Firms are required by regulatory authorities and the stock markets in which their shares are traded—if they are listed on a stock exchange—to provide financial information about their business transactions. The purpose of financial accounting is to systematically collect, organize, and present financial information according to standard rules known as accounting principles or accounting standards. The formal outputs of the financial accounting process are the financial statements.

This chapter presents an overview of the two most important financial statements: the balance sheet and the income statement (also called the profit and loss statement or P&L account). The approach is that of the user of the financial data, not that of the supplier. The words and expressions that are commonly employed in financial accounting are defined and the logic of and the relationship between the firm’s balance sheet and its income statement are explained. After reading this chapter, you should understand:

- The terminology generally used in financial accounting.
- How balance sheets and income statements are prepared and how they are interrelated.
- The most important accounting principles used to prepare financial statements.
- How business and financial decisions affect the balance sheet and income statement.

**FINANCIAL ACCOUNTING STATEMENTS**

Financial statements are formal documents issued by firms to provide financial information about their business and financial transactions. Firms must regularly issue at least two primary statements: a balance sheet and an income statement.
In some cases, regulatory authorities also require the firm to produce a **statement of cash flows** that provides information about the cash transactions between the firm and the outside world. This chapter examines the primary statements, leaving the analysis of cash flows to Chapter 4.

The fundamental objective of the balance sheet is to determine the value of the net investment made by the firm’s owners (the **shareholders**) in their firm at a specific date. The objective of the income statement is to measure the net profit (or loss) generated by the firm’s activities during a period of time referred to as the **accounting period** (usually a year). Net profit (or loss) is a measure of the change in the value of the owners’ investment in their firm during that period of time. In other words, a profit increases the value of the owners’ investment while a loss reduces it.

The balance sheet has information about what shareholders collectively own and what they owe at the date of the statement. The income statement has information about the firm’s activities that resulted in increases and decreases in the value of the owners’ investment during a period of time. In addition, notes are usually added to the financial statements. They provide additional information about the statements’ accounts, such as their nature and the way they have been valued.

Financial statements are prepared according to **accounting standards** or **accounting principles**. These standards may differ from one country to another. Furthermore, accountants have some leeway in implementing them, mostly in the valuation of some items in the balance sheet and income statement. Thus, to make meaningful comparisons between financial statements over time and across firms, it is necessary to check that the standards used and their implementation are identical from one period to another and from one firm to another. If they are not, adjustments need to be made.

Usually, firms prepare two sets of statements, one for financial reporting purposes and one for tax purposes. Only the first set of statements is public. It can be found in the **annual report** that firms publish every year and is the one examined in this chapter.

To illustrate how business transactions are recorded in balance sheets and income statements and to facilitate the understanding of the logic behind these statements, we use the fictitious firm Office Supplies Distributors (OS Distributors), a nationwide distributor of office equipment and supplies. Exhibit 2.1 presents OS Distributors’ balance sheets at the end of years 1998, 1999, and 2000. Notes on the balance sheets provide detailed information about some of the statements’ accounts. Exhibit 2.2 shows the company’s income statements for the years

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1In the United States, these standards are collectively known as Generally Accepted Accounting Principles (GAAP).

2In the United States, publicly held companies are required to provide another report, called the 10K, to all shareholders who request it. The 10K is a detailed version of the statements appearing in the annual report.
EXHIBIT 2.1  OS Distributors’ Balance Sheets.
Figures in millions of dollars

<table>
<thead>
<tr>
<th>Assets</th>
<th>December 31, 1998</th>
<th>December 31, 1999</th>
<th>December 31, 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>•  <strong>Current assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash¹</td>
<td>$6.0</td>
<td>$12.0</td>
<td>$8.0</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>44.0</td>
<td>48.0</td>
<td>56.0</td>
</tr>
<tr>
<td>Inventories</td>
<td>52.0</td>
<td>57.0</td>
<td>72.0</td>
</tr>
<tr>
<td>Prepaid expenses²</td>
<td>2.0</td>
<td>2.0</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>104.0</td>
<td>119.0</td>
<td>137.0</td>
</tr>
<tr>
<td>•  <strong>Noncurrent assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial assets and intangibles</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Property, plant, and equipment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross value³</td>
<td>$90.0</td>
<td>$90.0</td>
<td>$93.0</td>
</tr>
<tr>
<td>Less: Accumulated depreciation</td>
<td>(34.0)</td>
<td>(39.0)</td>
<td>(40.0)</td>
</tr>
<tr>
<td><strong>Total noncurrent assets</strong></td>
<td>56.0</td>
<td>51.0</td>
<td>53.0</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>$160.0</td>
<td>$170.0</td>
<td>$190.0</td>
</tr>
</tbody>
</table>

| Liabilities and owners’ equity |           |                   |                   |
|•  **Current liabilities**    |           |                   |                   |
| Short-term debt              | $15.0     | $22.0             | $23.0             |
| Owed to banks                | $7.0      | $14.0             | $15.0             |
| Current portion of long-term debt | 8.0     | 8.0               | 8.0               |
| Accounts payable             | 37.0      | 40.0              | 48.0              |
| Accrued expenses⁴            | 2.0       | 4.0               | 4.0               |
| **Total current liabilities**| 54.0      | 66.0              | 75.0              |
| •  **Noncurrent liabilities**|           |                   |                   |
| Long-term debt⁵              | $42.0     | 34.0              | 38.0              |
| **Total noncurrent liabilities** | 42.0 | 34.0              | 38.0              |
| •  **Owners’ equity⁶**       |           |                   |                   |
| **Total liabilities and owners’ equity** | $160.0 | $170.0             | $190.0            |

¹Consists of cash in hand and checking accounts held to facilitate operating activities.
²Prepaid expenses is rent paid in advance (when recognized in the income statement, rent is included in selling, general, and administrative expenses).
³In 1999, there was no disposal of existing fixed assets or acquisition of new fixed assets. However, during 2000, a warehouse was enlarged at a cost of $12 million and existing fixed assets, bought for $9 million in the past, were sold at their net book value of $2 million.
⁴Accrued expenses consist of wages and taxes payable.
⁵Long-term debt is repaid at the rate of $8 million per year. No new long-term debt was incurred during 1999, but during 2000 a mortgage loan was obtained from the bank to finance the extension of a warehouse (see Note 3).
⁶During the three years, no new shares were issued and none were repurchased.
**EXHIBIT 2.2 OS Distributors’ Income Sheets.**

Figures in millions of dollars

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net sales</strong></td>
<td>$390.0</td>
<td>$420.0</td>
<td>$480.0</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>328.0</td>
<td>353.0</td>
<td>400.0</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td><strong>62.0</strong></td>
<td><strong>67.0</strong></td>
<td><strong>80.0</strong></td>
</tr>
<tr>
<td>Selling, general, and administrative expenses</td>
<td>39.8</td>
<td>43.7</td>
<td>48.0</td>
</tr>
<tr>
<td>Depreciation expenses</td>
<td>5.0</td>
<td>5.0</td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Operating profit</strong></td>
<td><strong>17.2</strong></td>
<td><strong>18.3</strong></td>
<td><strong>24.0</strong></td>
</tr>
<tr>
<td>Extraordinary items</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Earnings before interest and tax (EBIT)</strong></td>
<td>17.2</td>
<td>18.3</td>
<td>24.0</td>
</tr>
<tr>
<td>Net interest expenses(^1)</td>
<td>5.5</td>
<td>5.0</td>
<td>7.0</td>
</tr>
<tr>
<td><strong>Earnings before tax (EBT)</strong></td>
<td>11.7</td>
<td>13.3</td>
<td>17.0</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>4.7</td>
<td>5.3</td>
<td>6.8</td>
</tr>
<tr>
<td><strong>Earnings after tax (EAT)</strong></td>
<td><strong>$7.0</strong></td>
<td><strong>$8.0</strong></td>
<td><strong>$10.2</strong></td>
</tr>
<tr>
<td>Dividends</td>
<td>$2.0</td>
<td>$2.0</td>
<td>$3.2</td>
</tr>
<tr>
<td><strong>Retained earnings</strong></td>
<td><strong>$5.0</strong></td>
<td><strong>$6.0</strong></td>
<td><strong>$7.0</strong></td>
</tr>
</tbody>
</table>

\(^1\)There is no interest income, so net interest expenses are equal to interest expenses.

1998, 1999, and 2000. Each income statement spans a full year, in this case, from January 1 to December 31. Two balance sheets flank an income statement: an opening, or beginning, balance sheet on December 31 of the previous year and a closing, or ending, balance sheet on December 31 of the same year.\(^3\) We have a complete set of statements for OS Distributors only for the years 1999 and 2000.

**THE BALANCE SHEET**

The main purpose of the balance sheet is to provide an estimate of the cumulative investment made by shareholders in their firm at a given point in time, generally at the end of the accounting period. This investment is known as owners’ equity; it is the difference, at a particular date, between what a firm’s shareholders collectively own, called assets (such as cash, inventories, equipment, and buildings), and what they owe, called liabilities (such as debts owed to banks and suppliers):

\[
\text{Owners’ equity} = \text{Assets} - \text{Liabilities} \quad (2.1)
\]

\(^3\)Note that the closing balance sheet of a given year is the same as the opening balance sheet of the following year.
Many other terms are used to refer to owners’ equity, including shareholders’ equity, shareholders’ funds, book value of equity, net worth, and net asset value.

OS Distributors’ balance sheet in Exhibit 2.1 is not in the format shown by equation 2.1. In the exhibit, assets are listed in one section and liabilities and owners’ equity are in a different section. However, the dollar value of assets is equal to the sum of the dollar value of liabilities and owner’s equity because equation 2.1 can be written as:

\[
\text{Assets} = \text{Liabilities} + \text{Owners’ equity}
\]  

(2.2)

According to equation 2.2, a firm’s total assets must have the same value as the sum of its liabilities and owners’ equity. In general, balance sheets follow the format of Exhibit 2.1 and equation 2.2.

According to accounting conventions, assets are classified in decreasing order of liquidity, where liquidity is a measure of the speed with which assets can be converted into cash. Cash, the most liquid of all assets, is listed first, and land, the least liquid of all assets, is shown last. Assets are divided into two categories: current assets and fixed (or noncurrent) assets. Current assets are those assets that are expected to be turned into cash within one year while fixed assets have a life that is longer than one year.

Liabilities are listed in increasing order of maturity, where maturity is a measure of the time before the liability is due. Short-term liabilities are listed first and long-term liabilities are shown last. Liabilities are followed by owners’ equity (which does not have to be repaid because it represents the owners’ investment in their firm). Liabilities are also divided into two categories: current liabilities, which are obligations that must be paid within one year, and noncurrent liabilities, which are not due until after one year.

Assets and liabilities are usually recorded according to the conservatism principle. According to this principle, when in doubt, assets and liabilities should be reported at a value that would be least likely to overstate assets or to understate liabilities.

OS Distributors’ owners’ equity was $64 million, $70 million, and $77 million at the end of 1998, 1999, and 2000, respectively. At each of these points in time, owners’ equity was equal to the difference between the firm’s total assets and its total liabilities. For example, on December 31, 1999, owners’ equity was equal to the difference between total assets of $170 million and total liabilities of $100 million ($66 million of current liabilities plus $34 million of long-term debt). Note that owners’ equity is a residual value. It is equal to whatever dollar amounts are left after deducting all the firm’s liabilities from its total amount of assets. If total liabilities exceed total assets, owners’ equity is negative and the firm is technically bankrupt. The following sections present a detailed analysis of the balance sheet structure.

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4As the most liquid of all assets, cash is also the medium of exchange for assets and liabilities. It serves as a basis for measuring the value of all assets and liabilities.
CURRENT, OR SHORT-TERM, ASSETS

Current assets include cash and cash equivalents, accounts receivable, inventories, and prepaid expenses.

Cash and Cash Equivalents

Cash and cash equivalents includes cash in hand and on deposit with banks and short-term investments with a maturity not exceeding one year. These short-term investments are usually referred to as marketable securities. They carry little risk and are highly liquid, meaning that they can be easily sold (converted into cash) with minimal change in value, that is, with relatively small capital gain or loss. Examples of marketable securities are certificates of deposit issued by banks, shares in money market funds, short-term government bills, and commercial papers issued by corporations with good credit ratings. These securities are described in Chapter 9.

OS Distributors held $6 million in cash at the end of 1998. This amount rose to $12 million at the end of 1999 and then fell to $8 million at the end of 2000 (see Exhibit 2.1). Chapter 4 examines in detail why OS Distributors experienced these particular movements in its cash holdings. Note that OS Distributors did not hold any marketable securities at the dates of the balance sheets.

Accounts Receivable

Most firms do not receive immediate cash payments for their goods or services. They usually let their customers pay their invoices at a later date. The invoices that have not yet been paid by customers at the date of the balance sheet are recorded as accounts receivable, also called trade receivables or, simply, receivables. Accounts receivable are debts owed to the firm by its customers and, for this reason, are also known as trade debtors. These assets will be converted into cash when customers pay their bills. The amount is usually reported net of advances from customers and of allowances for doubtful accounts. Doubtful accounts arise when it is expected that some customers will not meet their payment obligations.

OS Distributors’ receivables have grown steadily during the three-year period, rising from $44 million at the end of 1998 to $56 million at the end of 2000 (see Exhibit 2.1). Chapter 3 examines whether this phenomenon should be a cause of concern or whether it is justified by the firm’s activity.

Inventories

Inventories are goods held by the firm for future sales (finished goods) or for use in the manufacturing of goods to be sold at a later date (raw materials and work in process). Thus, a manufacturing firm normally has three inventory accounts: one for
raw materials, one for work in process, and a third for finished goods. Inventories are reported in the balance sheet at cost unless their market value has fallen below their cost. If, for example, some inventories have become obsolete and have an estimated liquidation value lower than their cost, then the firm should report these inventories at their (lower) estimated value. This method, called the lower-of-cost-or-market, is an example of the conservatism principle mentioned earlier.

The cost assigned to materials that have not yet entered the production process at the date of the balance sheet is reported as raw materials inventory. In addition, some of the units in production may not yet have been completed. The cost of the raw materials that were used in the production of these units plus the labor and other costs applicable to these unfinished units make up the work in process inventory. Finally, the cost of completed units not yet sold at the date of the balance sheet constitutes the finished goods inventory.

Inventories for OS Distributors consist of goods purchased from manufacturers and stored in its warehouses until sold to retail stores. Like receivables, inventories have grown during the period 1998 to 2000; they rose from $52 million at the end of 1998 to $72 million at the end of 2000. Again, Chapter 3 examines whether this growth should be worrisome or whether it is justified by the firm’s operations.

The growth in inventories could be due to an increase in the price of the items purchased by OS Distributors from its suppliers for resale to its customers. Suppose it paid $100 for an item purchased two weeks ago, $101 for the same item purchased last week, and $102 for the same item purchased this week. OS Distributors holds three identical items in its inventory but paid a different price for each of them. When it sells one of these items to a customer, a question arises: Which one has it sold? The first ($100), the second ($101), or the third ($102)?

If OS Distributors uses the first-in, first-out (or FIFO) method to measure the cost of its inventories, it will assume that it sold the first item it acquired ($100). If it uses the last-in, first-out (or LIFO) method, it will assume it sold the last item it acquired ($102). Alternatively, OS Distributors could use the average cost method. In this case, it will assume it sold an item at the average of the three prices ($101). The implication is clear: The firm’s financial statements will be different depending on which of the three valuation methods is adopted. After the sale of one item, there are two left in inventories. With FIFO, the reported value of the remaining two items is $203 ($101 plus $102); with LIFO, the value is $201 ($100 plus $101); and with averaging, the value is $202 ($101 plus $101). Furthermore, if we assume that the item was sold to a customer for $110, the reported gross profit will be $10 with FIFO ($110 less $100), $8 with LIFO ($110 less $102), and $9 with the average cost method ($110 less $101). Compared to LIFO, FIFO overstates both the value of inventories ($203 instead of $201) and reported gross profits ($10 instead of $8).

Prepaid Expenses

Prepaid expenses recorded on a balance sheet are payments made by the firm for goods or services it will receive after the date of the balance sheet. A typical example is the payment for an insurance policy that will provide protection for a
period of time that extends beyond the date of the balance sheet. It is recorded as a prepaid expense because the payment is made before the firm can benefit from the insurance coverage. Other common prepaid expenses include prepaid rent and leases. OS Distributors' balance sheets in Exhibit 2.1 indicate that the firm had $2 million of prepaid expenses at the end of 1998 and 1999 and $1 million at the end of 2000.

The way prepaid expenses are accounted for illustrates a key accounting principle, known as the **matching principle**. This principle states that expenses are recognized (in the income statement) not when they are paid but during the period when they effectively contribute to the firm's revenues. Expenses prepaid by the firm must be carried in its balance sheet as an asset until they become a recognized expense in its (future) income statement.

Suppose, for example, that on January 1, 1995, OS Distributors paid rent for three years, including rent for 1995. The rent for the first year (1995) would be recorded as an expense in the 1995 income statement. The remaining two-thirds of the total rent paid on January 1, 1995, and not “consumed” on that date, would be reported as prepaid expenses in the balance sheet at the end of 1995. In the balance sheet at the end of 1996, prepaid rent would represent only one-third of the total rent payment. On December 31, 1997, the total rent payment would be completely “consumed” and no prepaid rent would appear in the balance sheet on that date.

**NONCURRENT, OR FIXED, ASSETS**

Noncurrent assets, also called fixed or **capital assets**, are assets that are expected to produce economic benefits for more than one year. These assets are of two types: tangible and intangible. **Tangible assets** include items such as land, buildings, machines, and furniture, collectively called **property, plant, and equipment**. They also include long-term financial assets, such as shares in other companies and loans extended to other firms. **Intangible assets** include items such as patents, trademarks, copyrights, and goodwill.

**Tangible Assets**

Nonfinancial tangible assets are generally reported at their **historical cost**, which is, the price the firm paid for them. As time passes, the value of these assets is expected to decrease. In order to account for this loss of value, their purchase price, reported in the balance sheet as the **gross value** of fixed assets, is systematically reduced (or written down) over their expected useful life. This periodic and systematic value-reduction process is called **depreciation**. If depreciation is done on a yearly basis, the dollar amount by which the gross value of fixed assets is reduced is called annual **depreciation charges** or **expenses**. This dollar

---

5Note that plant and equipment are systematically depreciated but not land. It is assumed that the value of land does not decline with the passage of time.
amount is determined by the length of the period over which the asset is depreciated and the speed with which depreciation takes place.

Several methods are used to determine the annual depreciation charge. The most commonly used is the straight-line depreciation method. When this method is used, the firm’s assets are depreciated by an equal amount each year. According to the less frequently used accelerated depreciation method, the depreciation charge is higher in the early years of the asset’s life and lower in the later years. The total amount that is depreciated is the same regardless of the depreciation method used; it is equal to the acquisition cost of the asset, assuming that the asset will be worthless at the end of the period over which it is depreciated.

To illustrate the effect of different depreciation methods, consider a firm that paid $300,000 at the beginning of the year for a machine that will be fully depreciated over a period of three years. Although the $300,000 was paid during the year the asset was bought, this amount is not recognized as an expense for that year. If a straight-line depreciation schedule is applied, one third of the equipment cost is depreciated every year and the annual depreciation charge is equal to one third of $300,000, that is, $100,000. An accelerated depreciation schedule would call for half the cost of the equipment to be depreciated the first year, one third the second year, and one sixth the third year. The annual depreciation charges would then be $150,000 the first year (one half of $300,000), $100,000 the second year (one third of $300,000) and $50,000 the third year (one sixth of $300,000).

The value at which a fixed asset is reported in the balance sheet is its net book value. If the firm applies the historical or acquisition cost principle to value its fixed assets, then the net book value of a fixed asset is equal to its acquisition price less the accumulated depreciation since that asset was bought. In the above example, the net book value of the equipment at the end of each year after the asset was bought is computed as shown in Exhibit 2.3 for the two depreciation methods.

In some countries, for example the Netherlands, companies listed on the stock exchange can choose to value their assets at their replacement cost instead of their historical cost. According to the replacement cost principle, the net book value of an asset is equal to the price the firm would have to pay at the date of the

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**EXHIBIT 2.3  Computation of Net Book Value for the Two Depreciation Methods.**

Figures in thousands of dollars

<table>
<thead>
<tr>
<th></th>
<th>Straight-Line Method</th>
<th>Accelerated Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 1   Year 2 Year 3</td>
<td>Year 1   Year 2 Year 3</td>
</tr>
<tr>
<td>Gross value (acquisition cost)</td>
<td>$300 $300 $300</td>
<td>$300 $300 $300</td>
</tr>
<tr>
<td>Annual depreciation charge</td>
<td>($100) ($100) ($100)</td>
<td>($150) ($100) ($50)</td>
</tr>
<tr>
<td>Accumulated depreciation</td>
<td>(100) (200) (300)</td>
<td>(150) (250) (300)</td>
</tr>
<tr>
<td>Net book value</td>
<td>$200 $100 $0</td>
<td>$150 $50 $0</td>
</tr>
</tbody>
</table>
balance sheet to replace that asset less the amount of accumulated depreciation. The depreciation method is the same as the one used when the historical cost principle is applied. The depreciation expenses, however, are different because the value of the assets to be depreciated is no longer the same.

Consider the machine in the above example. Under the acquisition cost principle and the three-year straight-line depreciation schedule, its net book value was $200,000 at the end of the first year (acquisition price of $300,000 less accumulated depreciation of $100,000). Assume that it would have cost $330,000 to replace it at that date. Under the replacement cost principle, the base price on which the straight-line depreciation schedule must be applied is no longer the price at which the machine was bought ($300,000) but its replacement value of $330,000. Accordingly, the annual depreciation charge is now $110,000 (one third of $330,000) and not $100,000 (one third of $300,000). As a result, the net book value of the asset would be $220,000 (base price of $330,000 less accumulated depreciation of $110,000) instead of $200,000.

The above examples clearly illustrate that fixed asset values reported in the balance sheet can differ considerably, depending on the valuation principle used and the depreciation method applied. It is therefore important to check both before comparing the financial performance of different firms on the basis of their financial statements.

**Intangible Assets**

Intangible assets include patents, copyrights, property rights, franchises, licenses, and goodwill. When one firm acquires the assets of another for a price higher than the net book value in the acquired firm’s balance sheet, this difference is goodwill. For example, suppose Firm A pays $10 million for the assets of Firm B, and the net book value of those assets is $7 million. This transaction creates $3 million of goodwill on the balance sheet of Firm A.

Intangible assets are recorded at cost. As in the case of tangible assets, their value is usually gradually reduced as time passes. This cost reduction process, called amortization, follows the same principles as depreciation for tangible assets.

**OS Distributors’ Noncurrent Assets**

We can now examine the structure of OS Distributors’ fixed assets, as reported in Exhibit 2.1. They include only property, plant, and equipment. Their net book value was $56 million at the end of 1998, $51 million at the end of 1999, and $53 million at the end of 2000. Annual depreciation charges, recorded as expenses in OS Distributors’ income statements in Exhibit 2.2, were $5 million, $5 million, and $8 million, respectively.

At the end of 1998, the book value of OS Distributors’ fixed assets before depreciation (their gross value) was $90 million. This was the price paid when these assets were acquired. Accumulated depreciation was $34 million, so the net book value of the firm’s fixed assets was $56 million, the difference between their gross value ($90 million) and accumulated depreciation ($34 million).
During 1999, there were no changes in fixed assets, so their gross value remained at $90 million. (See Note 3 in Exhibit 2.1.) Net fixed assets, however, dropped to $51 million because accumulated depreciation increased to $39 million, the sum of accumulated depreciation at the end of 1998 ($34 million) and the additional depreciation charges in 1999 ($5 million).

During 2000, OS Distributors enlarged its warehouse at a cost of $12 million. That same year the firm sold a piece of equipment no longer needed at its net book value of $2 million. (The equipment was bought some time ago for $9 million and had been depreciated by $7 million.) What was the effect of these two transactions on the value of net fixed assets at the end of 2000? The gross value of the fixed assets increased by $12 million when the warehouse was enlarged and decreased by $9 million when the equipment no longer needed was sold. Together, these two transactions increased the gross value of the fixed assets from $90 million at the end of 1999 to $93 million at the end of 2000 ($90 million plus $12 million less $9 million), as shown in Exhibit 2.1. At the same time, accumulated depreciation increased by $8 million (the 2000 depreciation charge) and decreased by $7 million (the recorded accumulated depreciation of the piece of equipment that was sold the same year). Thus, accumulated depreciation increased to $40 million ($39 million of initial accumulated depreciation plus $8 million less $7 million). Consequently, the net book value of OS Distributors’ fixed assets at the end of 2000 was equal to $53 million ($93 million less $40 million).

We could have obtained the same net book value of $53 million in a different way: Start with the $51 million of net fixed assets at the end of 1999, add the $12 million cost of the warehouse extension, and subtract both the net book value of the piece of equipment that was sold ($2 million) and the 2000 depreciation charge of $8 million ($51 million plus $12 million less $2 million less $8 million equals $53 million). More generally:

\[
\text{Net fixed assets at the end of a period} = \\
\text{Net fixed assets at the beginning of the period} + \text{Gross value of fixed assets acquired during the period} - \text{Net book value of fixed assets sold during the period} - \text{Depreciation charges for the period}
\] (2.3)

CURRENT, OR SHORT-TERM, LIABILITIES

Current liabilities include short-term debt, accounts payable, and accrued expenses.

Short-term Debt

Short-term debt, also called notes payable, include bank overdrafts, drawings on lines of credit, and short-term promissory notes. The portion of any long-term debt due within a year is also a short-term obligation and is recorded in the balance sheet as short-term borrowings.
OS Distributors’ short-term borrowings consist of debt owed to banks and the portion of long-term debt repaid by the firm at the rate of $8 million per year from 1998 to 2000. In total, short-term borrowing grew from $15 million at the end of 1998 to $23 million at the end of 2000.

**Accounts Payable**

**Accounts payable**, also called **trade payables** or, simply, **payables**, are liabilities to the firm’s suppliers of goods and services. Payables arise because the firm does not usually pay its suppliers immediately for the goods and services received from them. As a result, there is a time lag between the receipt of goods or services and payment for them. Until payment is made, the firm must recognize in its balance sheet the credit extended by its suppliers (for this reason, payables are also known as **trade creditors**). Accounts payable are equal to the dollar value of the invoices the firm has received from its suppliers but has not yet paid at the date of the balance sheet.

The balance sheets in Exhibit 2.1 show that OS Distributors’ payables have increased from $37 million at the end of 1998 to $48 million at the end of 2000. Is that increase justified? This question is examined in the next chapter.

**Accrued Expenses**

**Accrued expenses** are liabilities other than short-term debt and accounts payable that are associated with the firm’s operations. They arise from the lag between the date at which these expenses have been incurred and the date at which they are paid. Examples are taxes, wages, and Social Security contributions that are due but have not yet been paid on the date of the balance sheet. Note that the allocation of expenses to the accrued expenses account in the balance sheet is another application of the matching principle.

OS Distributors’ accrued expenses were $2 million at year-end 1998 and $4 million at the end of years 1999 and 2000. They consist of wages and taxes payable. **Wages payable** represents compensation for vacation days owed to OS Distributors’ employees that had not yet been taken at the date of the balance sheets. OS Distributors must recognize its “debt” to its employees as wages payable in its balance sheet. Similarly, **taxes payable** are the amount of taxes owed at the date of the balance sheets. They are a debt to the tax collection agency and are recognized as taxes payable in the balance sheet until the firm pays its tax bill.

**NONCURRENT LIABILITIES**

**Long-term liabilities** reported on the balance sheet are liabilities with a maturity longer than one year at the date of the balance sheet. Examples of long-term liabilities include **long-term debt** owed to lenders, **pension liabilities** owed to employees (to be paid to them when they retire), and **deferred taxes** owed to the government’s tax collection agency.
Deferred taxes originate from the difference between the amount of tax due on the firm’s reported pretax profit and the amount of tax claimed by the tax authorities. These two measures of tax due may differ because firms usually depreciate their fixed assets on a straight-line basis in their financial statements but the tax authorities usually apply accelerated depreciation schedules to the same assets in order to determine the amount of taxes the firm must pay. Depreciation is a tax-deductible expense, so the two approaches can produce different taxable income and, thus, different tax expenses.

Consider a firm with $1,000,000 of revenues and $700,000 of expenses before depreciation charges are deducted. If depreciation charges are $100,000 on the basis of a straight-line depreciation schedule and $150,000 on the basis of an accelerated depreciation schedule, then profit before tax is $200,000 in the first case ($1,000,000 less $700,000 less $100,000) and $150,000 in the second ($1,000,000 less $700,000 less $150,000). If the tax rate is 40 percent, then the amount of tax is $80,000 (40 percent of $200,000) when straight-line depreciation is used and is $60,000 (40 percent of $150,000) when accelerated depreciation is used. In other words, the firm reports a tax expense of $80,000 in its income statement but actually owes only $60,000 in taxes. The difference of $20,000 between the two tax estimates represents a postponement not an elimination of the tax owed to the collecting agency. The amount that is depreciated (the asset acquisition price) and the total amount that is deductible are the same in both cases; hence, the $20,000 must be recognized as a liability in the firm’s balance sheet.6

OS Distributors had an outstanding (not yet repaid) long-term debt of $50 million at the end of 1998. However, the firm repays $8 million of this debt every year and this amount is recorded as a short-term borrowing (current portion of long-term debt). As a result, the long-term debt in the 1998 balance sheet was equal to only $42 million ($50 million less $8 million). At the end of 1999, the firm had repaid $8 million of its outstanding debt, but it still owed $42 million, $8 million of which was due in 2000. Consequently, its long-term debt at that date was $34 million ($42 million less $8 million) and the current portion of its long-term debt was $8 million.

In 2000, the firm borrowed $12 million to finance the extension of its warehouse. As a consequence, long-term debt increased by $12 million in 2000 while still decreasing by the annual repayment of $8 million. Therefore, the long-term debt at the end of 2000 was equal to $38 million (the initial $34 million less $8 million to be repaid during the year plus $12 million of new debt). In general:

\[
\text{Long-term debt at the end of a period = Long-term debt at the beginning of the period - Portion of long-term debt repaid during the period + New long-term debt issued during the period (2.4)}
\]

Compared to the straight-line depreciation method, accelerated depreciation schedules overestimate depreciation expenses (underestimate profit before tax) during the beginning of the life of an asset, and likewise underestimate depreciation expenses (overestimate profit before tax) towards the end of the asset’s life. Accordingly, the firm pays less taxes during the early years and more taxes towards the last years of the asset’s life.
OWNERS’ EQUITY

As shown in equation 2.1, owners’ equity at the date of the balance sheet is simply the difference between the book value of the firm’s assets and liabilities at that same date. The book value of the investment made in the firm by OS Distributors’ owners is reported at the bottom of the balance sheets in Exhibit 2.1. Owners’ equity has grown from $64 million at the end of 1998 to $77 million at the end of 2000.

In most balance sheets, the owners’ equity account shows several components, each representing a source of equity. Because one of these sources is the firm’s profit, we postpone the presentation of the components of owners’ equity (and the reason for the growth of OS Distributors’ equity) until after the firm’s income statement is discussed.

THE INCOME STATEMENT

The purpose of the income statement, also called the profit and loss or P&L statement, is to present a summary of the operating and financial transactions that have contributed to the change in the firm’s owners’ equity during the accounting period. The accounting period is usually one year, but limited versions of the income statement can be produced more frequently, as often as quarterly.

We define revenues as the transactions that increase owners’ equity and expenses as the transactions that decrease it during the accounting period. It follows that the net change in owners’ equity during that period, known as net income, net profit, or, as shown in Exhibit 2.2, earnings after tax (EAT), is simply:

\[ \text{Earnings after tax} = \text{Revenues} - \text{Expenses} \]  

(2.5)

This relationship is the model used to construct a firm’s income statement. The firm’s revenues are recorded first. They originate from many sources, including the sales of goods and services and the collection of fees and rental income. Then the firm’s expenses are listed. They include material costs, depreciation charges, salaries, wages, administrative and marketing expenses, and interest and tax expenses. Expenses are deducted from revenues in a multiple-step procedure in order to measure the contribution of different activities to the firm’s earnings after tax (see Exhibit 2.2). The revenues and expenses related to the firm’s operating activities are shown first, and then those related to nonoperating activities, such as financing. Finally, the tax expenses are reported. A detailed explanation of the structure of a firm’s income statement is given in the following sections.

Among the many accounting principles used to construct financial statements, two are of particular importance in understanding the income statement. First is the

\^There is one exception to these definitions. The issuance of new shares increases owners’ equity and the repurchase of outstanding shares decreases it. These transactions, however, are not recorded in the firm’s income statement as revenue or expense.
realization principle, which says that a revenue is recognized during the period when the transaction generating the revenue takes place, not when the cash from the transaction is received. In other words, the firm’s revenues increase when a product it sells or a service it renders is invoiced or sent to the customer, not when the cash payment takes place. Revenues are unaffected when payment is made for the product or service. When the payment is received, the firm adjusts its balance sheet accordingly: Cash rises by the amount received and accounts receivable decreases by the same amount.

The second principle is the matching principle, which was explained in the discussion of the valuation of prepaid expenses. According to this principle, expenses associated with a product or service are recognized when the product is sold or the service rendered, not when the expense is actually paid. For example, consider a distribution company that purchases an item from a wholesaler, stocks it, and then sells it. Expenses will increase during the period when the item is sold, not when it was purchased and not when the company paid for it.

The realization and matching principles form the basis of what is known as accrual accounting. A consequence of accrual accounting is that a firm’s earnings after tax is not equal to the difference between the firm’s cash inflows and outflows that occurred during the accounting period (the firm’s net cash flow). For example, the fact that OS Distributors realized a net profit of $10.2 million in 2000 does not mean that the firm has generated $10.2 million of cash during that year. A detailed analysis of the relationship between a firm’s profits and its cash flows is presented in Chapter 4.

NET SALES

For most firms, sales are the main source of revenues. The revenues of the accounting period, net of any discounts and allowances for defective merchandise, make up the net sales account. OS Distributors’ sales grew 7.7 percent during 1999, from $390 million in 1998 to $420 million in 1999. Sales rose to $480 million in 2000. Thus, the growth rate in 2000 was 14.3 percent, almost double the 1999 growth rate. The next chapter examines the consequences of this acceleration in the growth rate in sales on the firm’s income statement and balance sheet.

Cost of Goods Sold

The cost of goods sold (COGS), sometimes called cost of sales, represents the cost of the goods the firm has sold during the accounting period. For a distribution company, such as OS Distributors, the cost of goods sold is the acquisition price of the items sold from inventory plus any direct costs related to these items. In a manufacturing firm, goods incur various costs in the process of transformation from raw material to finished product, such as labor costs and manufacturing overhead. These costs make up the value of the finished goods inventory. They become cost of goods sold when the goods are released from inventory for sale. Depreciation expenses on
plant and equipment are often included in the cost of goods sold, although some firms report depreciation as a separate account in their income statement.

OS Distributors’ cost of goods sold consists of goods purchased from manufacturers for resale to retailers. (Depreciation expenses on the firm’s warehouses are shown separately.) Cost of goods sold rose from $328 million in 1998 to $400 million in 2000.

GROSS PROFIT

**Gross profit** is the first and broadest measure of the firm’s profit shown in its income statement. It is the difference between the firm’s net sales and its cost of goods sold. OS Distributors’ gross profit was $62 million in 1998, $67 million in 1999, and $80 million in 2000. Gross profit rose from 15.9 percent of sales in 1998 to 16.7 percent of sales in 2000 because the firm’s cost of goods sold grew at a slower rate than sales.

**Selling, General, and Administrative Expenses**

**Selling, general, and administrative expenses (SG&A’s),** sometimes referred to as **overhead expenses** or simply **overhead,** are the expenses incurred by the firm that relate to the sale of its products and the running of its operations during the accounting period. Expenses related to the training of salespeople are an example of overhead. For OS Distributors, selling, general, and administrative expenses amounted to $39.8 million in 1998, $43.7 million in 1999, and $48 million in 2000.

**Depreciation Expenses**

Depreciation expenses are the depreciation charges defined in the discussion of the balance sheet. They represent the portion of the cost of fixed assets that is allocated to the accounting period. When a fixed asset is purchased, the firm incurs a cost equal to the purchase price. This cost is recorded in the balance sheet as the gross value of the fixed asset. It is then charged or “expensed” (according to a depreciation schedule) over the years during which the asset is expected to generate some benefits. The amount expensed during each accounting period is recorded in the income statement in the depreciation expenses account.

If the firm expensed the full cost of a fixed asset the same year it acquired it, the matching principle would be violated. A fixed asset, by definition, generates benefits beyond the year in which it was purchased. Thus, allocating its full cost to the purchase year would cause a mismatch between expenses and revenues for a number of years.

OPERATING PROFIT

**Operating profit** is a measure of the firm’s profit from operations that takes into account all of the firm’s recorded expenses related to its operating activities: its cost of goods sold, its SG&A’s, and its depreciation expenses. It is the difference
between the firm’s gross profit and the sum of the SG&A’s and depreciation expenses. It measures the profit generated by the firm’s normal and recurrent business activities before interest expenses and taxes. OS Distributors generated an operating profit of $17.2 million in 1998, $18.3 million in 1999, and $24 million in 2000. Operating profit, measured as a percentage of sales, has risen from 4.4 percent of sales in 1998 to 5 percent of sales in 2000.

Extraordinary Items

This account represents the balance of the gains and losses that result from infrequent business transactions not directly related to the firm’s recurrent activities during the accounting period. For example, extraordinary items include the profit or loss made from selling land or properties and the destruction of assets resulting from a fire or other calamity.

EARNINGS BEFORE INTEREST AND TAX (EBIT)

Earnings before interest and tax, or EBIT, is the firm’s operating profit less any extraordinary losses plus any extraordinary gains reported in its income statement. It is a measure of a firm’s profits before taking into account the interest expenses it has incurred on its borrowings and the taxes it owes. Hence, it is not affected by either the firm’s decision to borrow or the incidence of taxation on its profits. Chapter 5 shows that earnings before interest and tax plays an important role in the analysis of a firm’s profitability because it enables the comparison of profitability for firms with different debt policies and tax obligations.

Earnings before interest and tax is shared among three claimants according to a legally established order. Lenders are the first claimants; they are entitled to receive interest income on the loans they extended to the firm. Then, the tax authority collects the tax the firm owes. Finally, the firm’s owners are entitled to whatever is left. Because there are no extraordinary items reported in OS Distributors’ income statements, its earnings before interest and tax is the same as its operating profit.

Net Interest Expenses

Net interest expenses is the difference between the interest expenses incurred by the firm on its borrowings and any income it received from its financial investments during the accounting period. OS Distributors has no interest income; hence, the firm’s net interest expenses are equal to its total interest expenses.

EARNINGS BEFORE TAX (EBT)

Earnings before tax, or EBT, is the difference between the firm’s earnings before interest and tax (EBIT) and its net interest expenses. It is a measure of a
firm’s profits before taking taxation into account. OS Distributors’ earnings before taxes were $11.7 million in 1998, $13.3 million in 1999, and $17 million in 2000. Expressed as a percentage of sales, EBT grew from 3 percent of sales in 1998 to 3.5 percent of sales in 2000. This improvement in the firm’s pretax profits in comparison to its sales is analyzed in detail in Chapter 5.

**Income Tax Expense**

The income tax expense account is a tax provision computed in accordance with the firm’s accounting rules. As mentioned earlier, this tax provision frequently differs from the actual income tax that the firm must pay. The difference is accounted for in the deferred tax account in the balance sheet. OS Distributors has no deferred taxes. Tax expenses are thus equal to 40 percent of the firm’s pretax profits.

**Earnings After Tax (EAT)**

Earnings after tax, or EAT, is obtained by deducting the firm’s income tax expense from its reported pretax profits, or earnings before tax (EBT). It is the firm’s net profit or net income, often referred to as the firm’s bottom line. When earnings after tax is positive, the firm has generated a profit and is said to be in the black. When its earnings after tax is negative, the firm has generated a loss and is said to be in the red. More precisely, earnings after tax is a measure of the net change in owners’ equity resulting from the transactions recorded in the income statement during the accounting period.

OS Distributors’ earnings after tax was $7 million in 1998, $8 million in 1999, and $10.2 million in 2000. As a percentage of sales, it has grown from 1.8 percent in 1998 to 2.1 percent in 2000. Are the levels and growth rates of OS Distributors’ earnings after tax adequate? The answer to this important question is the topic of Chapter 5.

**Reconciling Balance Sheets and Income Statements**

Transactions other than those recorded in the income statement affect owners’ equity. When a firm declares a cash dividend be paid to its owners, the book value of owners’ equity in the firm’s balance sheet decreases by the amount of the declared dividend. Thus, the net increase in owners’ equity is the difference between earnings after tax and dividends. This difference is called retained earnings. When a firm sells (issues) new shares during the accounting period, the amount raised, less issuance costs, increases the firm’s owners’ equity. Conversely, when a firm repurchases some of its own shares, the amount paid to the
shareholders who tender their shares, less transaction costs, decreases the firm’s owners’ equity. In general:

\[
\text{Net change in owners’ equity} = \text{Earnings after tax} - \text{Dividends} + \text{Amount raised by new share issuance} - \text{Amount paid for share repurchase} \tag{2.6}
\]

OS Distributors did not issue or repurchase shares during the three-year period from 1998 to 2000. (See Note 6 in Exhibit 2.1.) As a result, each year’s change in owners’ equity was exactly equal to the retained earnings from that year. Retained earnings are reported at the bottom of Exhibit 2.2. OS Distributors retained $5 million of its net earnings at the end of 1998, $6 million at the end of 1999, and $7 million at the end of 2000. Therefore, owners’ equity at the end of 1999 was equal to $70 million, the sum of owners’ equity at the end of 1998 ($64 million) and earnings retained in 1999 ($6 million). At the end of 2000, owners’ equity had grown to $77 million, the sum of owners’ equity at the end of 1999 ($70 million) and earnings retained in 2000 ($7 million).

The link between a firm’s balance sheets and its income statements is illustrated in Exhibit 2.4 for OS Distributors. On the left side of this exhibit is OS Distributors’
balance sheet drawn up on December 31, 1999, and on the right side is its balance sheet drawn up on December 31, 2000. Between the two balance sheets is the income statement for the year 2000. The balance sheet identity, expressed in equation 2.2, is illustrated by showing the book value of the firm’s assets on the left side and the sum of its liabilities and owners’ equity on the other side. The income statement identity, expressed in equation 2.5, is illustrated by showing the firm’s revenues on the left side and the sum of its expenses and its reported profits on the other side.

OS Distributors generated sales of $480 million during 2000, using for that purpose an initial amount of assets equal to $170 million (as indicated on the balance sheet at the end of 1999). After deducting $469.8 million of total expenses from its sales, OS Distributors reported a year-end net profit of $10.2 million in 2000. It retained $7 million of that profit and declared a dividend of $3.2 million. Because it had not raised new equity in 2000, the firm’s owners’ equity increased at the end of 2000 to $77 million, the sum of its original owners’ equity of $70 million and the retained profit of $7 million.

THE STRUCTURE OF THE OWNERS’ EQUITY ACCOUNT

Our analysis of owners’ equity has shown that the changes in owners’ equity come from earnings that are retained, net of any new issues of equity or any share repurchases that occurred during the accounting period. The owners’ equity account in the balance sheet represents the accumulated contribution of these changes over many accounting periods, from the date at which the firm was created until the date of the balance sheet. To help clarify the origin of its equity, most firms provide a breakdown of their owners’ equity into separate accounts that identify the different sources of equity. The most common items making up the owners’ equity account are shown in Exhibit 2.5, which presents a detailed account of OS Distributors’ owners’ equity at year-end 2000.

The first source of equity shown is common stock. The dollar amount is the number of shares the firm has issued since its creation multiplied by the par value,

<table>
<thead>
<tr>
<th>EXHIBIT 2.5 OS Distributors Owners’ Equity on December 31, 2000.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Figure in millions of dollars</strong></td>
</tr>
<tr>
<td><strong>December 31, 2000</strong></td>
</tr>
<tr>
<td>Common stock</td>
</tr>
<tr>
<td>10,000,000 shares at par value of $1</td>
</tr>
<tr>
<td>Paid-in capital in excess of par</td>
</tr>
<tr>
<td>Accumulated retained earnings</td>
</tr>
<tr>
<td>(Treasury stocks)</td>
</tr>
<tr>
<td><strong>Owners’ equity</strong></td>
</tr>
</tbody>
</table>
or **stated value**, of the shares. The par value of a common stock is an arbitrary fixed value attached to each share of stock. Unrelated to the market price of a share of common stock, par value is the amount that was set by those who created the firm and is stated in the firm’s charter. It represents the maximum liability of the owner of the share in the event of the firm’s dissolution. OS Distributors had 10 million shares outstanding at the end of 2000, and each of the firm’s shares has a par value of $1. Thus, the firm’s common stock was recorded at $10 million at the end of 2000.

The second source of equity shown is **paid-in capital in excess of par**. This is the difference between the cumulative amount of cash that the firm received from shares issued up to the date of the balance sheet and the cash it would have received if those shares had been issued at par value. The paid-in capital of OS Distributors was $20 million at the end of 2000, indicating the firm issued shares in the past that were sold at prices higher than $1. Suppose, for example, that one million shares were sold five years ago for $5 each. That year, OS Distributors’ paid-in capital in excess of par increased by $4 million, one million shares multiplied by the difference between $5 and a par value of $1.

The third source of equity, **accumulated retained earnings** or **reserves**, is the total amount of retained earnings since the creation of the firm. For OS Distributors, this “earned” capital amounted to $47 million at the end of 2000.

The last account, **treasury stock**, is subtracted from the previous ones. It represents the amount the firm spent to repurchase its own shares up to the date of the balance sheet. OS Distributors has not repurchased any of its shares, so this account remains equal to zero.

**SUMMARY**

This chapter explains how a firm’s balance sheet and income statement are prepared, what type of information they provide, and how they are related to each other. The next three chapters show how this information is used to assess the business and financial performance of firms.

The usefulness of financial statements, however, is often limited by the relative quality of the information they contain. Financial statements are prepared according to principles and rules that are not necessarily applied in the same fashion and with the same rigor by all firms. Furthermore, accounting rules differ from country to country and even from industry to industry within the same country, making intercountry and interindustry comparisons often quite challenging. Thus, to make meaningful comparisons between financial statements over time and across firms, it is necessary to check that the standards used and their implementations are identical from one period to another and from one firm to another. If they are not, adjustments need to be made.

For these reasons, a firm’s financial statements should be interpreted with a critical eye. You should never take a firm’s reported profit figures or asset values at face value. Always ask yourself how they were generated and which rules were used to estimate them. This point is clearly illustrated in Exhibit 2.6 with the case of the Singer Company.
EXHIBIT 2.6  How to Spot the Seams at Singer.*

Investors love a good story, and Singer Co. has all the makings of a best-seller: a strong brand name, operating in exploding consumer markets such as China and India and plenty of fans on Wall Street. Singer, which is synonymous with sewing machines, also uses its name to sell televisions, refrigerators and washing machines in more than 100 countries.

Analysts rave about the company’s consistent earnings, which have risen for 23 consecutive quarters. James G. Ting, 44, the Chinese-Canadian businessman who took over Singer in 1989, wants people to consider the stock as much a blue-chip as Du Pont Co. or Coca-Cola Co.

Singer, however, is not the real thing. Without doing anything illegal, and with the blessing of auditors at Ernst & Young, the company employs a myriad of tactics to brighten its profit picture. Nearly one-fifth of the $98.5 million that the company earned last year came from sources other than basic operations: asset sales, one-time investment gains and interest income and fees from affiliated companies.

Singer’s story provides clear examples of reasons that investors need to look at more than just the bottom line to determine the quality of a company’s earnings.

The basic lessons:

- **Profits can be too predictable.**
  Wall Street hates to be surprised, and Singer has a history of meeting analysts’ earnings-per-share expectations quarter after quarter almost to the penny.

  Only the devaluation of the Mexican peso caused the company to miss the mark by 9 cents when it reported fourth-quarter 1994 results—the first time Singer’s earnings had significantly trailed expectations since it went public in 1991.

  Whenever a company’s profit projections are so completely on target, however, investors should wonder how it is pulling off the feat—especially when it is subject to wildly fluctuating currencies.

- **Family ties can be too close.**
  Investors should also look out when much of a company’s business involves dealings with related businesses. Singer has close ties to a Canadian holding company, Semi-Tech Corp., and Mr. Ting is chairman of both companies.

  Semi-Tech (Global) Ltd., a Hong Kong-based company also headed by Mr. Ting, bought Singer in 1989 from a group including Paul A. Bilzerian, the former Singer chairman who was convicted that year of securities fraud and sentenced to four years in prison. Semi-Tech later sold a majority of Singer’s shares to the public. Almost half of Singer’s stock is still owned by Semi-Tech, however; and only two of its eight directors are not linked to Semi-Tech. “It’s very incestuous,” said Howard Schilit, who heads the Center for Financial Research and Analysis in Rockville, Maryland.
Singer seems to use these relationships to particular advantage. For instance, Semi-Tech Global, a company in which Semi-Tech Corp. has a big stake, owns a group of lackluster businesses that used to be owned by Singer. If the businesses turn around, Singer has the right to buy them at low prices—indeed, it has already bought back 7 of the original 12.

- **The best profits are the year-in, year-out kind.**
  Of the $98.5 million profit that Singer reported for last year, a high 18 percent came from one-time gains: a $4.7 million profit on investments, foreign-exchange gains of $600,000, asset sales totaling $4.8 million, $5.3 million in interest income and $2 million in consulting fees.

- **Cash is more important than earnings.**
  At healthy companies, cash flow—which excludes noncash items such as depreciation—roughly approximates net income over time.
  In Singer’s annual report, Mr. Ting says that its cash flow “remained strong” as $46 million more cash flowed into the company’s coffers than flowed out last year.
  That claim would be beyond question if all the incoming cash came from operations. But at least $132 million came from a rise in borrowings. Looking just at operations, Singer’s cash flow has significantly trailed its reported earnings.

- **Cash beats credit any day.**
  Whenever a company allows consumers to buy its wares on generous terms, investors should look for signs that customers are not paying their bills.

  In Singer’s case, half of its sales come from Asia and Latin America, and much of its success results from making it easy for people of limited means to buy items such as refrigerators on credit.

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*This article was written by Reed Abelson. It appeared in the International Herald Tribune dated May 15, 1995. © The New York Times.*
APPENDIX

2.1 SPECIMEN FINANCIAL STATEMENTS

POLO RALPH LAUREN’S BALANCE SHEETS AND INCOME STATEMENTS

The balance sheets and income statements that we have presented so far—those of OS Distributors, a fictitious firm—have purposely been reduced to their simplest form to make it easier to grasp financial accounting’s basic principles and terminology. In the real world, the financial statements published by companies are more complex and more difficult to read than those of OS Distributors, even with the help of notes that often accompany them. The purpose of this appendix is to help you decipher real world financial statements by going through the balance sheets and income statements taken from the annual reports of Polo Ralph Lauren Corp. (RL), a well-known designer and distributor of lifestyle products. Exhibit A2.1 presents the firm’s balance sheets, and Exhibit A2.2 its income statements taken from the firm’s annual reports for 1999 and 2000. To avoid unnecessary duplication, we will only review the few accounts in both statements that have not already been discussed in the body of the chapter.

An analysis of RL’s financial statements will be presented in the appendices of the next three chapters to complement the analysis made in these chapters on OS Distributors.

POLO RALPH LAUREN BALANCE SHEETS

Three new accounts appear on the assets side of RL’s balance sheets (“Deferred tax assets,” “Other assets,” and “Restricted cash”) and two others included among the liabilities (“Income taxes payable” and “Other noncurrent liabilities”). Further, the owners’ equity account shows more sub-accounts than does that of OS Distributors in Exhibit 2.5.

One can get more detailed statements and notes on U.S. firms not only from their annual 10-K reports, as indicated in footnote 2, but also from their 10-Q quarterly reports. These documents can be provided directly by the firm, or can be accessed freely from financial web sites.
EXHIBIT A2.1 Polo Ralph Lauren Corporation’s Consolidated Balance Sheets.
From the company annual report on fiscal year 2000; Figures in thousands of dollars

<table>
<thead>
<tr>
<th></th>
<th>March 28, 1998</th>
<th>April 3, 1999</th>
<th>April 1, 2000</th>
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</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current assets</strong></td>
<td></td>
<td></td>
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<tr>
<td>Cash and cash equivalents</td>
<td>$ 58,755</td>
<td>$ 44,458</td>
<td>$ 164,571</td>
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<tr>
<td>Accounts receivable, net of allowances</td>
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<td>157,203</td>
<td>204,447</td>
</tr>
<tr>
<td>Inventories</td>
<td>298,485</td>
<td>376,860</td>
<td>390,953</td>
</tr>
<tr>
<td>Deferred tax assets</td>
<td>24,448</td>
<td>51,939</td>
<td>40,378</td>
</tr>
<tr>
<td>Prepaid expenses and other</td>
<td>25,656</td>
<td>48,994</td>
<td>52,542</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>556,464</td>
<td>679,454</td>
<td>852,891</td>
</tr>
<tr>
<td>Property and equipment, net</td>
<td>175,348</td>
<td>261,799</td>
<td>372,977</td>
</tr>
<tr>
<td>Deferred tax assets</td>
<td>14,213</td>
<td>12,493</td>
<td>11,068</td>
</tr>
<tr>
<td>Goodwill, net</td>
<td>—</td>
<td>27,464</td>
<td>277,822</td>
</tr>
<tr>
<td>Other assets, net</td>
<td>79,105</td>
<td>79,157</td>
<td>105,804</td>
</tr>
<tr>
<td>Restricted cash</td>
<td>—</td>
<td>44,217</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>$825,130</td>
<td>$1,104,584</td>
<td>$1,620,562</td>
</tr>
<tr>
<td><strong>Liabilities and stockholders’ equity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current liabilities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notes and acceptances payable-banks</td>
<td>$ —</td>
<td>$ 115,500</td>
<td>$ 86,131</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>100,126</td>
<td>88,898</td>
<td>151,281</td>
</tr>
<tr>
<td>Income taxes payable</td>
<td>2,554</td>
<td>17,432</td>
<td>—</td>
</tr>
<tr>
<td>Accrued expenses and other</td>
<td>99,578</td>
<td>126,142</td>
<td>168,816</td>
</tr>
<tr>
<td><strong>Total current liabilities</strong></td>
<td>202,258</td>
<td>347,972</td>
<td>406,228</td>
</tr>
<tr>
<td>Long-term debt</td>
<td>—</td>
<td>44,217</td>
<td>342,707</td>
</tr>
<tr>
<td>Other noncurrent liabilities</td>
<td>38,546</td>
<td>53,490</td>
<td>99,190</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td>245,258</td>
<td>407,472</td>
<td>748,025</td>
</tr>
<tr>
<td><strong>Stockholders’ equity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common stock</td>
<td>1,003</td>
<td>1,004</td>
<td>1,004</td>
</tr>
<tr>
<td>Additional paid-in capital</td>
<td>447,918</td>
<td>450,030</td>
<td>450,030</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>136,738</td>
<td>227,288</td>
<td>370,785</td>
</tr>
<tr>
<td>Treasury stock</td>
<td>—</td>
<td>(16,084)</td>
<td>(57,346)</td>
</tr>
<tr>
<td>Accumulated other comprehensive income</td>
<td>—</td>
<td>—</td>
<td>9,655</td>
</tr>
<tr>
<td>Unearned compensation</td>
<td>(1,333)</td>
<td>(3,333)</td>
<td>(1,691)</td>
</tr>
<tr>
<td><strong>Total stockholders’ equity</strong></td>
<td>584,326</td>
<td>658,905</td>
<td>772,437</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$825,130</td>
<td>$1,104,584</td>
<td>$1,620,562</td>
</tr>
</tbody>
</table>
Deferred Tax Assets

Deferred tax assets are the assets side equivalent of the deferred tax liabilities. They represent the amount of taxes to be refunded in the future, which, as with deferred tax liabilities, arise from temporary differences in the amounts reported for book purposes and those reported for tax purposes. This happens when a firm reports a nonpaid expense in a given year, such as a bad debt expense or pending litigation costs, that will be recognized as a deductible expense by the tax authorities only when the expense is paid for in a future year. Until that year, the amount of tax deduction is recorded as a deferred tax asset.

In the case of RL, a note to the annual report indicates that most of the deferred tax assets reflect temporary differences in reporting the bad debt expenses related to the amount of accounts receivable not expected to be recovered.
Note that a portion of the deferred tax assets is recorded as a current asset. This indicates that RL is expecting to benefit from a tax refund of that amount during the following year.

**Other Assets**

Other assets include items that vary widely, such as long-term prepaid expenses, receivables or intangible assets.

**Restricted Cash**

Restricted cash often represents minimum cash balances that need to be maintained in checking accounts to meet contractual obligations with the bank, such as compensating balances. In the case of RL, the $44.217 million reported as restricted cash on April 3, 1999, represents cash committed to an acquisition that was completed in the first quarter of 2000.

**Income Taxes Payable**

In OS Distributors’ balance sheet, taxes payable are included in the company’s accrued expenses. In the case of RL, they are shown separately.

**Other Noncurrent Liabilities**

Other noncurrent (or long-term) liabilities include long-term obligations requiring future payments, such as pension obligations or other forms of deferred compensation, deferred tax liabilities, and rent obligations. In a note to RL’s balance sheet, it is explained that the reported amounts arise mainly from deferred rent and life insurance obligations.

**Accumulated Other Comprehensive Income**

The account “accumulated other comprehensive income” shows the accumulated amount of transactions which affected the company’s equity over time, up to the date of the balance sheet, and which are not included in reported profit. Comprehensive income includes adjustments related to previous periods, such as corrections of errors or, as in the case of RL at the end of fiscal year 2000, changes in the valuation of assets and liabilities arising from foreign currency translation (see Chapter 13 on accounting for foreign operations).

**Unearned Compensation**

Unearned compensation usually refers to deferred stock compensation. It is the expected value of shares that will be distributed to executives in the future under the stock ownership programs.
POLO RALPH LAUREN INCOME STATEMENTS

RL's income statements include two new sources of revenues ("Licensing revenues" and "Other income"), plus two new expense accounts ("Restructuring charge" and "Cumulative effect of change in accounting principle") but do not show, at least separately, the firm's depreciation expenses.

Licensing Revenue

RL get its revenues from three businesses: wholesale, retail, and licensing. Net sales refer to the revenues from the wholesale and retail activities, while licensing revenue represents the royalties that RL receives from its licensing partners for the right to manufacture and sell at wholesale specified products under RL's trademarks.

Other Income

Usually, the "other income account" represents revenues from marginal activities. Although no information is provided in RL's annual report on the activities concerned, it could be that the (very small) amount refers to the sale of surplus material used in the manufacture of garments, such as cutups.

Restructuring Charge

In a note to the income statement, RL indicates that the $58.6 million reported in 1999 represent expenses related to a restructuring plan designed to improve the profitability of its retail operations. Costs associated with the plan include contract termination costs, fixed asset write downs and termination benefits.

In general, a restructuring charge relates to a major reorganization of company businesses. Such a charge may not be reported as an extraordinary item, if restructuring is viewed as a recurring activity.

Cumulative Effect of Change in Accounting Principle

Accounting valuation principles change over time. To catch up with those changes, companies are required to adjust net income (the $3,967 million reported in RL's fiscal year 2000) for their cumulative effect.

Finally, note that the income tax expense is reported as "provision for income tax." The terminology is (slightly) different but the meaning is the same.
FURTHER READING


REVIEW PROBLEMS

2.1. Constructing income statements and balance sheets.
Based on the information provided below, prepare the following financial statements for CompuStores, a company that assembles and distributes personal computers:

   1. Accounts receivable increased by $6,400,000 in 2000.
   2. Profits in 2000 were taxed at 40 percent.
   3. At the end of 2000, inventories equaled 10 percent of the year’s sales.
   4. The net book value of fixed assets at the end of 1999 was $76 million.
   5. Cost of goods sold, other than the direct labor expenses related to the assembling of computers, equaled 70 percent of sales in 2000.
   6. The average interest rate on short- and long-term borrowing in 2000 was 10 percent of the amount of funds borrowed at the beginning of the year.
   7. Accounts receivable at the end of 2000 equaled 12 percent of sales.
   8. Accounts payable at the end of 1999 equaled $30 million.
   9. Depreciation expenses were $9 million in 2000.
   10. The company owed its employees $4 million at the end of 1999; a year later it owed them $1,810,000.
   12. Selling, general, and administrative expenses for 2000 were $18 million.
   13. Fees related to a technical license amount to $4 million per year.
   15. The balance of long-term debt was $27 million at the end of 1999, of which $4 million was due at year-end.
   16. There was no issuance of shares of common stocks or repurchase of outstanding shares in 2000.
   17. Direct labor expenses equaled 11.25 percent of sales.
   18. Repayment of long-term debt is $4 million per year in 2000.
   19. Inventories rose from $28 million at the end of 1999 to $32 million at the end of 2000.
20. In 2000, one of the company’s warehouses was enlarged at a cost of $14 million, which was partly financed with a $6 million long-term loan.
21. 2000 dividend payments were $9,360,000.
23. Equity capital at the end of 1999 was $81 million.
24. At the end of 1999, the company had enough cash that it could have immediately paid 1/4 of its accounts payable; at the end of 2000, it could have paid only 1/10.
25. The company paid in advance $9,600,000 of taxes on December 15, 2000.
26. The company’s line of credit was $3 million at the end of 1999. A year later it increased by 2/3.
27. In 2000, the company had a $2 million nonrecurrent loss related to the discontinuation of an old product line.
28. The company prepaid $1,500,000 on rent and insurance in 1999, and $2,085,000 a year later.

2.2. Forecasting income statements and balance sheets.

Having prepared CompuStores’ financial statements for the year 2000, the company’s financial manager now wishes to forecast next year’s income statement and balance sheet (called projected or pro forma statements). Prepare these projected statements using the following assumptions and the 2000 statements in the previous problem.

1. Sales are expected to grow by 10 percent.
2. Gross profit and the components of the cost of goods sold, expressed as a percentage of sales, should be the same as in 2000.
3. Selling, general, and administrative expenses will rise by $4,280,000.
4. The licensing fee, depreciation expenses, interest payments, and corporate tax rate are not expected to change next year.
5. Collection of receivables, payment of payables, and inventory management should be at the same level of efficiency as the previous year. Thus, accounts receivable should be collected at the same speed as in 2000 and will remain at 12 percent of the year’s sales. Accounts payable should still be 1.85 of a month of purchases, and inventories should stay at 10 percent of sales.
6. Prepaid and accrued expenses are not expected to change.
7. The company should upgrade one of its assembly lines at a cost equal to the year’s depreciation.
8. There will not be any new borrowing or issuance of new shares of common stocks.
9. The company wishes to hold as much cash in 2001 as it did in 2000 and will pay a dividend that will allow it to achieve this objective.