# Activity 1 chapter 1 Crossword Puzzle



**Across**

5. Statement reporting all amounts as percentages   
(2 Words)

7. Analysis used to compare revenues over a 5-year period

12. Net income earned, but not yet distributed to stockholders (2 Words)

14. Analysis revealing relationships among two or more accounts

16. Activity including cash transactions involving long-term assets

17. Statement reporting assets and how they are financed (abbreviation)

18. Statement reporting changes in contributed capital and retained earnings (2 Words)

20. Assets = Liabilities + \_\_\_\_ (abbreviation)

21. Activity including cash transactions from a company's central business

22. Measures how efficiently assets are used to generate revenue (2 Words)

24. Amounts owed

25. Proportion of assets financed by debt (2 Words)

26. Statement reporting changes in cash (2 Words)

28. Reveals how efficiently assets generate profits  
(3 Words)

**Down**

1. System for recording, classifying, and summarizing financial information

2. Wholesale costs of inventory sold (abbreviation)

3. Activity including cash transactions that involve stockholders and creditors

4. Amounts earned selling to or servicing customers

6. Items of value

8. Costs incurred to produce revenues

9. Rules for preparing the financial statements (abbreviation)

10. Amounts paid-in by stockholders to purchase stock   
(2 Words)

11. Amounts to be paid to suppliers (2 Words)

13. Principle that requires assets be recorded at the amount paid for them (2 Words)

15. Statement reporting profitability (2 Words)

19. Profit (loss), earnings, or the bottom line (2 Words)

23. Proportion of profit from revenue (abbreviation)

27. Amounts to be received from customers (abbreviation)

# Activity 2 THE FOUR FINANCIAL STATEMENTS

**Purpose**: • Identify the four financial statements.

• Understand the basic information provided by each financial statement.

**Accounting** is the system of recording, classifying, and reporting financial information. Four financial statements report this information: balance sheet, income statement, statement of stockholders’ equity, and the statement of cash flows.

**BALANCE SHEET**

Assets Liabilities

Stockholders’ equity

The Balance Sheet (BS) provides a snapshot of a company’s financial position as of a certain date. It reports **assets,** items of value such as inventory and equipment, and whether the assets are financed with **liabilities** (debt) or **stockholders’ equity** (equity).

**INCOME STATEMENT**

Revenues

(Expenses)

Net income

The Income Statement (IS) reports the company’s profitability during an accounting period. It reports **revenues**, amounts received from customers for products sold or services provided, and **expenses,** the costs incurred to produce revenues. The difference is **net income.**

**STATEMENT OF STOCKHOLDERS’ EQUITY**

Retained earnings, beginning Contributed capital, beginning

+ Net income + Issuance of shares

(Dividends) (Repurchase to retire shares)

Retained earnings, ending Contributed capital, ending

The Statement of Stockholders’ Equity (SE) reports if the **earnings** (net income) of this accounting period are distributed as **dividends** or retained in the business as **retained earnings**. It also reports amounts paid-in (contributed) by stockholders to purchase common stock and preferred stock.

**STATEMENT OF CASH FLOWS**

Cash inflows

(Cash outflows)

Change in the cash account

The Statement of Cash Flows (CF) reports cash inflows and cash outflows during an accounting period.

Q1 Which financial statement reports:

a. whether assets are primarily financed with debt or equity? (BS **/ IS / SE / CF**)

b. whether the company was profitable or not? (**BS /** IS **/ SE / CF**)

c. cash received from customers during the accounting period? (**BS / IS / SE /** CF)

d. dividends declared by the board of directors for shareholders? (**BS / IS /** SE **/ CF**)

e. retained earnings at the beginning of the accounting period? (**BS / IS /** SE **/ CF**)

f. the expenses of a corporation? (**BS /** IS **/ SE / CF**)

g. the assets of a corporation? (BS **/ IS / SE / CF**)

# Activity 3 BALANCE SHEET

**Purpose**: • Understand the information provided by the balance sheet.

• Identify asset, liability, and stockholders’ equity accounts reported on the

balance sheet.

• Understand the accounting equation.

|  |  |  |  |
| --- | --- | --- | --- |
| **PEPSICO (PEP\*) 12/25/2010 BALANCE SHEET** ($ in millions) | | | |
| **ASSETS** |  | **LIABILITIES** |  |
| Cash and cash equivalents | $ 5,943 | Accounts payable | $ 3,865 |
| Short-term investments | 426 | Short-term debt | 4,898 |
| Accounts receivable, net | 6,323 | Other current liabilities | 7,129 |
| Inventories | 3,372 | Long-term debt | 19,999 |
| Other current assets | 1,505 | Other noncurrent liabilities | 11,098 |
| Property, plant, and equipment, net | 19,058 |  |  |
| Goodwill | 14,661 | **STOCKHOLDERS' EQUITY** |  |
| Other intangible assets | 13,808 | Contributed capital | 4,449 |
| Long-term investments | 1,368 | Retained earnings | 37,090 |
| Other noncurrent assets | 1,689 | Treasury stock and other equity | (20,375) |
| **Total Assets** | **$68,153** | **Total L & SE** | **$68,153** |

The balance sheet reports assets and the amount of financing from liabilities and stockholders’ equity as of a certain date. This relationship is summarized by the **accounting equation**, which is:

**Assets = Liabilities + Stockholders’ Equity**

**Assets** are items of value that a corporation owns or has a right to use. Typical asset accounts include cash, accounts receivable, inventory, equipment, buildings, and land. Accounts *receivable* are amounts to be *received* in the future from customers.

**Liabilities** are amounts owed to creditors; the amount of debt owed to third parties. Typical liability accounts include accounts payable, wages payable, notes payable, and bonds payable. The key word found in many liability accounts is *payable*. Accounts *payable* are amounts to be *paid* in the future to suppliers.

**Stockholders’ Equity** is the portion of assets the owners own free and clear. Stockholders’ equity may also be referred to as shareholders’ equity or owners’ equity. Typical stockholders’ equity accounts include:

*Contributed Capital*—Amounts paid-in (contributed) by stockholders to purchase common stock and preferred stock.

*Retained Earnings*—Net income earned by the company since its incorporation and not yet distributed as dividends.

Q1 Identify the accounting equation amounts for PepsiCo Corporation using the information above.

Assets $68,153 million = Liabilities $46,989 million + Stockholders’ Equity $21,164 million

Q2 Assets can either be financed with liabilities or stockholder’s equity.

Q3 Will the accounting equation hold true for every corporation? (Yes **/ No / Can’t tell**) *Why*?

Assets will always be financed by either liabilities (debt) or stockholders’ equity. Assets are either owned free and clear by the owners (equity) or financed by creditors (debt).

\* *Stock market symbols are shown in parentheses*.

Q4 PepsiCo is primarily financed with (liabilities **/ stockholders’ equity**). How can you tell?

Total liabilities of $46,989 are greater than total stockholders’ equity of $21,164.

Q5 Circle whether the account is classified as an (A)sset, (L)iability, or part of Stockholders’ Equity (SE) on the balance sheet.

a. Cash (A **/ L / SE**)

b. Accounts *payable* (**A /** L **/ SE**)

c. Accounts *receivable* (A **/ L / SE**)

d. Land (A **/ L / SE**)

e. Common stock (**A / L /** SE)

f. Equipment (A **/ L / SE**)

g. Notes payable (**A /** L **/ SE**)

h. Building (A **/ L / SE**)

i. Retained earnings (**A / L /** SE)

j. Inventory (A **/ L / SE**)

k. Mortgage payable (**A /** L **/ SE**)

l. Bonds payable (**A /** L **/ SE**)

Q6 Use PepsiCo’s balance sheet on the previous page to answer the following questions:

1. What amount of cash does this company expect to receive from customers within the next few months? $6,323 million
2. The largest asset account is Property, plant, and equipment, net reporting $19,058 million.

What types of asset costs are included in this account?

Answers will vary, but could include…factory equipment for producing beverage concentrate, bottling, and making snack food; factory, warehouse, and administrative buildings; sales and delivery vehicles; and computer equipment.

1. How much does this company currently owe suppliers? $3,865 million
2. Since the company started business, what is the total amount shareholders have paid for their shares of stock? $4,449 million
3. Since the company started business, how much net income was earned and not yet distributed as dividends? $37,090 million

# Activity 4 INCOME STATEMENT

**Purpose**: • Understand the information reported on the income statement.

• Identify revenue and expense accounts reported on the income statement.

|  |  |
| --- | --- |
| **PEPSICO (PEP) 2010 INCOME STATEMENT** ($ in millions) | |
| Sales revenue | $ 57,838 |
| Cost of goods sold | 26,575 |
| Gross profit | 31,263 |
| Selling, general and administrative (SGA) expense | 22,326 |
| Research and development expense | 488 |
| Other operating expenses | 217 |
| Income before income tax | 8,232 |
| Provision for income tax | 1,912 |
| Net income | $ 6,320 |

The income statement reports the company’s profitability during an accounting period.

**Revenues** are amounts received from customers for products sold and services provided. *Sales revenue* and *service revenue* are amounts earned engaging in the primary business activity.

**Expenses** are the costs incurred to produce revenues. Expenses are recorded in the accounting period they benefit (if a cause and effect relationship exists) or are incurred (if there is no cause and effect relationship). *Cost of goods sold* expense reports the wholesale costs of inventory sold to customers during the accounting period.

**Net income** is the difference between revenues and expenses. Net income is also referred to as *profit (loss)*, *earnings*, or the *bottom line*.

**Revenues – Expenses = Net income**

Q1 Circle whether the account is classified as a (Rev)enue, (Exp)ense, or (Not) reported on the income statement.

a. Wage expense (**Rev /** Exp **/ Not**) d. Service revenue (Rev **/ Exp / Not**)

b. Inventory (**Rev / Exp /** Not) e. Rent expense (**Rev /** Exp **/ Not**)

c. Cost of goods sold (**Rev /** Exp **/ Not**) f. Building (**Rev / Exp /** Not)

Q2 Review PepsiCo’s 2010 income statement above and answer the following questions:

a. This company reports (1 **/** 2 **/ 3 / 4**) revenue account(s) and (**2 / 3 /** 4 **/** 5) expense accounts.

b. Beverages and snacks were sold to customers for $57,838 million that cost the company $26,575 million to produce.

c. The title of the largest expense account is Cost of Goods Sold reporting $26,575 million, which is typically the largest expense account for a company within the (retail **/ service**) industry.

What specific types of costs would be included in this account for PepsiCo?

Answers will vary, but could include … the cost of syrup concentration for the beverages, ingredients for snack foods, packaging materials, manufacturing labor, and other manufacturing costs such as depreciation of PPE.

d. Was PepsiCo profitable? (Yes **/ No**) How much profit was reported? $6,320 million

Q3 Net income can also be referred to as (**revenues / expenses / common stock /** earnings).

# Activity 5 STATEMENT OF STOCKHOLDERS’ EQUITY

**Purpose**: • Understand information provided by the Statement of Stockholders’ Equity.

• Understand changes within contributed capital and retained earnings.

• Identify relationships among the IS, RE, and the BS.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **PEPSICO (PEP) 2010 STATEMENT OF STOCKHOLDERS’ EQUITY**  ($ in millions) | | | | |
|  | **Contributed Capital** | **Retained Earnings** | **Other**  **Equity** | **Total Stockholders Equity** |
| Beginning balance | $ 176 | $ 33,805 | $ (17,177) | **$ 16,804** |
| Issuance of shares | 4,273 |  |  | **4,273** |
| Net income |  | 6,320 |  | **6,320** |
| Dividends |  | (3,041) |  | **(3,041)** |
| Other transactions |  | 6 | (3,198) | **(3,192)** |
| **Ending balance** | **$ 4,449** | **$ 37,090** | **$(20,375)** | **$ 21,164** |

The statement of stockholders’ equity reports changes within the contributed capital, retained earnings, and other equity accounts during an accounting period. ***Contributed capital*** (CC) is increased when additional shares of stock are issued and decreased when those shares are retired. ***Retained earnings*** (RE) is increased by **net income** (earnings) of the accounting period and decreased when earnings are distributed as **dividends** to the stockholders. Earnings not distributed as dividends are reported as retained earnings.

Q1 Earnings is another word for (**revenue / receivables /** net income).

Earnings of a corporation belong to the (**managers /** stockholders).

Earnings can either be distributed to the stockholders as (dividends **/ expenses / retained earnings**) or kept in the business as (**dividends / expenses /** retained earnings).

Q2 Income statement: Revenues - Expenses = Net income/loss

Balance sheet: Assets = Liabilities + Stockholders’ Equity

Stockholders’ Equity = Contributed capital + Retained Earnings + Other Equity

Statement of SE: Beg Retained Earnings + Net Income - Dividends = Ending RE

Q3 Net income is computed on the (IS **/ SE / BS**) and then transferred to the Statement of Stockholders’ Equity to increase (**CC /** RE **/ Other SE**). Ending retained earnings is reported on the Statement of Stockholders’ Equity and then transferred to the (**IS / SE /** BS).

Q4 Circle whether the account is reported on the Income Statement (IS), Statement of Stockholders’ Equity (SE), or the Balance Sheet (BS). Note: *Three amounts are reported on two statements*.

a. Contributed capital (**IS /** SE **/** BS) e. Sales revenue (IS **/ SE / BS**)

b. Net income (IS **/** SE **/ BS**) f. Accounts receivable (**IS / SE /** BS)

c. Dividends (**IS /** SE **/ BS**) g. Wage expense (IS **/ SE / BS**)

d. Retained earnings (**IS /** SE **/** BS) h. Bonds payable (**IS / SE /** BS)

Q5 Use PepsiCo’s 2010 statement of stockholders’ equity above to answer the following questions:

a. Contributed capital reported at the end of the accounting period is $4,449 million, which is the amount shareholders paid for (**net income / dividends /** issued shares).  
b. Retained earnings increased by (net income **/ dividends / issued shares**) of $6,320 million and decreased by (**net income /** dividends **/ issued shares**) of $3,041 million.  
c. When the company issues shares of stock, total stockholders’ equity (increases **/ decreases**). When the company buys back shares of stock, total stockholders’ equity (**increases /** decreases).

# Activity 6 STATEMENT OF CASH FLOWS

**Purpose**: • Understand information provided by the Statement of Cash Flows.

• Understand that cash flows are organized as operating, investing, and financing activities.

The statement of cash flows organizes cash inflows and cash outflows as operating activities, investing activities, and financing activities.

|  |  |
| --- | --- |
| **PEPSICO (PEP) 2010 STATEMENT OF CASH FLOWS** ($ in millions) | |
| Net cash received from ***operating*** activities (NCOA) | $ 8,448 |
| Net cash paid for ***investing*** activities (NCIA) | (7,668) |
| Net cash received from ***financing*** activities (NCFA) | 1,386 |
| Effect of exchange rate changes | (166) |
| Change in cash | 2,000 |
| + Cash, beginning of the period | 3,943 |
| = Cash, end of the period | $ 5,943 |

Business activities can be classified into three distinct categories: *operating*, *investing*, and *financing*.  **Operating Activities** relate to a company’s main business of selling products or services to earn net income. **Investing Activities** relate to the need for investing in property, plant, and equipment or expanding by making investments in other companies. **Financing Activities** relate to how a company finances its assets—with debt or stockholders’ equity. The Statement of Cash Flows describes a company’s cash inflows and outflows for each of these three areas.

Q1 Use PepsiCo’s 2010 statement of cash flows above to answer the following questions:

a. PepsiCo’s operating activities generated cash inflows of $8,448 million.

b. PepsiCo purchased property, plant, and equipment, which resulted in a cash (**inflow /** outflow) of $7,668 million from (**operating /** investing **/ financing**) activities.

c. PepsiCo borrowed money, which resulted in a cash (inflow **/ outflow**) of $1,386 million from (**operating / investing /** financing) activities.

d. At the beginning of 2010, cash was $3,943 million. During the year, cash (increased **/ decreased**) by $2,000 million, resulting in an ending cash balance of $5,943 million.

e. Cash at the end of 2010 is the (same as **/ different than**) cash at the beginning of 2011.

Q2 Circle whether the account is reported on the Income Statement (IS), the Balance Sheet (BS), or the Statement of Cash Flows (CF).

a. Retained earnings (**IS /** BS **/ CF**) e. Cash from issuing common stock (**IS / BS /** CF)

b. Rent expense (IS **/ BS / CF**) f. Sales revenue (IS **/ BS / CF**)

c. Rent payable (**IS /** BS **/ CF**) g. Accounts receivable (**IS /** BS **/ CF**)

d. Cash paid for rent (**IS / BS /** CF) h. Cash received from customers (**IS / BS /** CF)

# Activity 7 GENERALLY ACCEPTED ACCOUNTING PRINCIPLES (GAAP)

**Purpose**: • Understand that GAAP (Generally Accepted Accounting Principles) are the rules of financial accounting.

• Apply the historical cost principle.

**GAAP** (Generally Accepted Accounting Principles) are the rules that companies must follow when preparing financial statements.

* The **SEC (Securities and Exchange Commission)** has legislative authority to set the reporting rules for accounting information of the publicly held corporations it regulates. It has designated GAAP to be the official rules. The SEC provides oversight and enforcement authority over the Financial Accounting Standards Board (FASB) and the Public Company Accounting Oversight Board (PCAOB).
* The seven full-time voting members of the **FASB (Financial Accounting Standards Board)** set accounting reporting standards and formulate GAAP.
* **Audits** attest to whether a company’s financial statements comply with GAAP. Only **CPAs (Certified Public Accountants)**, licensed by the state, can conduct the audits.
* **Ethical behavior** is defined by the **AICPA’s (American Institute of CPA’s)** Code of Professional Conduct. This code holds CPAs accountable for serving the public interest.
* The five full-time members of the **PCAOB (Public Company Accounting Oversight Board)** establish auditing standards and conduct inspections of the public accounting firms that perform audits.

Q1(**FASB / SEC /** GAAP **/ AICPA**) are the rules that must be followed when preparing the financial statements for external use.

Q2 **GAAP** stands for Generally Accepted Accounting Principles.

Q3(CPAs **/ Management / Corporate accountants**) conduct audits that attest to whether a company’s financial statements comply with GAAP.

## HISTORICAL COST PRINCIPLE

**GAAP #1: The Historical Cost Principle** states that assets and services should be recorded at their acquisition cost, thus using ***verifiable*** information that is the most ***reliable*** information.

Q4An auto has a sticker price of $20,000. A company purchases the auto, but negotiates with the sales person and pays a price of only $18,000. On the balance sheet, ($18,000 **/ $20,000**) will be reported for the auto. Thirty years ago, land was purchased for $2,000, which now has a current market value of $100,000. On the balance sheet, ($2,000 **/ $100,000**) will be reported for the land.

Q5 When the financial statements are prepared according to GAAP, assets and services are reported at their (acquisition cost **/ current market value**).

Q6 THINK ABOUT IT: Is knowledge of an asset’s current market value ever useful? (Yes **/ No**)

*If so, when*? Knowledge of an asset’s current market value is valuable when buying or selling an individual asset or a business and when using an asset as collateral for a loan.

## International Financial Reporting Standards (IFRS)

Q7 There (are **/ are not**) differences among the accounting standards of different countries. IFRS are global accounting standards that U.S. GAAP is (converging toward **/ in full compliance with**).

# Activity 8 ANALYSIS: RATIOS

**Purpose**: • Understand that analysis reveals relationships.

• Explore the relationships among assets, liabilities, revenues, and net income.

• Examine the debt ratio, ROS (return-on-sales) ratio, asset-turnover ratio, and the ROA (return-on-asset) ratio.

The *three types of analysis* are Ratio Analysis, Trend Analysis (horizontal analysis), and Common-Size Statements (vertical analysis). *Analysis reveals relationships* by comparing amounts to:

(1) other amounts for the same period (ratios and common-size statements),

(2) the same information from a prior period (trend analysis),

(3) competitor information, and industry norms.

## RATIOS

**Tiffany & Co** (TIF), **Wal-Mart Stores** (WMT), and **Ford Motor Company** (F) are well-known companies, but how much do you really know about them?

Q1 *FINANCIAL TRIVIA* For the fiscal years ending below, put a large circle in the box of the company that you *guess* has …

a. the greatest amount of *assets*. (This one is completed for you.)

b. the greatest amount of *liabilities*.

c. the greatest amount of *revenue*.

d. the greatest amount of *net income*.

|  |  |  |  |
| --- | --- | --- | --- |
| ($ in millions) | **TIF**  Jan 31, 2011 | **WMT**  Jan 31, 2011 | **F**  Dec 31, 2010 |
| **ASSETS** | $ | $ | $ **164,687** |
| **LIABILITIES** | $ | $ | $ |
| ***All answers are acceptable. Solutions appear after Q7.*** | | | |
| **REVENUE** | $ | $ | $ |
| **NET INCOME** | $ | $ | $ |

Q2 *FINANCIAL TRIVIA* In each large circle, place the ***amount*** that you ***guess*** for …

a. the greatest amount of *assets*. (This is completed for you.)

b. the greatest amount of *liabilities*.

c. the greatest amount of *revenue*.

d. the greatest amount of *net income*.

*Now turn to page 25 and see how well you guessed.*

Q3 a. Compute the debt ratio for each company listed below. The debt ratio reveals the proportion of assets financed with debt. ***Debt ratio = Total liabilities / Total assets***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ($ in millions) | **Year Ended** | **Total Assets** | **Total Liabilities** | **Debt Ratio** |
| Tiffany & Co (TIF) | 1/31/2011 | $ 3,736 | $ 1,558 | 41.70% |
| Wal-Mart Stores (WMT) | 1/31/2011 | $ 180,663 | $ 112,121 | 62.06% |
| Ford Motor Company (F) | 12/31/2010 | $ 164,687 | $ 165,360 | 100.41% |

b. Wal-Mart is primarily financed with (debt **/ equity**), resulting in a debt ratio that is   
(**less /** more) than 50.00%, whereas a company primarily financed with equity will have a debt ratio that is (less **/ more**) than 50.00%. Ford has a debt ratio greater than (**50% /** 100%), indicating its liabilities are (greater **/ less**) than its assets.

Q4 a. Compute Return on Sales (ROS) for each company listed below. ROS reveals the portion of each revenue dollar that results in profit. ***ROS = Net income / Sales revenue***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ($ in millions) | **Year Ended** | **Revenue** | **Net income** | **ROS** |
| TIF | 1/31/2011 | $ 3,085 | $ 368 | 11.93% |
| WMT | 1/31/2011 | $ 421,849 | $ 16,389 | 3.89% |
| F | 12/31/2010 | $ 128,954 | $ 6,561 | 5.09% |

b. Wal-Mart has (greater **/ less**) revenue than Tiffany & Co, but Tiffany & Co has a   
(higher **/ lower**) ROS ratio than Wal-Mart. The ROS ratio for Tiffany & Co indicates 11.93% of every revenue dollar resulted in profit (net income), but for Wal-Mart only 3.89% of every revenue dollar resulted in profit.

c. For Wal-Mart, 96.11 cents of each revenue dollar went to pay for all of the costs of running the business, leaving 3.89 cents of each revenue dollar for profit.

d. The corporation with the strongest ROS ratio is (TIF **/ WMT / F**).

*How can a company increase its ROS ratio*?

A company can increase its ROS ratio by reducing costs and operating more efficiently, thereby increasing profit for a given amount of revenue or by generating more revenue.

e. Does a low ROS ratio indicate a weak corporation? (**Yes /** No) *Why*?

Even though Wal-Mart has a low ROS ratio compared to Microsoft, it definitely would not be considered a weak corporation. Corporations use different strategies to generate profits (net income). Wal-Mart’s strategy is to keep prices low to generate a large volume of sale revenue.

Q5 a. Compute Asset Turnover for each company listed below. Asset Turnover reveals how efficiently assets are used to generate revenue. ***Asset Turnover = Sales Revenue / Total Assets***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ($ in millions) | **Year Ended** | **Revenue** | **Total Assets** | **Asset Turnover** |
| TIF | 1/31/2011 | $ 3,085 | $ 3,736 | 0.8257 |
| WMT | 1/31/2011 | $ 421,849 | $ 180,663 | 2.3350 |
| F | 12/31/2010 | $ 128,954 | $ 164,687 | 0.7830 |

1. The asset turnover ratios computed above are in the range (less than 3 **/ 3 or more**).
2. (**TIF /** WMT **/ F**) has the strongest asset turnover, indicating the company makes profits by generating a large volume of revenue using relatively few assets. Wal-Mart generates $2.34 in revenue for every $1 invested in assets.

Q6 a. Compute Return on Assets (ROA) for each company listed below. ROA reveals how efficiently a company uses its assets to generate profit (net income). A high ROA ratio depends on managing asset investments and controlling expenses to keep net income high. Analyze the components, ROS and Asset Turnover, to better understand corporate strategy (product-differentiation vs. low-cost strategies). ROA is the broadest measure of profitability.   
***ROA =*** ***Net Income / Total Assets***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ($ in millions) | **Year Ended** | **Net Income** | **Total Assets** | **ROA** |
| TIF | 1/31/2011 | $ 368 | $ 3,736 | 9.85% |
| WMT | 1/31/2011 | $ 16,389 | $ 180,663 | 9.07% |
| F | 12/31/2010 | $ 6,561 | $ 167,687 | 3.91% |

b. For each company below, compute ROA by multiplying the two components, Return on Sales and Asset Turnover (previously computed). ***ROA = ROS x Asset T/O***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ($ in millions) | **Year Ended** | **ROS x** | **Asset Turnover** | **= ROA** |
| TIF | 1/31/2011 | 11.93% | 0.8257 | 9.85% |
| WMT | 1/31/2011 | 3.89% | 2.3350 | 9.07% |
| F | 12/31/2010 | 5.09% | 0.7830 | \*3.99% |

\* Rounding error

c. The corporation with the strongest overall measure of profitability is (TIF **/ WMT / F**) with an ROA of 9.85% indicating that for each dollar invested in assets, the company generates, on average, 9.85 cents in profits.

The corporation with the weakest ROA is (**TIF / WMT /** F).

d. Wal-Mart has a **(high /** low) ROS and a (high **/ low**) Asset Turnover, indicating that a (low-cost **/ product-differentiation**) strategy is used, whereas Tiffany & Co has a **(**high **/ low**) ROS and a (**high /** low) Asset Turnover, indicating that a (**low-cost /** product-differentiation) strategy is used. Ford Motor Company has **(high /** low) ROS and (**high /** low) Asset Turnover, indicating that it is (**doing well /** still recovering).

Q7 a. The ratio that measures the ability to translate revenue into profit is the   
(**Debt /** ROS **/ Asset Turnover / ROA)** ratio.

b. The ratio that measures the proportion of debt used to finance assets is the   
(Debt **/ ROS / Asset Turnover / ROA**) ratio.

c. The broadest measure of profitability that can be broken down into components to better understand corporate strategy is the (**Debt / ROS / Asset Turnover /** ROA) ratio.

d. A high (**Debt / ROS /** Asset Turnover **/ ROA**) ratio indicates a high-volume strategy

Solutions to *FINANCIAL TRIVIA* Q1 and Q2.

|  |  |  |  |
| --- | --- | --- | --- |
| ($ in millions) | **TIF**  Jan 31, 2011 | **WMT**  Jan 31, 2011 | **F**  Dec 31, 2010 |
| **ASSETS** | $ 3,736 | **$ 180,663** | $ 164,687 |
| **LIABILITIES** | 1,558 | 112,121 | **165,360** |
| **STOCKHOLDERS’ EQUITY** | 2,178 | **68,542** | (673) |
| **REVENUE** | 3,085 | **421,849** | 128,954 |
| **NET INCOME** | $ 368 | **$ 16,389** | $ 6,561 |

# Activity 9 ANALYSIS: TREND

Purpose: • Prepare a trend analysis and understand the information provided.

A **trend analysis** compares amounts of a more recent year to a base year. The base year is the earliest year being studied. The analysis measures the percentage of change from the base year.

Q1 Complete the trend indexes for *Total expenses* and *Net income* using the amounts listed below. To compute, divide each amount by the amount of the base year and multiply by 100. Record the resulting *trend index* in the shaded area below. Use 2007 as the base year.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PEPSICO**  ($ in millions) | **2010** | | **2009** | | **2008** | | **Base Year**  **2007** | |
| **Sales revenue** | $57,838 | 147 | $43,232 | 110 | $43,251 | 110 | $39,474 | 100 |
| **Total expenses** | 51,518 | 152 | 37,286 | 110 | 38,109 | 113 | 33,794 | 100 |
| **Net income** | $ 6,320 | 111 | $ 5,946 | 105 | $ 5,142 | 90 | $ 5,682 | 100 |

ROS 10.93% 13.75% 11.89% 14.39%

Q2 From 2007 to 2010 sales growth for PepsiCo was 47%. During the same period, total expenses increased 52%. When net sales increase, expenses would be expected to (increase **/ stay the same / decrease**). It is favorable when sales increase by 47% and expenses increase at a (**greater /** lesser) rate than 47%. From 2007 to 2010 (**revenues /** expenses) of PepsiCo increased at a greater rate, which is (**favorable /** unfavorable), resulting in a (small **/ large**) increase in net income.

Q3 Assume PepsiCo had a goal of increasing profits by 5% each year. This goal was (met **/ not met**).  
 47% / 3 years ~16% > 5%

Q4 The best year financially for PepsiCo was (2010 **/** 2009 **/ 2008**). *Why*?

**Both answers are acceptable:**

In 2009, total expenses were kept under control. Expenses increased by 10%, no more than the 10% increase in sales revenue. Also, expenses decreased from the previous year. For 2009, ROS was 13.75% compared to only 10.93% for 2010.

2010 reported the greatest increase in revenue (47%) and net income (11%).

The worst year financially for PepsiCo was (**2010 / 2009 /** 2008). *Why*?

Expenses increased at a greater rate than revenue; expenses increased by 13%, while sales revenue increased by only 10%, resulting in a 10% decrease in net income since the base year. ROS for 2008 was only 11.89% compared to 13.75% for 2009.

Q5 Complete the trend indexes for *Liabilities* and *Stockholders’ Equity* using the amounts listed below. To compute, divide each amount by the amount for the base year and multiply by 100. Record the resulting *trend index* in the shaded area below. Use 2007 as the base year.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PEPSICO**  ($ in millions) | **12/25/2010** | | **12/26/2009** | | **12/27/2008** | | **Base Year**  **12/29/2007** | |
| **Assets** | $68,153 | 197 | $39,848 | 115 | $35,994 | 104 | $34,628 | 100 |
| **Liabilities** | 46,989 | 270 | 23,044 | 132 | 23,888 | 137 | 17,394 | 100 |
| **SEquity** | $21,164 | 123 | $16,804 | 98 | $12,106 | 70 | $17,234 | 100 |

Q6 The assets of PepsiCo increased by 97% from 12/29/2007 to 12/25/2010, indicating PepsiCo is (growing **/ shrinking**). From 12/29/2007 to 12/25/2010, (**assets /** liabilities) increased at a greater rate, indicating the corporation is relying (more **/ less**) on debt to finance assets.

Q7 Stockholders’ equity amounts are greater than the base year on (12/25/2010 **/ 12/26/2009 / 12/27/2008**) when the trend index is (greater **/ less**) than 100. Stockholders’ equity amounts are less than the base year on (**12/25/2010 /** 12/26/2009 **/** 12/27/2008) when the trend index is (**greater /** less) than 100.

Q8 It is easier to analyze PepsiCo (**before /** after) preparing the trend analysis.

# Activity 10 ANALYSIS: COMMON-SIZE STATEMENTS

**Purpose**: • Prepare common-size statements and understand the information provided.

The **COMMON-SIZE INCOME STATEMENT** compares all amounts within one year to revenue of that same year. The analysis measures each income statement amount as a percentage of revenue.

Q1 Prepare the common-size statements for the Coca-Cola (KO) and the Starbucks (SBUX) companies listed below. To compute, divide each amount on the income statement by sales revenue. Record the resulting *common-size percent* in the shaded area provided.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **2010** | **PEPSICO (PEP)** | | **COCA-COLA (KO)** | | **STARBUCKS (SBUX)** | |
| ($ in millions) | **Amount** | **%** | **Amount** | **%** | **Amount** | **%** |
| **Sales revenue** | $57,838 | 100 | $35,119 | 100 | $10,707 | 100 |
| **Total expenses** | 51,518 | 89 | 23,310 | 66 | 9,761 | 91 |
| **Net income** | $ 6,320 | 11 | $11,809 | 34 | $ 946 | 9 |

Q2 (PEP **/ KO / SBUX**) is the largest company above, reporting sales revenue of approximately $57.8 (**trillion /** billion **/ million / thousand**). ROS for PepsiCo is 11% or 0.11 in decimal form, which indicates 11 cents of every dollar of sales revenue resulted in profit. ***ROS = NI / Revenue***

Q3 On the common-size income statement, every amount is compared to or divided by total   
(**assets / liabilities /** sales revenue **/ net income**).

Q4 Common-size statements are helpful when comparing companies of different size. (True **/ False**)

Q5 Based only on the information provided above, which company would be your choice of investment? (**PEP /** KO **/ SBUX**) Why?

Coca-Cola’s ROS of 34% is the greatest, indicating for every dollar of sales revenue 34 cents goes toward profit and 66 cents towards expenses. Said another way, KO incurs only 66 cents of expenses to generate each $1 of sales revenue.

The **COMMON-SIZE BALANCE SHEET** compares all amounts within one year to total assets of that same year. The analysis measures each balance sheet amount as a percentage of total assets.

Q6 Prepare the common-size statements for the Coca-Cola (KO) and Starbucks (SBUX) companies listed below. To compute, divide each amount on the balance sheet by total assets. Record the resulting *common-size percent* in the shaded area provided.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **2010** | **PEPSICO (PEP)** | | **COCA-COLA (KO)** | | **STARBUCKS (SBUX)** | |
| ($ in millions) | **Amount** | **%** | **Amount** | **%** | **Amount** | **%** |
| **Assets** | $68,153 | 100 | $72,921 | 100 | $6,386 | 100 |
| **Liabilities** | 46,989 | 69 | 41,918 | 57 | 2,712 | 42 |
| **SEquity** | $21,164 | 31 | $31,003 | 43 | $3,674 | 58 |

Q7 Starbucks primarily finances assets with (**liabilities /** stockholders’ equity*)*. The debt ratio for Starbucks is 42%, which indicates debt (liabilities) is used to finance 42% of assets and equity (stockholders’ equity) is used to finance 58% of assets. On the common-size balance sheet, every amount is compared to or divided by total (assets **/ liabilities)**. ***Debt Ratio = Liabilities / Assets***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COCA-COLA (KO\*) 12/31/2010 BALANCE SHEET** ($ in millions) | | | | | |
| **ASSETS** |  |  | **LIABILITIES** |  |  |
| Cash and cash equivalents | $ 8,517 |  | Accounts payable | | $ 1,887 |
| Short-term investments | 2,820 |  | Short-term debt | | 8,100 |
| Accounts receivable, net | 4,430 |  | Other current liabilities | | 8,521 |
| Inventories | 2,650 |  | Long-term debt | | 14,041 |
| Other current assets | 3,162 |  | Other non-current liabilities | | 9,369 |
| Property, plant, and equipment, net | 14,727 |  |  |  |  |
| Goodwill | 11,665 |  | **STOCKHOLDERS’ EQUITY** | |  |
| Other intangibles | 15,244 |  | Contributed capital | | 10,937 |
| Long-term investments | 7,585 |  | Retained earnings | | 49,278 |
| Other non-current assets | 2,121 |  | Other stockholders’ equity | | (29,212) |
| **TOTAL ASSETS** | $ 72,921 |  | **TOTAL L & SE** | | $ 72,921 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COCA-COLA (KO) 2010 INCOME STATEMENT** ($ in millions) | | | | | |
| Sales revenue |  |  |  | $ 35,119 |  |
| Cost of goods sold |  |  |  | 12,693 |  |
| Gross profit |  |  |  | 22,426 |  |
| Selling, general, and administrative expense | | | | 7,199 |  |
| Other operating expenses | | |  | 6,778 |  |
| Nonoperating (revenues) and expenses | | | | ( 5,794) |  |
| Income before income tax | |  |  | 14,243 |  |
| Provision for income tax | |  |  | 2,434 |  |
| Net income |  |  |  | $ 11,809 |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COCA-COLA (KO) 2010 STATEMENT OF STOCKHOLDERS’ EQUITY** ($ in millions) | | | | |
|  | **Contributed Capital** | **Retained Earnings** | **Other Equity** | **TOTAL S/E** |
| Beginning balance | $ 9,417 | $ 41,537 | $ (26,155) | $ 24,799 |
| Issuance of shares | 1,520 |  |  | 1,520 |
| Net income |  | 11,809 |  | 11,809 |
| Dividends |  | (4,068) |  | (4,068) |
| Other transactions |  |  | (3,057) | (3,057) |
| Ending balance | $ 10,937 | $ 49,278 | $(29,212) | $ 31,003 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COCA-COLA (KO) 2010 STATEMENT OF CASH FLOWS** ($ in millions) | | | | | |
| Net cash received from operating activities (NCOA) | | | | $ 9,532 |  |
| Net cash paid from investing activities (NCIA) | | | | (4,405) |  |
| Net cash paid from financing activities (NCFA) | | | | (3,465) |  |
| Effect of exchange rate changes | | | | (166) |  |
| Change in cash |  |  |  | 1,496 |  |
| + Cash, beginning of the period | | | | 7,021 |  |
| = Cash, end of the period | |  |  | $ 8,517 |  |

# Activity 11 TEST YOUR UNDERSTANDING

**Purpose**: • Review the four financial statements.

• Compute net income.

• Prepare and evaluate trend analyses, common-size statements, and ratios.

Q1 Make the following statements true by correcting the false information.

*Note*: There may be more than one way to correct the false information.

a. The four financial statements include the income revenue statement, statement of stockholders’ equity contributed capital, balance asset sheet, and the statement of cash flows.

b. The balance sheet statement of cash flows reports the assets of the business and how those assets are financed.

c. Assets are financed either by liabilities or stockholders’ equity expenses.

d. Accounts receivable Retained earnings is an asset account, accounts payable receivable is a liability account, and retained earnings accounts payable is a stockholders’ equity account.

e. Accounts payable receivable are amounts to be paid later to suppliers by the corporation.

f. The statement of cash flows income statement reports cash inflows and cash outflows.

g. Revenue Cash is the amount earned engaging in the primary business activity.

h. Earnings is another term for net income revenue.

i. Net income distributed to shareholders is referred to as dividends contributed capital.

j. Dividends are not reported as an expense on the income statement.

Q2 Circle the income statement amounts and cross out amounts not reported on the income statement. Then compute net income.

Supply expense $ 8,000 Sales revenue $100,000

Notes payable ~~30,000~~ Common stock ~~50,000~~

Cost of goods sold 70,000 Dividends ~~2,000~~

Net income totals $22,000 (= $100,000 – 70,000 – 8,000)

Q3 Suppose that during the first year of business $100,000 of wage costs were incurred; $90,000 were paid in cash to employees; and the remaining wages will be paid to employees on January 3 of the coming year, the next payday. What account title and amount will be reported on the following year-end financial statements?

a. Income Statement account title: Wages (expense **/ payable / paid**) of $100,000

b. Balance Sheet account title: Wages (**expense /** payable **/ paid**) of $ 10,000

c. Statement of Cash Flows account title: Wages (**expense / payable /** paid) of $ 90,000

Q4 Review the 2010 Financial Statements of the Coca-Cola Company on page 28 to answer the following questions:

a. Assets $72,921 million = Liabilities $41,918 million + SE $31,003 million

Is the accounting equation in balance? (Yes **/ No**)

b. Net Income of $11,809 million is reported on the Income Statement. It is also reported on the (Statement of Stockholders’ Equity **/ Balance Sheet / Statement of Cash Flows**).

c. The ending balance of retained earnings on the Statement of Stockholders’ Equity is $49,278 million. It is also reported on the (**Income Statement /** Balance Sheet **/ Statement of Cash Flows**).

d. Cash reported on the Balance Sheet is $8,517 million. It is also reported on the (**Income Statement / Statement of Stockholders’ Equity /** Statement of Cash Flows).

e. Total Assets of $72,921 million helped to generate Sales Revenue of $35,119 million, which results in an Asset Turnover ratio of 0.482.

f. Sales Revenue of $35,119 million helped to generate Net Income of $11,809 million, which results in a ROS ratio of 33.6%.

g. Total Assets of $72,821 million helped to generate Net Income of $11,809 million, which results in a ROA ratio of 16.2%.

h. The most comprehensive measure of profitability is (**Asset Turnover / ROS /** ROA). For Coca-Cola, ROA of 16.2% = Asset Turnover of 0.482 x ROS of 33.6% indicating that a (**low-cost /** product-differentiation) strategy is used.

Q5 Complete Coca-Cola’s trend indexes for *Total expenses* and *Net income* using the amounts listed below. Record the resulting *trend index* in the shaded area. Use 2007 as the base year.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Coca-Cola (KO)**  ($ in millions) | **2010** | | **2009** | | **2008** | | **Base Year**  **2007** | |
| **Sales revenue** | $35,119 | 122 | $30,990 | 107 | $31,994 | 111 | $28,857 | 100 |
| **Total expenses** | 23,310 | 102 | 24,166 | 106 | 26,187 | 114 | 22,876 | 100 |
| **Net income** | $11,809 | 197 | $ 6,824 | 114 | $ 5,807 | 97 | $ 5,981 | 100 |

From 2007 to 2010 sales revenue of Coca-Cola increased by 22% while expenses increased by 2% resulting in an increase in net income of 97%. Coca-Cola has (kept **/not kept**) spending under control, resulting in a (**small /** large) increase in net income that is (greater **/ less**) than the increase in sales revenue over the same time period.

Q6 Complete Coca-Cola’s common-size statements for 12/31/2008, 12/31/2009, and 12/31/2010 using the amounts listed below. Record the resulting *common-size percent* in the shaded area provided.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Coca-Cola (KO)**  ($ in millions) | **Dec 31,**  **2010** | **%** | **Dec 31,**  **2009** | **%** | **Dec 31,**  **2008** | **%** | **Dec 31, 2007** | **%** |
| **Assets** | $72,921 | 100 | $48,671 | 100 | $40,519 | 100 | $43,269 | 100 |
| **Liabilities** | 41,918 | 57 | 23,872 | 49 | 20,047 | 49 | 21,525 | 50 |
| **SEquity** | $31,003 | 43 | $24,799 | 51 | $20,472 | 51 | $21,744 | 50 |

On 12/31/2007, 50% of assets were financed with liabilities and on 12/31/2010 assets were primarily financed with (liabilities **/ stockholders’ equity**), indicating that on 12/31/2010 this company is relying (more **/ less**) on debt to finance assets.

In the common-size *balance sheet*, every amount is compared to or divided by total assets.

In the common-size *income statement*, every amount is compared to or divided by revenue.

Q7 To answer the following questions, use the chart below that presents financial information for PepsiCo, Coca-Cola, and ratio averages for the beverage industry.

|  |  |  |  |
| --- | --- | --- | --- |
| ($ in millions) | **PEP**  **12/25/2010** | **KO**  **12/31/2010** | **Beverage**  **Industry Average** |
| **Assets** | $ 68,153 | $ 72,921 | NA |
| **Liabilities** | 46,989 | 41,918 | NA |
| **Stockholders’ Equity** | 21,164 | 31,003 | NA |
| **Revenue** | 57,838 | 35,119 | NA |
| **Net Income** | $ 6,320 | $ 11,809 | NA |
| **ROS** | 10.93% | 33.63% | 19% |
| **Asset Turnover** | 0.8486 | 0.4816 | 0.80 |
| **ROA** | 9.27% | 16.19% | 15% |
| **Debt Ratio** | 68.95% | 57.48% | 74% |

a. (**PEP /** KO) has a stronger ROS, indicating it generates more (**expense /** profit) from each dollar of revenue.

b. (PEP **/ KO**) reports the greatest volume of sales as indicated by the (**ROS /** Asset Turnover **/ ROA**) ratio.

c. The most comprehensive measure of profitability, the (**ROS / Asset Turnover /** ROA) ratio, indicates (**PEP /** KO) is the more profitable company.

d. (**PEP / KO / both /** neither) are at greater financial risk than average for the beverage industry, which is indicated by the (**ROS / Asset Turnover / ROA /** Debt) ratio.

Q8 Are Generally Accepted Accounting Principles (GAAP) necessary? (Yes **/ No**) Why or why not?

Yes, rules are needed so that different companies report items in similar ways. This enables the public to understand the financial statements and compare companies.