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The Income Statement[1]

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The income statement is a financial statement that measures the performance of the firm over a period of time. It shows the profit generated and its different components. The income statement contains the revenues generated (the achievements) less the expenses incurred (the efforts). The basic equation of the income statement is *Revenues – Expenses = Net Profit*. For this reason, the income statement is also called the statement of profits and losses (the P&L). Depending on the country, net profit is referred to as net earnings or net income. Net profit is an important figure because it reveals whether the firm is making money or not. It is a summary figure of the performance of the firm.

More technically, *revenues* are increases in owners' equity as a result of operations conducted by the firm with the intention of generating profits. *Expenses* are decreases in owners' equity as a result of operations conducted by the firm with the intention of generating profits. Because owners' equity equals net assets (assets – liabilities), we can also say that revenues increase net assets and expenses decrease net assets as a result of operations.

It is crucial to realize that *revenues are not cash inflows and expenses are not cash outflows.* Therefore, net profit is not the change in cash during the period. The reason is the accrual basis of accounting by which revenues and expenses are recognized in the accounts when the revenues are earned or when the expenses are incurred, not when cash is received or paid. For instance, the revenue from credit sales is recognized before the cash is received and many expenses are recognized before payments are made, such as utilities, which are first consumed and recognized as a utilities expense and later paid for.

[1] It is highly advisable to read first note CN-230-E to further understand this note.

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Table 1
Income Statement (Expenses by Function)

Sales revenue
– Cost of goods sold expense
Gross profit
– Marketing and selling expenses
– Administration expenses
– Research & development expenses
– Other operating expenses
+/- Other nonrecurring operating items
Operating profit
+ Financial income
– Financial expense
Profit before tax
– Tax expense
Net profit
– Profit for minority interests
Net profit for parent company owners

The top line of the income statement is always revenues: the inflow of net assets as a result of selling goods or performing services. The following line is the cost of the goods sold (cost of sales) or of the services performed. The difference between revenue and cost of sales (or services) is called gross profit. After this subtotal, firms report the rest of operating expenses incurred in order to generate the revenues (selling, administration, research and development, etc.). Sometimes, firms incur operating expenses that are not expected to recur in the future: for example, an unexpected loss because of a fire. If these expenses are material, firms disclose them separately in the operating section of the income statement to facilitate the task of forecasting profits in the following period. These expenses reduce profits now but are not expected to occur next period. You can see some real-life examples in the income statements of Air Liquide and Air Products in the **Exhibit** to this note. The difference between revenue and all the operating expenses is called operating profit. Some firms refer to operating profit as earnings before interest and taxes (EBIT).

After operating profit, firms report financing costs (e.g., interest expense) and income from financial investments. The subtotal at this point is called profit before tax. Next, the firms report the income tax expense. Finally, the difference between all the revenues and expenses is the net profit from continuing operations. The usage of the qualifier "continuing operations" requires some explanation. Occasionally, firms decide to discontinue some divisions during the period because they are loss-making operations, or they do not make strategic sense anymore. These units are not going to generate revenues and expenses in the future. To facilitate the forecasting of revenues and expenses and to make more meaningful comparisons, firms segregate the revenues and expenses of the units to be discontinued and report them in net terms at the bottom of the income statement. After the profit or loss from discontinued operations, the firm shows the net profit (or net earnings or net income).

If the firm has minority shareholders in subsidiaries under its control, these shareholders are entitled to a portion of the profits generated by these subsidiaries. This is reflected in the line called Profit for noncontrolling interests, which is reported net of tax. It only appears in consolidated income statements. A consolidated income statement aggregates the different income statements of the firm's subsidiaries. Finally, the last line of any income statement is the net profit for the shareholders that control the company.[2]

Classification of Expenses

By function. The expenses in the income statement displayed in **Table 1** have been grouped by functional activity. For instance, all the costs incurred in making the products that are sold (raw materials, production labor, utilities, depreciation of manufacturing equipment, etc.) are grouped into the cost of goods sold. Similarly, marketing and selling expenses contain the costs incurred in this function (salaries of sales people, the utilities they consume, depreciation of the sales facilities, etc.); research and development contains the salaries of the researchers, the cost of the materials they employ, the utilities consumed, the depreciation of the research equipment and facilities, etc. Note that in a by function income statement, total salary expense, total utilities expense, total materials expense, and total depreciation expense are not reported separately. Instead, the different portions of these costs are reported inside the different functions. This format is commonly used in Anglo-Saxon countries. The Appendix contains two examples of by function income statements: Linde Group and Air Products. You can verify that the expenses for materials, salaries, utilities or depreciation are not reported separately.

By nature. The expenses in the income statement displayed in **Table 2** below have been classified by their nature: materials, salaries, utilities, depreciation, etc. Unlike in a by function income statement, here we cannot tell how much raw materials and supplies were used in production, selling and administration, or research and development. The same applies to the breakdown of the salaries, utilities, and depreciation costs among production, selling and administration, or research and development. In a by nature income statement, we cannot determine cost of goods sold and, therefore, gross profit. By the same token, we cannot know how much was expensed in selling and administration, or in research and development. The by nature format is used in continental Europe, although more and more large firms are switching to the by function format. The reason is that international investors tend to prefer the latter format because it allows for making assessments about efficiency. For instance, in some industries the gross profit margin (gross profit / sales revenue) is closely monitored as its deterioration can signal trouble in the operations. See the income statement of Air Liquide, a French company, in the Appendix for an illustration. You can verify that the expenses for cost of goods sold, selling and administration, or research and development are not reported.

Each expense classification format has its own advantages and disadvantages. Firms try to overcome the disadvantages by reporting information relative to the alternative presentation in the notes to the financial statements. In some cases, this is mandatory. For instance, under International Financial Reporting Standards (IFRS), a firm that reports expenses by function must also report the cost of materials, salaries and depreciation in a note.

[2] You may not have fully understood this explanation of profit for noncontrolling interests; it requires some knowledge of consolidation. It is not important at this point. Consolidation is dealt with in a separate note.

Table 2
Income Statement (Expenses by Nature)

Sales revenue
Cost of materials or merchandise
Personnel costs
Other operating costs (utilities, etc.)
Depreciation & amortization
+/- Other nonrecurring operating items
Operating profit
+ Financial income
– Financial expense
Profit before tax
– Tax expense
Net profit from continuing operations
+/– Profit (loss) from discontinued operations
Net profit
– Profit for noncontrolling interests
Net profit for parent company owners

Revenue Recognition Criteria

The recognition of revenues is a key event in the life of any firm. Accounting standards contain specific rules on revenue (and expense) recognition. A firm recognizes revenues when the transaction fulfills the following conditions:

a) The firm has done all that it has promised to do for the customer: the firm has delivered the products or performed the services it has agreed to provide. This means that the firm has earned the revenues.

b) The firm has received cash or some other asset. If the asset is not cash (e.g., accounts receivable), the firm must be reasonably certain of converting it into cash. This means that the firm can reliably measure the revenues.

If the firm has not performed all its obligations, it must adjust the amount of revenue recognized to reflect those unperformed obligations (e.g., delivery of free software upgrades in the future).

Expense Recognition Criteria

A firm recognizes an expense when either of the following conditions holds:

a) The consumption of an asset results from a transaction that leads to the recognition of revenue (e.g., cost of sales expense is recognized when the sales revenue is recognized; at the same time inventory decreases). The expense is recognized in the period when the firm recognizes the revenue. This is known as the matching principle.

b) The consumption of an asset (or the incurrence of a liability) results from the passage of time (e.g., depreciation expense, interest expense).

Comprehensive Income

Most revenues and expenses are recorded in the income statement using the account profit and loss for the period. You already know that this is a summary account used to prepare the income statement. At the end of the period, this account is closed to retained profits. In this way, retained profits reflect the effect of revenues and expenses.

However, some revenues and expenses are not recognized in the income statement and, therefore, do not affect retained profits. These items tend to be unrealized gains and losses that arise from changes in the value of assets or liabilities, and not from transactions.

The net effect of these gains and losses is called other comprehensive income (OCI). Other comprehensive income is accumulated in an owners' equity account called accumulated other comprehensive income (AOCI), similar to what we do with net profit in retained profits. Some firms refer to other comprehensive income as gains and losses recognized directly in equity. The addition of net profit and other comprehensive income is called comprehensive income, which is reported in a separate statement that complements the income statement. This statement is called the statement of comprehensive income. In the Appendix, you can see an example of Air Products, which also shows the owners' equity section of the balance sheet so that you can identify the account accumulated other comprehensive income.

Earnings per Share

At the bottom of the income statement, firms report earnings per share (EPS). This figure is the net profit (with some minor adjustments) divided by the weighted average number of shares outstanding during the period. The denominator is defined in this way because the number of shares outstanding can vary during the period (e.g., the firm may issue more shares). Earnings per share is reported in two ways: basic and diluted. The difference between them is that diluted earnings per share takes into account, in the computation of the number of shares, the effect of the possible conversion into shares of certain instruments such as stock options, warrants, convertible debt, etc. The figure of earnings per share is closely followed by financial analysts, who try to forecast it using all the available information.

Exhibit
The Linde Group

Group statement of profit and loss (in € million)

	2013	2012
Revenue	16,655	15,833
Cost of sales	10,642	10,121
Gross profit	**6,013**	**5,712**
Marketing and selling expenses	2,512	2,321
Research and development costs	92	101
Administration expenses	1,419	1,373
Other operating income	358	304
Other operating expenses	193	179
Share of profit or loss from associates and joint ventures (at equity)	16	13
Earnings before interest and taxes (EBIT)	**2,171**	**2,055**
Financial income	98	144
Financial expenses	475	465
Profit before tax	**1,794**	**1,734**
Income tax expense	364	393
Profit for the year	**1,430**	**1,341**
Attributable to Linde AG shareholders	1,317	1,232
Attributable to noncontrolling interests	113	109
Earnings per share in € – undiluted	7.10	6.93
Earnings per share in € – diluted	7.08	6.87

Source: Linde Annual Report.

Exhibit (Continued)

Air Liquide

Consolidated income statement

Year ended December 31 (in millions of euros)	2012	2013
Revenue	**15,326.3**	**15,225.2**
Other income	134.5	189.3
Purchases of materials and supplies	-6,098.6	-5,985.1
Personnel expenses	-2,674.2	-2,751.1
Other expenses	-2,903.2	-2,861.4
Operating income recurring before depreciation and amortization (EBITDA)	**3,784.8**	**3,816.9**
Depreciation and amortization expense	-1,231.8	-1,236.3
Operating income recurring	**2,553.0**	**2,580.6**
Other nonrecurring operating income	13.4	235.1
Other nonrecurring operating expenses	-40.5	-209.2
Operating income (EBIT)	**2,525.9**	**2,606.5**
Net finance costs	-248.1	-219.9
Other financial income	10.2	14.4
Other financial expenses	-93.2	-99.1
Income taxes	-557.6	-611.9
Share of profit of associates	20.0	14.5
Profit for the period	**1,657.2**	**1,704.5**
– Minority interests	66.1	64.2
– Net profit (group share)	1,591.1	1,640.3
Basic earnings per share (in euros)	**5.11**	**5.28**
Diluted earnings per share (in euros)	**5.09**	**5.26**

Source: Air Liquide Annual Report.

Exhibit (Continued)

Air Products and Chemicals, Inc., and subsidiaries consolidated income statements

Year ended September 30 (in millions of dollars, except for share data)	2013	2012
Sales	10,180.4	9,611.7
Cost of sales	7,472.1	7,051.9
Selling and administrative	1,066.3	946.8
Research and development	133.7	126.4
Business restructuring and cost reduction plans	231.6	327.4
Gain on previously held equity interest	-	85.9
Customer bankruptcy	-	9.8
Pension settlement loss	12.4	-
Advisory costs	10.1	-
Other income (expense), net	70.2	47.1
Operating income	1,324.4	1,282.4
Equity affiliates income	167.8	153.8
Interest expense	141.8	123.7
Income from continuing operations before taxes	1,350.4	1,312.5
Income tax provision	307.9	287.3
Income from continuing operations	1,042.5	1,025.2
Income (loss) from discontinued operations, net of tax	-	168.1
Net income	**1,032.5**	1,193.3
Less: net income attributable to noncontrolling interests	38.3	26.0
Net income attributable to air products	994.2	1,167.3
Net income attributable to air products		
Income from continuing operations	1,004.2	999.2
Income (loss) from discontinued operations	(10.0)	168.1
Net income attributable to air products	994.2	1,167.3
Basic earnings per common share attributable to air products		
Income from continuing operations	4.79	4.73
Income (loss) from discontinued operations	(0.05)	0.80
Net income attributable to air products	**4.74**	**5.53**
Diluted earnings per common share attributable to air products		
Income from continuing operations	4.73	4.66
Income (loss) from discontinued operations	(0.05)	0.78
Net income attributable to air products	4.68	5.44
Weighted average of common shares outstanding (in millions)	209.7	211.2
Weighted average of common shares outstanding assuming dilution	212.3	214.7

Source: Air Products Annual Report.

Exhibit (Continued)

Air Products and Chemicals, Inc., and subsidiaries consolidated comprehensive income statements

Year ended 30 September (in millions of dollars)	2013	2012
Net income	**1,032.5**	**1,193.3**
Other comprehensive income (loss), net of tax:		
Translation adjustments, net of tax of ($44.8), and $8.9	(25.0)	84.6
Net gain (loss) on derivatives, net of tax of $14.5, and ($9.8)	35.0	(21.8)
Pension and postretirement benefits, net of tax of $154.8, and ($124.6)	231.9	(246.0)
Reclassification adjustments:		
Currency translation adjustment	0.6	13.3
Derivatives, net of tax of ($5.5), and $5.0	(20.2)	12.4
Pension and postretirement benefits, net of tax of $55.9, and $36.5	104.9	67.0
Total other comprehensive income (loss)	**327.2**	**(90.5)**
Comprehensive income	**1,359.7**	**1,102.8**

Source: Air Products Annual Report.

Air Products and Chemicals, Inc., and subsidiaries consolidated balance sheets (only owners' equity section)

September 30 (in millions of dollars, except for share data)	2013	2012
Shareholders' equity		
Common stock (par $1 per share; issued 2013, 2012: 249,455,584 shares)	**249.4**	249.4
Capital in excess of par value	**799.2**	810.5
Retained earnings	**9,646.4**	9,234.5
Accumulated other comprehensive loss	**(1,020.6)**	(1,348.8)
Treasury stock, at cost (2013: 38,276,327 shares; 2012: 36,979,704 shares)	**(2,632.3)**	(2,468.4)
Total Air Products shareholders' equity	**7,042.1**	6,477.2
Noncontrolling interests	**156.8**	146.1
Total equity	**7,198.9**	6,623.3

Source: Air Products Annual Report.