= \frac{\text{annual sales}}{\text{average receivables}}$

  days of receivables collection $= \frac{365}{\text{receivables turnover}}$ (average time to collect account receivables)
- inventory turnover $= \frac{\text{COGS}}{\text{average inventory}}$

  days of inventory on hand $= \frac{365}{\text{inventory turnover}}$ (average time from purchase to sale of the inventory)
- payables turnover $= \frac{\text{purchase}}{\text{average account payables}}$

  days of payable $= \frac{365}{\text{payables turnover}}$
- **operating cycle**= days of receivables collection + days of inventory on hand
- **Cash convertion cycle**= days of receivables collection + days of inventory on hand – number of days of payables
- **The higher cash conversion cycle, the higher the days of inventory and sales outstanding and the shorter payable period.（重点掌握）**
- total asset turnover $= \frac{\text{revenue}}{\text{average total assets}}$

> **Liquidity ratio (measure liquidity): the higher the ratios, the better solvency the company in the short run.**

- current ratio $= \frac{\text{current assets}}{\text{current liabilities}}$
- quick ratio $= \frac{\text{cash+marketable securities+receivables}}{\text{current liabilities}}$
- cash ratio $= \frac{\text{cash+marketable securities}}{\text{current liabilities}}$

> **Solvency ratio (measure leverage): the higher the ratios, the higher default risks of the company.**

- Leverage
  - Long-term debt-to-equity ratio$= \frac{\text{total long−term debt}}{\text{total equity}}$
  - debt-to-equity ratio$= \frac{\text{total debt}}{\text{total equity}}$
  - total debt ratio $= \frac{\text{total debt}}{\text{total assets}}$
  - financial leverage $= \frac{\text{total assets}}{\text{total equity}}$
- Coverage
  - interest coverage ratio $= \frac{\text{EBIT}}{\text{interest}}$

- ◆ fixed charge coverage ratio $= \frac{\text{EBIT+lease payment}}{\text{interest+lease payment}}$

- ➢ **DuPont system of analysis 杜邦分因素分析法是十分重要的，3 因素和 5 因素都要掌握，尤其是 5 因素分析。**
  - ■ 3 因素分析
    - ◆ $\text{ROE} = \frac{\text{net income}}{\text{sales}} \times \frac{\text{sales}}{\text{assets}} \times \frac{\text{assets}}{\text{equity}}$
    - ◆ $\text{ROE} = \text{profit margin} \times \text{asset turnover} \times \text{financial leverage}$
  - ■ 5 因素分析
    - ◆ $\text{ROE} = \frac{\text{net income}}{\text{EBT}} \times \frac{\text{EBT}}{\text{EBIT}} \times \frac{\text{EBIT}}{\text{revenue}} \times \frac{\text{revenue}}{\text{assets}} \times \frac{\text{assets}}{\text{equity}}$
    - ◆ $\text{ROE} = \text{tax burden} \times \text{interest burden} \times \text{EBIT margin} \times \text{asset turnover} \times \text{financial leverage}$
  - ■ **杜邦分析的内容有可能和权益里的内容一起考，通过 ROE retention rate, 来计算 g，进而使用 DDM 进行估值。**
    - ◆ $g = \text{ROE} \times \text{retention ratio} = \text{ROE} \times (1 - \text{DPR})$

3.35.1.2. Formula of coverage ratio

Cash flow interest coverage ratio= (CFO + interest paid + taxes paid) / interest paid

Other cash flow ratio 的公式总结如下：

Other cash flow ratios	
Performance ratios	Calculation
Cash flow to revenue	CFO/ Revenue
Cash return on assets	CFO/ Average total assets
Cash return on equity	CFO / Average total equity
Cash to income	CFO/ Operating income
Cash flow per share	(CFO– Preferred dividends) / Weighted average NO. of common shares

Other cash flow ratios	
Coverage ratio	Calculation
Debt coverage	CFO / Total debt
Interest coverage	(CFO + Interest paid + Taxes paid)/Interest paid
Reinvestment	CFO / Cash paid for long-term assets
Debt payment	CFO / Cash paid for long-term debt repayment
Dividend payment	CFO/ dividend paid
Investing and financing	CFO/Cash outflows from investing and financing activities

3.35.1.3. Common-size

- ➢ **Common-sized I/S ratios** ---- item in the income statement account / revenues (net sales)
- ➢ **Common-sized B/S ratios** ---- item in the balance sheet account / total assets
- ➢ **Common-sized CF/S ratio:**
  - ■ Item in the CF statement account / revenues
  - ■ CF outflow / total outflows OR CF inflow / total inflows
- ➢ **Common-size** 一般有横向比较（公司间），纵向比较（年份间），体现 trend.

3.35.2. 基础题

Q-78. An analyst gathers the following information about two companies:

	Company 1	Company 2
Current ratio	1.91	2.52
Net operating cycle (days)	44	31

All else being equal, company 1 most likely has:

A. less liquidity and less need for outside financing than company 2.

B. Less liquidity and greater need for outside financing than company 2.

C. Greater liquidity and less need for outside financing than company 2.

Q-79. Galambos Corporation had an average receivables collection period of 19 days in 2003. Galambos has stated that it wants to decrease its collection period in 2004 to match the industry average of 15 days. Credit sales in 2003 were $300 million, and analysts expect credit sales to increase to $400 million in 2004. To achieve the company's goal of decreasing the collection period, the change in the average accounts receivable balance from 2003 to 2004 that must occur is closest to:

A. –$420,000.

B. $420,000.

C. $836,000.

Q-80. The following information is selected from a company's balance sheet:

Cash	$4,100
Marketable securities	$17,200
Accounts receivable	$225,300
Inventory	$229,400
Total current assets	$475,500
Current liabilities	$339,600

The company's quick ratio is closest to:

A. 1.40.

B. 0.06.

C. 0.73.

Q-81. Income statements for two companies (A and B) and the common-sized income statement for the industry are provided below:

All $ figures in '000s	Company A	Company B	Industry
Sales	$ 21,000	$ 16,500	100.0%
Cost of goods sold	12,706	10,478	63.8%
Selling, general, and administrative expenses	5,250	4,042	24.8%
Interest expense	1,680	1,072	7.0%
Pretax earnings	1,364	908	4.4%
Taxes	410	290	1.6%

Net earnings	$ 954	$ 618	2.8%

The best conclusion an analyst can make is that:

A. Company B's interest rate is the industry average.

B. both companies' tax rates are higher than the industry average.

C. Company A earns a higher gross margin than both Company B and the industry.

Q-82. The following financial data is available for a company:

Return on assets (ROA)	3.8%
Total asset turnover	1.82
Financial leverage	1.65
Dividend payout ratio	47.1%

The company's sustainable growth rate is closest to:

A. 3.00%.

B. 3.32%.

C. 3.78%.

Q-83. Consider the following information available for a company for last year:

ROE	16%
Net profit margin	20%
Revenue	$500,000
Average total assets	$800,000

The average shareholder's equity is closest to:

A. 645,000

B. 625,000

C. 605,000

Q-84. A measure of operating performance is most likely to be represented by which of the following ratios?

A. Defensive interval ratio

B. Working capital turnover ratio

C. Cash ratio

Q-85. A company's most recent balance sheet shows the following values (NZ$ thousands):

Accounts payable	3,800
Long-term debt	5,590
Other long-term liabilities	800
Common stock	1,200
Retained earnings	1,810

The company's debt- to- capital ratio is closest to:

A. 0.77

B. 1.86

C. 0.65

Q-86. The following selected financial information is available:

Metric	
Sales	$421,000
Cost of goods sold (COGS)	315,000
Cash	30,000
Average accounts receivable	40,000
Average inventories	36,000
Average accounts payable	33,000

The company's cash conversion cycle (in days) is closest to:

A. 76.4.

B. 45.2.

C. 38.2.

Solutions

3. Financial Reporting and Analysis

3.1. 基础题

Q-1. Solution: A.

The role of financial reporting is to provide information about the performance of a company, its financial position, and changes in financial position that is useful to a wide range of users in making economic decisions.

Audit reports express an opinion about the fair presentation of the financial statements.

The role of financial statement analysis is to take the financial reports and evaluate the past, current, and prospective performance and financial position of a company for the purpose of making investment, credit, and other economic decisions.

Q-2. Solution: A.

Annual report is not a requirement of the US SEC. Both 10-K and proxy statement are required by the US SEC. Proxy statements are prepared and distributed to shareholders on matters that are to be put to a vote at shareholder meetings.

Q-3. Solution: B.

A qualified opinion is one in which there is some scope limitation or exception to accounting standards that is described in additional explanatory paragraphs.

Q-4. Solution: C.

A is incorrect. The financial statements are obtained in the collect data step, but not converted into common-size statements until the process step.

B is incorrect. Preparing common-size financial statements is part of the process data stage, after which the analyst will analyze/interpret the processed data.

C is correct. Preparing common-size financial statements is part of the process data step.

Q-5. Solution: C.

Start-of-year capital contributed by owners		$10,000
Additional shares issued		$2,000
Initial retained earnings		$6,000
Net income	$4,000	
Less dividends paid	(600)	
Increase in retained earnings	$3,400	$3,400
Ending owners' equity		$21,400

Q-6. Solution: A.

The process has recognized as a liability, with cash has been received, but the transaction haven't occurred. So this should be recognized as an unearned revenue.

Q-7. Solution: C.

The two fundamental qualitative characteristics that make financial information useful are relevance and faithful representation. Materiality relates to the level of detail of the information needed to achieve relevance.

Q-8. Solution: A.

Service revenues are recognized by reference to the stage of completion of the service contract. Historical patterns provide evidence that 25% of the services performed under the contract are incurred during the contract's first year. As such, only 25% of the contract revenue would be recognized in the first year:

Total contract value	€400
Stage of completion at end of first year	25%
Revenue recognized in first year	€100

Q-9. Solution: A.

companies may be permitted to adopt new standards prospectively, but changes in accounting policies are reported through retrospective application unless it is impractical to do so.

Q-10. Solution: B

Companies that capitalize R&D costs report those expenditures in CFI; companies that expense R&D costs report those expenditures in CFO. Companies that expensed will report a higher expense, lower NI,and then a lower equity,therefore, it would incur a worse financial leverage.

Q-11. Solution: A.

Borrowing costs can be capitalized under IFRS until the tangible asset is ready for use. Also, under IFRS, income earned on temporarily investing the borrowed monies decreases the amount of borrowing costs eligible for capitalization. Therefore, Total capitalized interest = (500 million × 14% × 2 years)- 10 million = 130 million.

Q-12. Solution: C.

With stock options, the treasury stock method must be used. Under that method, the company would receive $320,000 (20,000 × $16) and would repurchase 16,000 shares ($320,000/$20). The shares for the denominator would be:

Shares outstanding	900,000
Options exercises	20,000
Treasury shares purchased	(16,000)
Denominator	904,000

Q-13. Solution: B.

Preferred stock dividends of $70,000 (0.07× 1,000,000)

$$\text{BEPS} = \frac{Net\ income - preferred\ dividends}{Weighted\ average\ number\ of\ common\ shares\ outstanding}$$

$$= \frac{1{,}250{,}000 - 70{,}000}{1{,}000{,}000} = 1.18$$

$$\text{DEPS} = \frac{Net\ income - \mathrm{D}_{ps} + \text{converted preferred dividends}}{\text{WACSO} + \text{number of shares converted}}$$

$$= \frac{1{,}250{,}000 - 70{,}000 + 49{,}000}{1{,}000{,}000 + 700 \times 25} = 1.2079$$

Because DEPS for the company is 1.21, which is larger than its BEPS, which is 1.18, so the preferred stock is an anti-dilutive stock, DEPS for the company is 1.18.

Q-14. Solution: C.

$$\text{Diluted EPS}=\frac{\text{adjusted income available for common shares}}{\text{weighted avg. common \& potential common shares out}}$$

$$=\frac{\left[\text{NI- div}_{\text{preferred}}\right]+\left[\text{div}_{\substack{\text{convertible}\\\text{preferred}}}\right]+\left[\text{interest}_{\substack{\text{convertible}\\\text{debt}}}\right](1\text{-t})}{\text{WACSO}+\left[\text{shares}_{\substack{\text{conversion of}\\\text{conv. pfd. shares}}}\right]+\left[\text{shares}_{\substack{\text{conversion of}\\\text{conv. debt}}}\right]+\left[\text{shares}_{\substack{\text{issuable from}\\\text{stock opt.}}}\right]}$$

Based on the formula shown above, to calculate DEPS, both convertible debt and convertible preferred stocks will influence both the numerator and denominators.
Treasury stock method is used for stock options, and only denominator is influenced to calculate DEPS.

Q-15. Solution: B.

$$\text{EPS}=\frac{\text{NI}}{\text{shares}}=\text{NI per share}=\text{Sales per share}\times\text{Net profit margin}=70\times2.3\%=1.61$$

Q-16. Solution: C.

Foreign currency translation adjustment on a foreign subsidiary;
Unrealized G/L on derivatives contracts accounted for as cash flow hedges;
Unrealized G/L on available for sale securities;
Certain costs of a company's defined benefit post-retirement plans that are not recognized in the current period.

Q-17. Solution: C.

Comprehensive income includes both net income and realized and unrealized gains and losses that are excluded from the net income calculation (collectively referred to as Other comprehensive income), but which adjust reported values of balance sheet line items.
Ending R/E = Beginning R/E + NI - dividends declared
450 = 200 + NI − 10, NI = 260
CI = NI + OCI = 260 + 40 = 300

Q-18. Solution: A.

Comprehensive income includes both net income and realized and unrealized gains and losses that are excluded from the net income calculation (collectively referred to as Other comprehensive income), but which adjust reported values of balance sheet line items.
Four types of items are treated as other comprehensive income under both IFRS and US GAAP. (The specific treatment of some of these items differs between the two sets of standards, but these types of items are common to both.)

- Foreign currency translation adjustments. In consolidating the financial statements of foreign subsidiaries, the effects of translating the subsidiaries' balance sheet assets and liabilities at current exchange rates are included as other comprehensive income.
- Unrealized gains or losses on derivatives contracts accounted for as hedges. Changes in the fair value of derivatives are recorded each period, but certain changes in value are treated as other comprehensive income and thus bypass the income statement.

- Unrealized holding gains and losses on a certain category of investment securities, namely, available-for-sale 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 post-retirement plans that are not recognized in the current period.

In addition, under IFRS, other comprehensive income includes certain changes in the value of long-lived assets that are measured using the revaluation model rather than the cost model. Also, under IFRS, companies are not permitted to reclassify certain items of other comprehensive income to profit or loss, and companies must present separately the items of other comprehensive income that will and will not be reclassified subsequently to profit or loss.

Q-19. Solution: C.

Treasury stock is non-voting and does not receive dividends.

Q-20. Solution: C.

For financial assets classified as available for sales, unrealized gains and losses are not recorded on the income statement but do appear on the balance sheet.

Shareholders' equity is adjusted through a separate line item for valuation gains and losses termed "other comprehensive income.

Q-21. Solution: C.

The allowance for doubtful accounts increases by the bad debt expense recognized for the year and decreases by the amounts written off during the year.

Beginning balance allowance	£56 million
Plus bad debt expense	?
Less write-offs	(£84 million)
Ending balance allowance	£92 million
Solve for bad debt expense = 120	

Q-22. Solution: C

Non-cash transactions, if significant, are reported as supplementary information, not in the investing or financing sections of the cash flow statement.

Q-23. Solution: B.

Purchasing other companies' long-term bond generally should be classified as investing activities, which should be classified as operating activities for financial institutions.

Q-24. Solution: B.

US GAAP requires that interest paid be classified as an operating cash flow; IFRS allows interest paid to be classified as either an operating or financing activity.

Q-25. Solution：C.

FCFF = NI + NCC – WC Inv – FC Inv + [Int×(1-tax rate)]

FCFF = CFO – FC Inv + [Int×(1-tax rate)]

CFO = NI + NCC – WC Inv

Adjustment = NCC − WC Inv = 7,250 − 600 − (35,950 − 39,570) = 10,270

Q-26. Solution: A.

Cash received from customers = Sales - increase in accounts receivable = 384.6 – (155.5-152.3) = 381.4. Cash paid to suppliers = Cost of goods sold + Increase in inventory + decrease in accounts payable = 168.3+(74.8-66.3)+(35.5-34.1)=178.2.

Q-27. Solution: C.

CFO = Net income + depreciation + delta current liabilities - delta current asset + loss – gains = 240 + 40 + 50 – 20 – 10 + 30 – 4. Note that the increase in PP&E cannot be classified as cash flows from operating activities.

Q-28. Solution: C.

The direct method of cash flow statement presentation shows the specific cash inflows and outflows that result in reported cash flow from operating activities (e.g., cash from customers and ash to suppliers). Companies using IFRS can decide to report interest and dividend receipts as ther an investing or operating activity, whereas under US GAAP, they must report such income as an operating activity. The listed operating and investment activities indicate that the company reports under IFRS using the direct method.

Q-29. Solution: B.

Interest expense can be determined from the following relationship:

	£ millions
Beginning interest payable	40.9
Plus interest expense	?
Minus cash paid for interest	–130.3
Ending interest payable	58.4
Solving for interest expense = 147.8	

Q-30. Solution: A.

Ending year net book value is \$59 million (=105 –46), and the beginning year net book value is \$60 million (=100 –40).

$NBV_{ending} = NBV_{beginning}$ + purchase – depreciation.

Cash received from equipment sale= $NBV_{beginning}$ + purchase – depreciation - NBV_{ending} – loss = 60 +10 -8 – 59 - 2 =1 million

Q-31. Solution: C.

CFI = -purchased of new machine = -150,000

CFF = -dividends paid – principal paid = -42,000 – 34,000 = -76,000

Convertible preferred stock – non-cash

Dividends received – operating cash flows

Q-32. Solution: C.

CFO = net income + depreciation + loss on sale of equipment + decrease in accounts receivable - increase in inventories + increase in accounts payable.

It would have been deducted in the calculation of net income but the loss is not the cash impact of the transaction (the proceeds received, if any, would be the cash effect) and cash flows related to equipment transactions are investing activities, not operating activities.

CFO = 91.6 + 36.4 + 3.2 + 8.4 –10.8 +9 = \$137.8 million; so FCFE = 137.8-14.6=\$123.2 million.

Q-33. Solution: B.

Free cash flow to the firm can be computed as operating cash flows plus after-tax interest expense less capital expenditures.

Q-34. Solution: A.

The FCFF [Cash flow from operations (CFO) + Interest × (1– t) – Capital expenditures] would be the same. CFO and capital expenditures would both increase by the same amount (ignoring taxes). Therefore, net effect on FCFF would be zero.

Q-35. Solution: B.

$\text{FCFE} = \text{FCFF} - \text{interest}(1 - \text{tax rate}) + \text{net borrowing} = \text{CFO–FC Inv} + \text{Net borrowing}$

Company 1: FCFE = CFO – 23 – 17 = CFO – 40

Company 2: FCFE = CFO – 11 – 29 = CFO – 40

Q-36. Solution: A.

The total capitalized costs include fixed production costs, the direct conversion costs of material and labor, storage costs required as part of production, normal waste cost but not abnormal waste costs. \$540,000 +\$522,000 +\$153,000+\$52,000+\$5,700 = \$1,272,700.

Q-37. Solution: B.

When inventory costs are increasing and inventory unit levels are stable or increasing, using the LIFO method will result in higher cost of sales and lower inventory carrying amounts than using the FIFO method. The higher cost of sales under LIFO will result in lower gross profit, operating income, income before taxes, and net income. Income tax expense will be lower under LIFO, causing the company's net operating cash flow to be higher. On the balance sheet, the lower inventory carrying amount will result in lower reported current assets, working capital, and total assets. Analysts must carefully assess the financial statement implications of the choice of inventory valuation method when comparing companies that use the LIFO method with companies that use the FIFO method.

Q-38. Solution: A.

The periodic and perpetual systems result in the same inventory and cost of goods sold values (and thus gross profit margin) using both FIFO and specific identification valuation methods, but not always under LIFO.

Q-39. Solution: C.

Under both IFRS and US GAAP, the inventory would be written down to its net realizable value ($4.1 million); therefore, the costs of goods sold would be the same. There are some exceptions under US GAAP for inventory valued using the retail method, which would not apply to a manufacturing company or for inventory valued under LIFO.

Q-40. Solution: A

IFRS require the reversal of inventory write-downs if net realisable values increase; US GAAP do not permit the reversal of write-downs.

Q-41. Solution: C.

The write-down reduced the value of inventory and increased cost of sales in 2007. The higher numerator and lower denominator mean that the inventory turnover ratio as reported was too high. Gross margin and the current ratio were both too low.

Q-42. Solution: A.

$\text{COGS}_{\text{FIFO}} = \text{COGS}_{\text{LIFO}} - \Delta\text{LIFO reserve} = 70 - (12 - 10) = 68$

Q-43. Solution: B.

Adding the ending balance in the LIFO reserve to the LIFO inventory would equal the ending balance for inventory on FIFO basis.

Ending inventory (FIFO) = Ending inventory (LIFO) + LIFO reserve

Q-44. Solution: B.

The most appropriate way to identify a LIFO liquidation is by reviewing the inventory footnotes for a decrease in the LIFO reserve. Although a LIFO liquidation may result in an increase in gross margin or changes in inventory out of line with changes in sales there are other factors that could explain those changes.

Q-45. Solution: C.

Net income (LIFO) = Net profit margin × Sales

= 0.049 × 2,125 = 104.1

Change in LIFO reserve = LIFO reserve 2014 – LIFO reserve 2013

= 82 – 64 = 18

Net income (FIFO) = LIFO net income + Change in LIFO reserve × (1 – Tax rate)

= 104.1 + 18 × (1 – 0.30) = 116.7

Increase in net income = 116.7 – 104.1 = 12.6

More simply, the difference is the change in the LIFO reserve, after tax.

18 × (1 – 0.3) = 12.6

Q-46. Solution: B.

A longer useful life and higher salvage value are consistent with lower depreciation expense, which results in a higher net asset value. Asset turnover (Sales/Total assets) would decrease because sales would be constant while assets would be higher due to smaller depreciation charges.

Q-47. Solution: B.

The expected remaining useful life of a company's overall asset base	= Net PPE ÷ Depreciation expense.
Depreciation expense equals the change in accumulated depreciation *	750 – 500 = 250
The expected remaining useful life	4,250 ÷ 250 = 17 years
*This is true when there are no asset dispositions or acquisitions, as appears to be the case here because the gross PPE does not change.	

Q-48. Solution: B.

Under the double declining balance method, the depreciation rate is 2 × Straight line rate. The straight line rate is 33.3% (i.e., 1/3 years), so the double declining rate is 66.6%, or two-thirds depreciation rate per year. But the asset should not be depreciated below its assumed residual value in any year.

	Double Declining Balance Method of Depreciation		
Year	Net Book Value at Start of Year	Depreciation	Net Book Value at End of Year
1	€100,000	€66,667	€33,333
2	33,333	22,222	11,111
3	11,111*	1,111**	10,000
*	Alternative calculation for start of Year 3 net book value: €10,000 × (1 – 0.667) × (1 – 0.667) = €1,111.		
**	Depreciation cannot be 2/3 × €11,111 = €7,407 because that would reduce book value to less than the estimated €10,000.		

Q-49. Solution: A.

Under IFRS,the recoverable amount for customer list is the higher of:

- Value in use, which is the present value of the future cash flows: $886,000.
- Fair value less costs to sell: $890,000 -7,000 = $883,000.

The recoverable amount ($886,000) is lower than the carrying value ($930,000).
Therefore, the asset is impaired and should be written down to that amount.
Under U.S. GAAP, the carrying value of the customer list is lower than undiscounted future cash flow, so the customer list is not impaired under US GAAP.

Q-50. Solution: C.

Under IFRS, an asset is considered to be impaired when its carrying amount exceeds its recoverable amount (the higher of fair value less cost to sell or value in use).
Fair value less costs to sell: 480 – 50 = 430
Value in use = Present value of expected future cash flows = 440
Recoverable amount (higher value of the above two amounts) = 440
Impairment loss under IFRS = Carrying value (net book value) – recoverable amount
Impairment loss = 500 – 440 = 60

Q-51. Solution: B.

"An intangible asset with an indefinite useful life is not amortised. Instead, at least annually, the reasonableness of assuming an indefinite useful life for the asset is reviewed and the asset is tested for impairment." "Intangible assets with indefinite lives are not amortised. Instead, they are carried on the balance sheet at historical cost but are tested at least annually for impairment. Impairment exists when the carrying amount exceeds its fair value."

Q-52. Solution: A.

The fair value model differs from the revaluation model used for property, plant, and equipment. Under the revaluation model, whether an asset revaluation affects net income depends on whether the revaluation initially increases or decreases the carrying amount of the asset. In contrast, under the fair value model, all changes in the fair value of the asset affect net income. To use the fair value model, a company must be able to reliably determine the property's fair value on a continuing basis.

Q-53. Solution: C.

For investment properties, the fair value model requires the company to recognize its revaluation gains or losses directed to net income, so Segeo should recognize 55.75- 48.25 =7.5 million directly to net income.

Q-54. Solution: B.

"Other long-lived tangible assets (i.e., property considered to be property, plant, and equipment) are owner-occupied properties used for producing the company's goods and services or for housing the company's administrative activities." "The revaluation model is an alternative to the cost model for the periodic valuation and reporting of long-lived assets. IFRS permit the use of either the revaluation model or the cost model."

Q-55. Solution: A.

When interest rates rise, bonds decline in value. Thus, the carrying amount of the bonds being carried on the balance sheet is higher than the market value. The company could repurchase the bonds for less than the carrying amount, so the economic liabilities are overestimated. Because the bonds are issued at a fixed rate, there is no effect on interest coverage.

Q-56. Solution: B.

IFRS recommends the effective interest method for the amortization of bond discounts/premiums.

The bond is issued for 0.8456 × 500 = 422.80 million

Interest expense = 422.80 × 5% = 21.14million

Q-57. Solution: A.

Most companies maintain the historical cost (sales proceeds) of the bonds after issuance, and they amortise any discount or premium over the life of the bond. The amount reported on the balance sheet for bonds is thus the historical cost plus or minus the cumulative amortisation, which is referred to as amortised cost.

Coupon = 10,000 × 0% = 0

N = 3, I/Y = 5, PMT = 0, FV = 10,000, CPT PV = 8,638

Interest expense of year 1 = 8,638 ×5% = 432

The carrying amount at the end of year 1 = 8,638 + 432 – 0 = 9,070

Interest expense of year 1 = 9,070×5% = 454

The carrying amount at the end of year 2 = 9,070 + 454 – 0 = 9,524

Alternative solution:
There is a new 1-year zero-coupon bond issuing at 5%.
PV = 10,000 / (1+5%) = 9,524

Q-58. Solution: B.

Under the straight-line method, the bond premium is amortized equally over the life of the bond. The annual interest payment is $240,000 ($3,000,000 × 8%) and annual amortization of the premium under the straight-line method is $53,460 [($3,160,381 – $3,000,000)/3)]. The interest expense is the interest payment less the amortization of the premium ($240,000 – $53,460 = $186,540).

Q-59. Solution: B.

The present value of the lease is $360,477.62. (n = 5, I/Y= 12%, PMT = $100,000) 12% of the original PV is $43,257.31 and represents the interest component of the payment in the first year. The difference between the annual payment and the interest is the amortization of the lease obligation included in cash flow from financing. $100,000 – 43,257.31 = $56,742.69. Depreciation is $360,477.62/5 or $72,095.52 so the total reduction in pretax income would be interest plus depreciation or $115,352.83. CFO would be reduced by the amount of the interest only because the depreciation would be added back to determine cash flow from operations.

Q-60. Solution: C.

For operating lease, the company needs to recognize ROU asset and lease liability on its balance sheet, and rent expense is recognized on its income statement. However, for finance lease, ROU asset and lease liability is recognized on balance sheet, but rent expense is not recognized on its income statement.

Q-61. Solution: A.

A finance lease is similar to borrowing money and buying an asset; a company that enters into a finance lease as the lessee reports an asset (leased asset) and related debt (lease payable) on its balance sheet. A company that enters into a finance lease as the lessee will report interest expense and depreciation expense on its income statement. A company that enters into an operating lease will report the lease payment on its income statement. For a finance lease, only the portion of the lease payment relating to interest expense reduces operating cash flow; the portion of the lease payment that reduces the lease liability appears as a cash outflow in the financing section. A company that enters into an operating lease as the lessee will report the full lease payment as an operating cash outflow.

Q-62. Solution: A.

Sales-type lease treats the lease as a sale of the asset, and revenue is recorded at the time of sale equal to the present value of future lease payments. Under a direct financing lease, only interest income is reported as earned. Under an operating lease, revenue from rent is reported when collected.

Q-63. Solution: B.

Under IFRS 16 all leases are classified as a finance lease and must be capitalized.

Using a financial calculator for an annuity due at the beginning of the period:
PV of lease payments: PMT = \$25,000, i = 8%, N = 5, Mode = Begin, Compute PV. PV = \$107,803

Therefore, the lease would be capitalized at \$107,803.

Present value of the lease (asset value capitalized and initial liability): \$107,803

Payment 1 January 2020: –25,000

Liability value 1 January 2020: \$82,803

Interest expense in 2020:0.08 × \$82,803 = \$6,624.25

Amortization expense for the year using the lease term as the useful life (no indication that the lease will be renewed beyond the initial term): \$107,803/5 = \$21,560.63

Total expense in 2020: \$28,184.88

Q-64. Solution: B.

The company will report a net pension obligation of €1 million equal to the pension obligation (€10 million) less the plan assets (€9 million).

Q-65. Solution: A.

Plan	Expense Components under US GAAP	\$ Thousands
Defined benefit plan	Employee service costs	1,400
	Interest expense accrued on beginning pension obligation	200
	Less expected ROA on plan assets	(400)
Total Expense		1,200

Q-66. Solution: A.

The compensation for a stock grant is based on the market value at the date of the stock grant. For a stock option, the value is not definitively known and must be estimated. Answer B is not correct because companies account for both stock grants and option grants by allocating the value of the grant over the service period (often the vesting period). Answer C is not correct because for both a share grant and an option grant, the value of the grant is determined based on the date of the grant.

Q-67. Solution: A.

Calculated as follows: 100,000 shares × by average fair value at grant date of USD40 = USD4,000,000 total compensation. Divide this amount by the four-year vesting period, and the result is USD1,000,000 annual compensation expense.

Q-68. Solution: C.

Taxes payable = taxable income × tax rate = 500 × 20% = 100

△DTL= (70-30)×20% = 8

Income tax expense = taxes payable + △DTL - △DTA = 100+8 = 108

Q-69. Solution: C.

Straight line depreciation expense = (100,000 – 20,000) / 10 = 8,000

DDB depreciation expense = (2/8) × 100,000 = 25,000

DTL = 30% × (25,000 – 8,000) = 5,100

Q-70. Solution: C.

Tax credits that directly reduce taxes are a permanent difference, and permanent differences do not give rise to deferred tax.

Q-71. Solution: A.

"Deferred tax liabilities result from temporary timing differences between a company's income as reported for tax purposes (taxable income) and income as reported for financial statement purposes (reported income)." Deferred tax liabilities "arise when a deficit amount is paid for income taxes and company expects to eliminate the deficit over the course of future operations. In this case, financial accounting income tax expense exceeds income taxes payable."

Q-72. Solution: A.

If the liability will not reverse, there will be no required tax payment in the Future and the "liability" should be treated as equity.

Q-73. Solution: B.

The valuation allowance is taken against deferred tax assets to represent uncertainty that future taxable income will be sufficient to fully utilize the assets. By decreasing the allowance, Zimt is signaling greater likelihood that future earnings will be offset by the deferred tax asset.

Q-74. Solution: B.

The change in Fred's rates causes its deferred tax liability account to increase ((25 – 20) / 20) × \$1,800,000 =) \$450,000. The corresponding increase is to current income tax expense.

Q-75. Solution: B.

Current tax expense = Taxable income × Current tax rate= 150,000 × 30% = 45,000

20X2.1.1

DTL (old) =30,000

Temporary difference (old) = 30,000/30% = 100,000

20X2.12.31

Additional temporary difference = 300,000-150,000=150,000

Temporary difference (new) = 100,000 + 150,000 = 250,000

DTL (new) = Temporary difference (new) × tax rate (new)= 250,000 × 25% = 62,500

Delta DTL = 62,500 – 30,000 = 32,500

Income tax expense = tax payable + delta DTL = 45,000 + 32,500 = 77,500

Q-76. Solution: A.

A is correct. Conservative accounting choices decrease a company's reported performance and results in the current period and may increase its reported performance and financial position in later periods. Therefore, it typically avoids a sustainability issue.

B is incorrect because higher current reported performance is a result associated with aggressive accounting choices, not conservative ones.

C is incorrect because in general, conservatism means that losses are recognized when probable; waiting to recognize losses until they are certain would be an aggressive approach rather than a conservative one.

Q-77. Solution: B.

High-quality financial reports offer useful information, meaning information that is relevant and faithfully represents actual performance. Although low earnings quality may not be desirable, if the reported earnings are representative of actual performance, they are consistent with high-quality financial reporting. Highest-quality financial reports reflect both high financial reporting quality and high earnings quality.

Q-78. Solution: B.

A higher current ratio indicates a higher level of liquidity (i.e., a greater ability to meet short-term obligations). A lower ratio indicates less liquidity, implying a greater reliance on operating cash flow and outside financing to meet short-term obligations.

This cash conversion cycle (net operating cycle) metric indicates the amount of time that elapses from the point when a company invests in working capital until the point at which the company collects cash. A shorter cash conversion cycle indicates greater liquidity. A short cash conversion cycle implies that the company only needs to finance its inventory and accounts receivable for a short period of time. A longer cash conversion cycle indicates lower liquidity; it implies that the company must finance its inventory and accounts receivable for a longer period of time, possibly indicating a need for a higher level of capital to fund current assets.

Q-79. Solution: C.

Accounts receivable turnover is equal to 365/19 (collection period in days) = 19.2 for 2003 and needs to equal 365/15 = 24.3 in 2004 for Galambos to meet its goal. Sales/turnover equals the accounts receivable balance. For 2003, \$300,000,000/19.2 = \$15,625,000, and for 2004, \$400,000,000/24.3 = \$16,460,905. The difference of \$835,905 is the increase in receivables needed for Galambos to achieve its goal.

Q-80. Solution: C.

A is incorrect. It is the current ratio: (Current assets/Current liabilities) = (475,500/339,600) = 1.40.

B is incorrect. It is the cash ratio: (Cash + Marketable Securities)/Current liabilities = (4,100 + 17,200)/339,600 = 0.06.

C is correct. The quick ratio is

(Cash + Marketable securities + Accounts receivable) / Current liabilities = (4,100 + 17,200 + 225,300) / 339,600 = 0.73

Q-81. Solution: C.

Common-sized analysis of the income statements shows that Company A has a lower percentage cost of goods sold and hence a higher gross margin than the industry.

	Co A	Co B	Industry	Co A	Co B
Sales	\$21,000	\$ 16,500	100.0%	100%	100%
Cost of goods sold	12,706	10,478	63.8%	60.5%	63.5%
Gross margin			36.2%	39.5%	36.5%
Company A earns a higher gross margin than both Company B and the industry					
Pretax earnings	1,364	908	4.4%	6.5%	5.5%
Taxes	410	290	1.6%	2.0%	1.8%
Tax rate = Taxes ÷ Pretax earnings			36%	30%	32%

The tax rates for the companies are not higher than the industry.
The interest rate is not a function of sales and cannot be analyzed on a common-sized income statement. Tax rates are determined based on taxes ÷ pretax earnings, not as a percentage of sales (as shown in common-sized analysis).

Q-82. Solution: B.

Sustainable growth rate = retention ratio (b) × ROE.

b = 1- Dividend payout ratio	1 - 0.471 = 0.529
ROE = ROA x Financial leverage	0.038 x 1.65 = 0.0627
Sustainable growth rate = b x ROE	0.529 x 0.0627 = 3.32%

Q-83. Solution: B.

The DuPont equation is:

$$ROE = \frac{\text{Net income}}{\text{Revenue}} \times \frac{\text{Revenue}}{\text{Average total assets}} \times \frac{\text{Average total assets}}{\text{Average shareholders' equity}}$$

$$16\% = 20\% \times \frac{\$500{,}000}{\$800{,}000} \times \frac{\$800{,}000}{\text{Average shareholders' equity}}$$

Average shareholders' equity = $625,000

Q-84. Solution: B.

A is incorrect. The defensive interval ratio is an example of a liquidity ratio.
B is correct. Activity ratios are typically used to measure operating performance. Working capital turnover is an example of an activity ratio; the defensive interval ratio and cash ratio are liquidity ratios used to measure a company's ability to meet its short-term obligations.
C is incorrect. The cash ratio is an example of a liquidity ratio.

Q-85. Solution: C.

The debt- to- capital ratio is

$$\frac{Total\ debt}{Total\ debt + Total\ shareholders'\ equity} = \frac{5{,}590}{5{,}590 + 1{,}200 + 1{,}810} = 0.65$$

Where total debt includes only interest- bearing debt.

Q-86. Solution: C.

Cash conversion cycle = DOH + DSO – Days of payables

	Formula	Calculation	Days
DOH: Days of inventory on hand	(365/Inventory turnover)	365/8.75	41.7
Inventory turnover	(COGS/Average inventory)	315,000/36,000 = 8.75	
DSO: Days of sales outstanding	(365/Receivables turnover)	365/10.53	34.7
Receivables turnover	(Sales/Average accounts receivable)	421,000/40,000 = 10.53	
Number of days of payables	(365/Payables turnover)	365/9.55	− 38.2
Payables turnover	(COGS*/Average accounts	315,000/33,000 =	

	payable)	9.55	
Cash conversion cycle			38.2
* When purchases are not available (as in this case) the COGS can be used to estimate payables turnover			