# Preparing Consolidated Statements

Web

This reading illustrates the preparation of consolidated financial statements for Company P and Company S. Learning how to interpret and analyze consolidated financial statements does not require knowing how to construct them, but this knowledge helps.

## Data for the Illustration

The single-company financial statements of Company P and Company S appear in **Exhibit PCSt.1** The following additional information affects the preparation of the consolidated financial statements.

**EXHIBIT PCSt.1** Illustrative Data for Preparation of Consolidated Financial Statements

| | Single-Company Statements | | | |
|---|---|---|---|---|
| | Company P (1) | Company S (2) | Combined (3) = (1) + (2) | Consolidated (See Exhibit PCSt.2) (4) |
| **CONDENSED BALANCE SHEETS ON DECEMBER 31, YEAR 4** | | | | |
| **Assets** | | | | |
| Accounts Receivable | $ 200,000 | $ 25,000 | $ 225,000 | $ 213,000 |
| Investment in Stock of Company S (using equity method) | 705,000 | — | 705,000 | — |
| Other Assets | 2,150,000 | 975,000 | 3,125,000 | 3,125,000 |
| Total Assets | $3,055,000 | $1,000,000 | $4,055,000 | $3,338,000 |
| **Equities** | | | | |
| Accounts Payable | $ 75,000 | $ 15,000 | $ 90,000 | $ 78,000 |
| Other Liabilities | 70,000 | 280,000 | 350,000 | 350,000 |
| Common Stock | 2,500,000 | 500,000 | 3,000,000 | 2,500,000 |
| Retained Earnings | 410,000 | 205,000 | 615,000 | 410,000 |
| Total Equities | $3,055,000 | $1,000,000 | $4,055,000 | $3,338,000 |
| **CONDENSED INCOME STATEMENT FOR YEAR 4** | | | | |
| **Revenues** | | | | |
| Sales | $ 900,000 | $ 250,000 | $1,150,000 | $1,110,000 |
| Equity in Earnings in Company S | 48,000 | — | 48,000 | — |
| Total Revenues | $ 948,000 | $ 250,000 | $1,198,000 | $1,110,000 |
| **Expenses** | | | | |
| Costs of Goods Sold (excluding depreciation) | $ 440,000 | $ 80,000 | $ 520,000 | $ 480,000 |
| Depreciation Expense | 120,000 | 50,000 | 170,000 | 170,000 |
| Administrative Expense | 80,000 | 40,000 | 120,000 | 120,000 |
| Income Tax Expense | 104,000 | 32,000 | 136,000 | 136,000 |
| Total Expenses | $ 744,000 | $ 202,000 | $ 946,000 | $ 906,000 |
| Net Income | $ 204,000 | $ 48,000 | $ 252,000 | $ 204,000 |
| Dividends Declared | (50,000) | (13,000) | (63,000) | (50,000) |
| Increase in Retained Earnings for the Year | $ 154,000 | $ 35,000 | $ 189,000 | $ 154,000 |

1. Company P acquired 100 percent of the outstanding shares of Company S for $650,000 cash on January 1, Year 1. At the time of acquisition, the book value of the shareholders' equity of Company S was $650,000, comprising the following account balances:

| *Company S, January 1, Year 1* | |
|---|---|
| Common Stock | $500,000 |
| Retained Earnings | 150,000 |
| Total Shareholders' Equity | $650,000 |

Company P made the following journal entry on its books at the time of acquisition:

| | | |
|---|---|---|
| Investment in Stock of Company S | 650,000 | |
| Cash | | 650,000 |

2. Company P records its investment in the shares of Company S using the equity method. The Retained Earnings of Company S have increased since January 1, Year 1, the date of acquisition, by $55,000 (= $205,000 – $150,000). This increase appears in the Investment in Company S account on Company P's books: $705,000 = $650,000 + $55,000.
3. At December 31, Year 4, $12,000 of Company S's accounts receivable represent amounts payable by Company P.
4. During Year 4, Company S sold merchandise to Company P for $40,000. None of that merchandise remains in Company P's inventory as of December 31, Year 4.

## Work Sheet Preparation

Preparing consolidated statements for Company P and Company S requires the following steps, characteristic of the consolidation procedure:

1. Eliminating the parent company's investment account
2. Eliminating intercompany receivables and payables
3. Eliminating intercompany sales and purchases

This illustration starts with the information in single-company, balance sheet and income statement account balances. In **Exhibit PCSt.2**, these data appear in the first two pairs of columns, which contain the same information as the first two columns of **Exhibit PCSt.1**. The amounts shown for Retained Earnings are the balances as of December 31, Year 4, before closing revenue and expense accounts but after subtracting dividend declarations for Year 4. The fourth pair of columns in **Exhibit PCSt.2** shows the amounts on a consolidated basis for Company P and Company S. The amounts in the last pair of columns horizontally sum the amounts in the other columns: Company P items, Company S items, plus adjustments and eliminations. These adjustments and eliminations, discussed in the sections that follow, appear only on a work sheet to prepare consolidated statements, not in the accounting records of either company.

1. *Elimination of Parent Company's Investment Account.* Company P acquired the shares of Company S for a price equal to their book value, $650,000. Since acquisition, Company P has used the equity method and has recorded the increase in Retained Earnings of Company S, $55,000 (= $20,000 of earnings retained by Company S during Years 1-3 + $35,000 earnings retained during Year 4), in its investment account. To avoid double-counting the net assets of Company S (the assets themselves on Company S's balance sheet and Company P's investment in them on Company P's balance sheet), the accountant must use the consolidation process to eliminate the investment account. The elimination is as follows:

| | | |
|---|---|---|
| (1) Common Stock—from books of Company S | 500,000 | |
| Retained Earnings (Company S) | 157,000 | |
| Equity in Earnings of Company S—from books of Company P | 48,000 | |
| Investment in Stock of Company S—from books of Company P | | 705,000 |

Except for the minority interest, if any, the shareholders of the parent provide the shareholders' equity of the consolidated entity. This example does not have minority interest. Thus the shareholders' equity of the subsidiary comes entirely from the parent's financing. If the consolidation process merely added together the shareholders' equity of the parent and of the subsidiary, it would double-count equities. When the consolidation process eliminates Company P's investment account to avoid double-counting of net assets, it eliminates the subsidiary's shareholders' equity accounts—corresponding to the parent's investment—to avoid double-counting the equities. The total amount eliminated equals the balance in the investment account, $705,000. This amount also equals the total shareholders' equity of Company S on December 31, Year 4, $705,000 (= $500,000 + $205,000); see **Exhibit PCSt.1**. Because the elimination applies to income statement accounts, before closing entries, the revenue and expense accounts of Company S remain open, not yet closed to Company S's Retained Earnings.

In addition to eliminating the common stock of Company S, $500,000, the consolidation process eliminates the balances in Retained Earnings of Company S, $157,000, and the Equity in Earnings of Company S for Year 4, $48,000. The balance in the income statement account, Equity in Earnings of Company S, equals Company S's net income for the year. The consolidation process eliminates this account and replaces it with the individual revenues less expenses of Company S (whose difference is also Company S's net income) in the consolidated income statement.

**2.** *Elimination of Intercompany Receivables and Payables.* A parent may sell goods on account to (or buy goods on account from) a subsidiary and treat the resulting obligation as an account receivable (or an account payable). The subsidiary will treat the obligation as an account payable (or an account receivable). A parent often makes loans to subsidiaries; these loans appear among the parent's assets as Notes Receivable, Investment in Bonds, or Advances to Subsidiary. The subsidiary would show Notes Payable, Bonds Payable, or Advances from Parent among its liabilities. A single company would not show Accounts Receivable and Accounts Payable for departments within the company. The consolidation process eliminates these transactions from the consolidated balance sheet so that the resulting statement appears like that of a single company.

In the illustration, Company S's accounts receivable include $12,000 due to it from Company P. The entry to record the elimination of the intercompany receivables and payables in **Exhibit PCSt.2** is as follows:

| | | |
|---|---|---|
| (2) Accounts Payable . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 12,000 | |
| Accounts Receivable . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | 12,000 |
| To eliminate intercompany payables and receivables. | | |

**3.** *Elimination of Intercompany Sales and Purchases.* A consolidated income statement will not report sales between consolidated companies for the same reason that an income statement for a single company will not report transfers from Work-in-Process Inventory to Finished Goods Inventory as sales. During Year 4, Company P acquired $40,000 of merchandise inventory from Company S. Eliminating intercompany sales requires a debit to Sales (of the selling corporation) and a credit to Inventories or to Cost of Goods Sold (of the purchasing corporation), depending on whether it has yet computed Cost of Goods Sold. In this illustration, Company P has already computed its cost of goods sold from the inventory equation:

$$\begin{aligned}\text{Cost of Goods Sold} &= \text{Beginning Inventory} + \text{Purchases} - \text{Ending Inventory}\\ &= \text{Goods Available for Sale} - \text{Ending Inventory}\end{aligned}$$

Therefore, the offsetting credit to eliminate intercompany sales must be to the Cost of Goods Sold account:

| | | |
|---|---|---|
| (3) Sales . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 40,000 | |
| Cost of Goods Sold . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | 40,000 |
| To eliminate intercompany sales and purchases. | | |

Company S sold goods to Company P, and Company P sold the goods to outsiders. Not to eliminate intercompany sales would force the income statement to count both revenue and cost of goods sold twice, but, even so, would report gross profit correctly. To see that profits appear properly, even without the elimination, assume that the goods cost Company S $30,000 and that Company P sold them for $45,000. In the single-company income statements, Company S's profits are $10,000 (= $40,000 – $30,000) as a result of the sale to Company P. Company P's profits are $5,000 (= $45,000 – $40,000) as a result of its sales to others. Total profits of the consolidated group from these transactions are $15,000, or Company P's revenue of $45,000 less Company S's cost of $30,000. The elimination of intercompany sales does not change the consolidated sales to outsiders, the consolidated cost of goods sold to outsiders, or consolidated profit.

## Statement Preparation

After completing the consolidation work sheet, the accountant prepares the consolidated statements. **Column (4)** of **Exhibit PCSt.1** presents a consolidated balance sheet on December 31, Year 4, and a consolidated income statement for Year 4 for Company P and Company S. Compare the results of using the equity method for an unconsolidated subsidiary, as in **Column (1)**, with consolidating that subsidiary, as in **Column (4)**:

1. When a parent does not consolidate the subsidiary, the parent's balance sheet shows the investment in the subsidiary's net assets in a single investment account. When it consolidates the subsidiary, the individual assets and liabilities of the subsidiary replace the investment account.
2. After the parent consolidates a subsidiary, consolidated retained earnings equals the same amount as when the parent uses the equity method for the subsidiary.

**EXHIBIT PCSt.2** **Company P and Company S Work Sheet to Derive Consolidated Financial Statements Starting with Data from Exhibit PCSt.1**

After Recording All Dividend Declarations for Year 4: Company P—$50,000 and Company S—$13,000

| | Company P | | Company S | | Adjustments and Eliminations | | P and S Consolidated | |
|---|---|---|---|---|---|---|---|---|
| | Debit | Credit | Debit | Credit | Debit | Credit | Debit | Credit |
| **BALANCE SHEET AND INCOME STATEMENT ACCOUNTS** | | | | | | | | |
| Accounts Receivable | $ 200,000 | | $ 25,000 | | | (2) $ 12,000 | $ 213,000 | |
| Investment in Stock of Company S | 705,000[a] | | — | | | (1) 705,000 | — | |
| Other Assets | 2,150,000 | | 975,000 | | | | 3,125,000 | |
| Accounts Payable | | $ 75,000 | | $ 15,000 | (2) $ 12,000 | | | $ 78,000 |
| Other Liabilities | | 70,000 | | 280,000 | | | | 350,000 |
| Common Stock | | 2,500,000 | | 500,000 | (1) 500,000 | | | 2,500,000 |
| Retained Earnings: | | | | | | | | |
| Company P | | 206,000[b] | | | | | | 206,000 |
| Company S | | | | 157,000[c] | (1) 157,000 | | | |
| Sales | | 900,000 | | 250,000 | (3) 40,000 | | | 1,110,000 |
| Equity in Earnings of Company S | | 48,000 | | — | (1) 48,000 | | | |
| Cost of Goods Sold | 440,000 | | 80,000 | | | (3) 40,000 | 480,000 | |
| Depreciation Expense | 120,000 | | 50,000 | | | | 170,000 | |
| Administrative Expense | 80,000 | | 40,000 | | | | 120,000 | |
| Income Tax Expense | 104,000 | | 32,000 | | | | 136,000 | |
| Totals | $3,799,000 | $3,799,000 | $1,202,000 | $1,202,000 | $757,000 | $757,000 | $4,244,000 | $4,244,000 |

[a] 705,000 = $650,000 (acquisition cost) + $20,000 (earnings retained by Company S during Year 1, Year 2, and Year 3; this is a plug, not derivable independently from other data) + $35,000 (earnings retained by Company S in Year 4)

[b] $206,000 = $256,000 (Company P retained earnings balance at beginning of Year 4) – $60,000 (dividends declared by Company P during Year 4)

[c] $157,000 = $170,000 (Company S Retained Earnings at end of Year 3) – $13,000 (Company S dividends declared during Year 4)

3. When a parent does not consolidate a subsidiary, the parent's interest in the earnings of the subsidiary appears on the single line, Equity in Earnings of Company S, on the parent's income statement. When it does consolidate the subsidiary, the individual revenues and expenses of the subsidiary replace the Equity in Earnings of Company S account.
4. After the parent consolidates a subsidiary, consolidated net income equals the same amount as when the parent uses the equity method for the subsidiary.

## Acquisition Price Exceeds Book Value Acquired

The parent company may acquire a subsidiary for an amount that exceeds the book value of the subsidiary's net assets. Suppose, for example, that Company P had paid $700,000, rather than $650,000, for its 100 percent investment in Company S. The $50,000 difference in purchase price represents the amount paid for Company S's net assets exceeding their book value or for net assets not recorded, such as goodwill, or both. Goodwill equals the excess of purchase price paid for an acquisition over the fair market value of the identifiable net assets acquired. Assume that on the date of acquisition, January 1, Year 1, the book value of Company S's recorded assets and liabilities equaled their market values, and Company S has no unrecorded, separately identifiable assets (as it would if it had developed its own patents).

The fact that Company P was willing to pay $700,000 for identifiable assets having book values and market values equal to $650,000 means that Company S must have had unidentifiable assets of $50,000 on January 1, Year 1. The $50,000 of unidentifiable assets in this case represents **goodwill**. GAAP do not allow firms to amortize goodwill (see the discussion in **Chapter 8**).

### Problem 1 for Self-Study

**Preparing consolidation work sheet adjustment and elimination entries. Exhibit PCSt.3** presents balance sheets for the end of Year 6 and income statements for Year 6 for P Company and S Company. P Company acquired all of the common stock of S Company on January 1, Year 6, for $430. During Year 6, P Company sold merchandise on account costing $600 to S Company for $1,000. S Company sold all of this merchandise to its customers by the end of Year 6. On December 31, Year 6, S Company still owes P Company $200 related to these intercompany merchandise transactions.

**EXHIBIT PCSt.3** P Company and S Company Balance Sheet and Statement of Income and Retained Earnings (Problem 1 for Self-Study)

| Balance Sheets, December 31, Year 6 | P Company | S Company |
|---|---|---|
| **ASSETS** | | |
| Cash | $ 220 | $ 90 |
| Accounts Receivable | 790 | 420 |
| Inventories | 640 | 390 |
| Investment in Stock of S Company (using equity method) | 530 | — |
| Property, Plant, and Equipment (net) | 970 | 640 |
| Total Assets | $3,150 | $1,540 |
| **EQUITIES** | | |
| Accounts Payable | $ 730 | $ 450 |
| Other Current Liabilities | 520 | 260 |
| Long-term Debt | 600 | 300 |
| Common Stock | 300 | 100 |
| Retained Earnings | 1,000 | 430 |
| Total Liabilities and Shareholders' Equity | $3,150 | $1,540 |
| **Statement of Income for Year 6** | | |
| **RETAINED EARNINGS FOR BEGINNING AND END OF YEAR 6** | | |
| Sales Revenue | $4,000 | $3,000 |
| Equity in Earnings of S Company | 100 | — |
| Cost of Goods Sold | (2,800) | (2,200) |
| Selling and Administrative Expenses | (940) | (640) |
| Interest Expense | (60) | (25) |
| Income Tax Expense | (100) | (35) |
| Net Income | $ 200 | $ 100 |
| Retained Earnings, Beginning of Year | 800 | 330 |
| Retained Earnings, End of Year | $1,000 | $ 430 |

**a.** Prepare the work-sheet adjustment and elimination entries to consolidate P Company and S Company for Year 6.

**b.** Assume for this part that P Company paid $510 for all of the common stock of S Company on January 1, Year 6. The common shareholders' equity of S Company was $430 on this date (= common stock of $100 + retained earnings of $330). P Company attributes any excess of the acquisition cost over the book value of the net assets acquired to a patent, which it amortizes over 10 years.

**(1)** Compute the balance in the account Investment in S Company on P Company's books on December 31, Year 6, assuming P Company uses the equity method.

**(2)** Prepare the work sheet adjustment and elimination entries to consolidate P Company and S Company for Year 6.

## Recognition of Minority Interest

Previous sections illustrate the consolidation procedure when the parent owns 100 percent of a subsidiary. Parent companies may, however, own less than 100 percent for several reasons:

- The parent can gain control of a subsidiary with a smaller capital investment and therefore put less capital at risk to loss. Parent companies generally gain control of a subsidiary when the ownership percentage exceeds 50 percent. A 51 percent investment in a subsidiary requires less funds than a 100 percent investment.
- Some shareholders of the subsidiary may be unwilling to sell their shares, so the parent cannot acquire 100 percent.

A minority interest exists whenever a parent company owns a controlling interest in a subsidiary but does not own 100 percent. The remaining shareholders in the subsidiary constitute the minority interest. These minority shareholders have a claim on the earnings and net assets of the subsidiary. The consolidated balance sheet includes all of the assets and liabilities of a subsidiary, not just an amount equal to the parent's ownership percentage. Likewise, the consolidated income statement includes all of the revenues and expenses of a subsidiary, not just an amount equal to the parent's ownership percentage. The parent's controlling interest permits it to manage all of the net assets of a subsidiary, justifying the inclusion of 100 percent of the subsidiary's assets, liabilities, revenues, and expenses in the consolidated financial statements. The parent company, however, does not have a claim on 100 percent of the net assets or earnings. The consolidated financial statements must therefore recognize the claim of the minority shareholders. We illustrate below the procedures to prepare a consolidation work sheet when a minority interest exists.

### Recognition of Minority Interest at the Date of Acquisition

Refer to the data in **PCSt.1** for Company P and Company S. Recall that Company P acquired 100 percent of the outstanding shares of Company S for $650,000 on January 1, Year 1. At the time of acquisition, the book value of the shareholders' equity of Company S was $650,000, comprising the following account balances:

| ***COMPANY S, JANUARY 1, YEAR 1*** | |
|---|---|
| Common Stock | $500,000 |
| Retained Earnings | 150,000 |
| Total Shareholders' Equity | $650,000 |

Assume now that Company P acquired only 80 percent of the outstanding common stock of Company S and paid $520,000. **Exhibit PCSt.4** shows the claims of Company P and of the minority shareholders on the net assets of Company S on the date of acquisition.

**EXHIBIT PCSt.4** Allocation of Shareholders' Equity of Company S to Company P and the Minority Shareholders on the date of acquisition

| | Total (1) | To Company P (80 percent) (2) | To Minority Shareholders (20 percent) (3) |
|---|---|---|---|
| Common Stock | $500,000 | $400,000 | $100,000 |
| Retained Earnings | 150,000 | 120,000 | 30,000 |
| Total Shareholders' Equity | $650,000 | $520,000 | $130,000 |

The work sheet entry to eliminate the Investment in Company S account, which appears the books of Company P, is:

| | | |
|---|---|---|
| Common Stock (Company S) | 400,000 | |
| Retained Earnings (Company S) | 120,000 | |
| Investment in Company S (Company P) | | 520,000 |

The work sheet entry to recognize the minority interest claim on the net assets of Company S is:

| | | |
|---|---|---|
| Common Stock (Company S) | 100,000 | |
| Retained Earnings (Company S) | 30,000 | |
| Minority Interest in Net Assets of Company S | | 130,000 |

The account, Minority Interest in Net Assets of Company S, does not appear on the books of either company. Rather, the work sheet entry above creates this account. The consolidated balance sheet includes all of the assets and liabilities of Company P (except the Investment in Company S account eliminated in the first entry above) and of the Company S. The 20 percent claim of the minority shareholders against the net assets of *Company S* of $130,000 appears in shareholders' equity on the consolidated balance sheet.

## CONCEPTUAL NOTE

A conceptual issue arises regarding the valuation of the minority interest in the net assets of a subsidiary when the parent paid more than the book value of the subsidiary's net assets on the date of acquisition:

- Should the minority interest reflect the book values on the subsidiary's books, or
- Should the minority interest reflect the market values of the subsidiary's net assets implied by the price paid by the parent for its interest in the subsidiary?

To illustrate this issue, assume in the example above that Company P had paid $560,000 instead of $520,000 for its 80 percent interest in Company S. Using the book values of Company S's net assets yields a minority interest of $130,000 [= 0.20 x ($100,000 + $30,000)]. The implied market value of the net assets of Company S is $700,000 (= $560,000/0.8). Using the market values of Company S's net assets yields a minority interest of $140,000 (= 0.2 x $700,000).

Proponents of using book values of the subsidiary's net assets view consolidated financial statements from the parent's viewpoint. The parent paid $40,000 more than book value for its 80 percent interest. The minority shareholders' did not pay an additional $10,000 for its interest in the undervalued assets. The minority interest should therefore equal $130,000. Proponents of using market values of the subsidiary's net assets view consolidated financial statements from both the parent's and the minority interest's viewpoint. The net assets of Company S have a market value exceeding their book value of $50,000 (= $700,000 – $650,000). If Company S were to sell its net assets for their market value, the minority shareholders' would have a claim on 20 percent of the proceeds, or $140,000 (= 0.2 x $700,000).

GAAP currently follow the first approach. Thus, in the example above, the consolidation work sheet shows a write-up of Company S's net assets, the recognition of goodwill, or both, for the $40,000 excess price paid by P Company. It does not recognize the additional $10,000 in the valuation of S Company's net assets and in the valuation of the minority interest. Recent discussions within the FASB suggest a preference toward the second approach to measuring the minority interest but the FASB has not yet issued a pronouncement requiring it.

## Recognition of Minority Interest Subsequent to Date of Acquisition

Continuing the example above, column **(1)** of **Exhibit PCSt.5** shows the change in shareholders' equity of Company S between January 1, Year 1 and December 31, Year 4. Company S generated earnings in excess of dividends of $7,000 during Year 1, Year 2, and Year 3 and net income of $48,000 during Year 4. Columns **(2)** and **(3)** show the allocation of total shareholders' equity to the 80 percent interest of Company P and the 20 percent interest of the minority shareholders.

**EXHIBIT PCSt.5** Allocation of Shareholders' Equity of Company S to Company P and the Minority Shareholders on December 31, Year 4

| | Total (1) | To Company P (80 percent) (2) | To Minority Shareholders (20 percent) (3) |
|---|---|---|---|
| Common Stock | $500,000 | $400,000 | $100,000 |
| **Retained Earnings:** | | | |
| January 1, Year 1 | $150,000 | $120,000 | $ 30,000 |
| Increase in Retained Earnings, January 1, Year 1 to December 31, Year 3 minus Dividends for Year 4 of $13,000 | 7,000 | 5,600 | 1,400 |
| Net Income for Year 4 | 48,000 | 38,400 | 9,600 |
| December 31, Year 4 | $205,000 | $164,000 | $ 41,000 |
| Total Shareholders' Equity | $705,000 | $564,000 | $141,000 |

Company P initially recorded its investment in Company S at its cost on January 1, Year 1 of $520,000. Company P increased the account, Investment in Company S, by $7,000 for its 80 percent share of Company S's earnings for Year 1 to Year 3 in excess of dividends for Year 1 to Year 4. Company P increased the investment account by $38,400 during Year 4 for its share of earnings. The account, Investment in Company S, has a balance of $564,000 on December 31, Year 4. The work sheet entry to eliminate the investment account is similar to that discussed earlier except that the entry eliminates only 80 percent of the shareholders' equity of Company S.

| | | |
|---|---|---|
| Common Stock (Company S) | 400,000 | |
| Retained Earnings (Company S) | 125,000 | |
| Equity in Earnings of Company S (Company P) | 38,400 | |
| Investment in Company S (Company P) | | 564,000 |

The minority interest in Company S has likewise increased from $130,000 on January 1, Year 1, to $141,000 on December 31, Year 4. As indicated above, the account, Minority Interest in Net Assets of Company S, does not appear on the books of either Company P or Company S. The consolidation work sheet procedure creates this account. Thus, changes in the minority interest claim appear in consolidated financial statements as a result of entries on the consolidation work sheet. The entry to eliminate the remaining 20 percent of the shareholders' equity accounts of Company S and to recognize the minority interest's claim on earnings and net assets is as follows:

| | | |
|---|---|---|
| Common Stock (Company S) | 100,000 | |
| Retained Earnings (Company S) | 31,400 | |
| Minority Interest in Earnings of Company S (Consolidated Income Statement) | 9,600 | |
| Minority Interest in Net Assets of Company S (Consolidated Balance Sheet) | | 141,000 |

The account, Minority Interest in Net Assets of Company S, appears on the consolidated balance sheet. This account reports the minority interest claim on the net assets of Company S on December 31, Year 4. The account, Minority Interest in Earning of Company S, appears on the consolidated income statement. The consolidated income statement includes all of the revenues and expenses of Company P and Company S. The claim of the minority shareholders on the earnings of *Company S* appears as a subtraction (note the debit balance in this account) from the combined earnings of Company P and Company S when computing consolidated net income.

**Exhibit PCSt.6** presents the consolidation work sheet reflecting the two entries above, as well as the elimination of intercompany sales, receivables, and payables.

**EXHIBIT PCSt.6** COMPANY P and COMPANY S
Work Sheet to Derive Consolidated Financial Statements Based on Data for Year 4

| | Company P | | Company S | | Adjustments and Eliminations | | P and S Consolidated | |
|---|---|---|---|---|---|---|---|---|
| | Debit | Credit | Debit | Credit | Debit | Credit | Debit | Credit |
| **Balance Sheet and Income Statement Accounts with Retained Earnings from Start of Year** | | | | | | | | |
| Accounts Receivable | $ 200,000 | | $ 25,000 | | | (2) $ 12,000 | $ 213,000 | |
| Investment in Stock of Company S | 564,000 | | — | | | (1) 564,000 | — | |
| Other Assets | 2,280,000 | | 975,000 | | | | 3,255,000 | |
| Accounts Payable | | $ 75,000 | | $ 15,000 | (2) $ 12,000 | | | $ 78,000 |
| Other Liabilities | | 70,000 | | 280,000 | | | | 350,000 |
| Common Stock | | 2,500,000 | | 500,000 | (1) 400,000 | | | 2,500,000 |
| | | | | | (4) 100,000 | | | |
| **Retained Earnings:** | | | | | | | | |
| Company P | | 204,600 | | | | | | 204,600 |
| Company S | | | | 157,000 | (1) 125,600 | | | |
| | | | | | (4) 31,400 | | | |
| Sales | | 900,000 | | 250,000 | (3) 40,000 | | | 1,110,000 |
| Equity in Earnings of Company S | | 38,400 | | — | (1) 38,400 | | | |
| Cost of Goods Sold | 440,000 | | 80,000 | | | (3) 40,000 | $ 480,000 | |
| Depreciation Expense | 120,000 | | 50,000 | | | | 170,000 | |
| Administrative Expense | 80,000 | | 40,000 | | | | 120,000 | |
| Income Tax Expense | 104,000 | | 32,000 | | | | 136,000 | |
| **Minority Interest in Net** | | | | | | | | |
| Assets of Company S | | | | | | (4) 141,000 | | 141,000 |
| Minority Interest in Earnings of Company S | | | | | (4) 9,600 | | 9,600 | |
| Totals | $3,788,000 | $3,788,000 | $1,202,000 | $1,202,000 | $757,000 | $757,000 | $4,383,600 | $4,383,600 |

(1) To eliminate the investment account against 80 percent of the shareholders' equity of Company S.
(2) To eliminate intercompany receivables and payables.
(3) To eliminate intercompany sales.
(4) To recognize the 20 percent minority interests in the earnings and net assets of Company S.

## Problem 2 for Self-Study

**Preparing consolidation work sheet adjustment and elimination entries when a minority interest exists.** This problem extends **Problem 1 for Self Study**. Assume that P Company acquired 90 percent of S Company's common stock on January 1, Year 6 for $387. **Exhibit PCSt.7** presents balance sheet and income statement data for P Company and S Company.

**EXHIBIT PCSt.7** P COMPANY AND S COMPANY Balance Sheet and Income Statement Data for Year 6 (Problem 2 for Self-Study)

| Balance Sheets, December 31, Year 6 | P Company | S Company |
|---|---|---|
| **ASSETS** | | |
| Cash | $ 263 | $ 90 |
| Accounts Receivable | 790 | 420 |
| Inventories | 640 | 390 |
| Investment in Stock of S Company (using equity method) | 477 | — |
| Property, Plant, and Equipment (net) | 970 | 640 |
| Total Assets | $3,140 | $1,540 |
| **EQUITIES** | | |
| Accounts Payable | $ 730 | $ 450 |
| Other Current Liabilities | 520 | 260 |
| Long-term Debt | 600 | 300 |
| Common Stock | 300 | 100 |
| Retained Earnings | 990 | 430 |
| Total Liabilities and Shareholders' Equity | $3,140 | $1,540 |

*(continued on next page)*

*(continued from previous page)*

**Statement of Income for Year 6**

**RETAINED EARNINGS FOR BEGINNING AND END OF YEAR 6**

| | | |
|---|---|---|
| Sales Revenue | $4,000 | $3,000 |
| Equity in Earnings of S Company | 90 | — |
| Cost of Goods Sold | (2,800) | (2,200) |
| Selling and Administrative Expenses | (940) | (640) |
| Interest Expense | (60) | (25) |
| Income Tax Expense | (100) | (35) |
| Net Income | $ 190 | $ 100 |
| Retained Earnings, Beginning of Year | 800 | 330 |
| Retained Earnings, End of Year | $ 990 | $ 430 |

**a.** Give the work sheet entry to eliminate the Investment in S Company account.
**b.** Give the work sheet entry to recognize the minority interest in the earnings and net assets of S Company.

## *Effects on the Statement of Cash Flows*

The consolidated income statement shows all the revenues and all the expenses of the less-than-wholly-owned subsidiary, but the parent cannot claim all the resulting income. The income statement, therefore, shows the subtraction for the minority's interest in the subsidiary's income, but this subtraction does not use the cash of the consolidated entity. Hence, if the consolidated entity uses the indirect method of reporting operation cash flows, starting with net income, it must add back the charge in deriving cash from operations. **Exhibit PCSt.8** illustrates these presentations for Marathon Group (oil/gas companies affiliated with U.S. Steel as part of USX Corporation; the presentations are condensed from its report for a recent year). **Exhibit PCSt.8** shows both the subtraction on the income statement and the addback on the statement of cash flows of the $249 million charge for minority interest in the income of parent Marathon Group's consolidated but less-than-wholly-owned subsidiary, Marathon Ashland Petroleum.

Dividends paid by the less-than-wholly-owned subsidiary to the minority shareholders do reduce the cash of the consolidated entity. The consolidated statement of cash flows often shows these dividends paid to minority shareholders as part of financing activities but sometimes shows them as a reduction in the addback to net income, hence as a reduction in operating cash flows.

**EXHIBIT PCSt.8** **Marathon Group, A Unit of USX Corporation, for Year 8 (Dollars in Millions)**

| Statement of Operations | | Statement of Cash Flows | |
|---|---|---|---|
| Revenues (details omitted) | $ 22,075 | Net Income | $ 310 |
| Costs and Expenses (details omitted) | (21,137) | Adjustments to Reconcile to Net Cash Provided from Operating Activities: Depreciation, Depletion, and Amortization | 941 |
| Income from Operations | $ 938 | | |
| Net Interest and Other Financial Costs | (237) | | |
| Minority Interest in Income of Marathon Ashland Petroleum | (249) | Minority Interest in Income of Marathon Ashland Petroleum | 249 |
| Income before Income Taxes | $ 452 | All Other (details omitted) | (69) |
| Provision for Estimated Income Taxes | (142) | Net Cash Provided from Operating Activities | $ 1,431 |
| Net Income | $ 310 | Net Cash (Used) in Investing (details omitted) | (2,004) |
| | | Net Cash Provided from Financing Activities (details omitted) | 674 |
| | | Net Increase in Cash and Cash Equivalents | $ 101 |
| | | Cash and Cash Equivalents at Beginning of Year | 36 |
| | | Cash and Cash Equivalents at End of Year | $ 137 |

# Solutions to Self-Study Problems

## SUGGESTED SOLUTION TO PROBLEM 1 FOR SELF-STUDY

(P Company and S Company; preparing consolidation work sheet adjustment and elimination entries.)

**a.**

| | | |
|---|---|---|
| Common Stock (S Company) | 100 | |
| Retained Earnings (S Company) | 330 | |
| Equity in Earnings of S Company (P Company) | 100 | |
| Investment in S Company (P Company) | | 530 |
| To eliminate investment account and subsidiary's shareholders' equity accounts. | | |
| Sales Revenue | 1,000 | |
| Cost of Goods Sold | | 1,000 |
| To eliminate intercompany sales of merchandise. | | |
| Accounts Payable | 200 | |
| Accounts Receivable | | 200 |
| To eliminate intercompany receivables and payables. | | |

**b.**

| | | | |
|---|---|---|---|
| (1) | Acquisition Cost of Investment in S Company | $ 510 | |
| | Plus Equity in Earnings of S Company, Year 6 | 100 | |
| | Less Amortization of Excess Acquisition Cost for Year 6: ($510 – $430)/10 | (8) | |
| | Investment Account, December 31, Year 6 | $ 602 | |
| (2) | Common Stock (S Company) | 100 | |
| | Retained Earnings (S Company) | 330 | |
| | Equity in Earnings of S Company (P Company) | 100 | |
| | Patent | 72 | |
| | Investment in S Company (P Company) | | 602 |
| | Sales Revenue | 1,000 | |
| | Cost of Goods Sold | | 1,000 |
| | Accounts Payable | 200 | |
| | Accounts Receivable | | 200 |

## SOLUTION TO PROBLEM 2 FOR SELF-STUDY

**a.**

| | | |
|---|---|---|
| Common Stock (S Company) | 90 | |
| Retained Earnings (S Company) | 297 | |
| Equity in Earnings of S Company (P Company) | 90 | |
| Investment in S Company (P Company) | | 477 |

**b.**

| | | |
|---|---|---|
| Common Stock (S Company) | 10 | |
| Retained Earnings (S Company) | 33 | |
| Minority Interest in Earnings of S Company (Consolidated Income Statement) | 10 | |
| Minority Interest in Net Assets of S Company (Consolidated Balance Sheet) | | 53 |

## Problems

**PCSt.1 Preparing a consolidation work sheet.** The income statement for the current year and the balance sheet for the end of the current year of Peak Company and Valley Company appear in Exhibit PCSt.9

**EXHIBIT PCSt.9** PEAK COMPANY AND VALLEY COMPANY
Balance Sheet & Statement of Income and Retained Earnings (Problem PCSt.1)

| | Peak Company | Valley Company |
|---|---|---|
| **Balance Sheets, December 31 of Current Year** | | |
| **ASSETS** | | |
| Cash | $ 13,000 | $ 6,000 |
| Accounts Receivable | 42,000 | 20,000 |
| Investment in Stock of Valley Company (using equity method) | 56,000 | — |
| Other Assets | 143,000 | 85,000 |
| Total Assets | $254,000 | $111,000 |
| **EQUITIES** | | |
| Accounts Payable | $ 80,000 | $ 25,000 |
| Bonds Payable | 50,000 | 30,000 |
| Common Stock | 10,000 | 5,000 |
| Retained Earnings | 114,000 | 51,000 |
| Total Liabilities and Shareholders' Equity | $254,000 | $111,000 |
| **Statement of Income for Current Year and Retained Earnings for Beginning and End of Current Year** | | |
| Sales Revenue | $400,000 | $125,000 |
| Equity in Earnings of Valley Company | 10,000 | — |
| Cost of Goods Sold | (320,000) | (90,000) |
| Selling and Administrative Expenses | (44,000) | (20,000) |
| Income Tax Expense | (12,000) | (5,000) |
| Net Income | $ 34,000 | $ 10,000 |
| Less: Dividends | — | (4,000) |
| Retained Earnings, Beginning of Year | 80,000 | 45,000 |
| Retained Earnings, End of Year | $114,000 | $ 51,000 |

Peak Company acquired all of the common stock of Valley Company on January 1 of this year for $50,000. The shareholders' equity of Valley Company on January 1 comprised $5,000 of common stock and $45,000 of retained earnings. Valley Company earned $10,000, and declared and paid dividends of $4,000 during the current year. The balance sheet accounts on December 31 reflect advances from Peak Company to Valley Company totaling $8,000; Peak includes the advances in its Accounts Receivable; Valley shows the advances in its Accounts Payable.

**a.** Prepare a consolidation work sheet for Peak Company and Valley Company for the current year. The adjustments and elimination columns should contain entries to (1) eliminate the investment account and (2) eliminate intercompany receivables and payables.

**b.** Assume for parts **b** and **c** that Peak Company paid $70,000, instead of $50,000, for all of the common stock of Valley Company. The market values of Valley Company's recorded assets and liabilities equaled their book values. Valley Company holds a patent that resulted from the firm's internal research and development efforts. The patent has a zero book value, a $20,000 market value, and a 10-year remaining life on the date of the acquisition. Compute the balance in the Investment in Stock of Valley Company on Peak Company's books at the end of the current year.

**c.** Give the consolidation work sheet entry to eliminate the investment account at the end of the current year.

**PCSt.2** **Preparing a consolidation work sheet.** The balance sheets for the end of Year 2 and income statements for Year 2 of Company P and Company S appear in **Exhibit PCSt.10**.

**EXHIBIT PCSt.10** Company P and Company S
Balance Sheet & Statement of Income and
Retained Earnings (Problem PCSt.2)

| Balance Sheets, December 31 of Year 2 | Company P | Company S |
|---|---|---|
| **ASSETS** | | |
| Receivables | $ 60,000 | $ 40,000 |
| Investment in Stock of Company S (using equity method) | 272,000 | — |
| Other Assets | 496,000 | 352,000 |
| Total Assets | $ 828,000 | $392,000 |
| **EQUITIES** | | |
| Accounts Payable | $ 72,000 | $ 48,000 |
| Other Liabilities | 88,000 | 72,000 |
| Common Stock | 160,000 | 80,000 |
| Retained Earnings | 508,000 | 192,000 |
| Total Liabilities and Shareholders' Equity | $ 828,000 | $392,000 |
| **Statement of Income for Year 2** | | |
| **Retained Earnings for Beginning and End of Year 2** | | |
| Sales Revenue | $1,600,000 | $640,000 |
| Equity in Earnings of S Company | 32,000 | — |
| Cost of Goods Sold | (1,160,000) | (496,000) |
| Other Expenses | (280,000) | (112,000) |
| Net Income | $ 192,000 | $ 32,000 |
| Less: Dividends | (40,000) | — |
| Retained Earnings, Beginning of Year 2 | 356,000 | 160,000 |
| Retained Earnings, End of Year 2 | $ 508,000 | $192,000 |

Company P acquired 100 percent of the common stock of Company S on January 2, Year 2, for $240,000. The shareholders' equity accounts of Company S on this date appear below:

| | |
|---|---|
| Common Shares | $ 80,000 |
| Retained Earnings | 160,000 |
| Total | $240,000 |

During Year 2, Company P sold merchandise costing $32,000, on account, to Company S for $40,000. Of the amount, $12,000 remains unpaid at year-end. Company S sold all of the merchandise during Year 2. Company P declared and paid $40,000 of dividends during Year 2. Company S did not declare or pay a dividend during Year 2.

**a.** Prepare a consolidation work sheet for Company P and Company S for Year 2. The adjustments and eliminations columns should contain entries to (1) eliminate the investment account, (2) eliminate intercompany sales, and (3) eliminate intercompany receivables and payables.

**b.** Prepare a consolidated statement of income and retained earnings for Year 2 and a consolidated balance sheet as of December 31, Year 2.

**PCSt.3** **Preparing a consolidation work sheet.** The condensed balance sheets of Ely Company and Sims Company at December 31 appear in **Exhibit PCSt.11**.

**EXHIBIT PCSt.11** ELY COMPANY AND SIMS COMPANY
Balance Sheet Data (PCSt.3)

| | Ely Company | Sims Company |
|---|---|---|
| **ASSETS** | | |
| Cash | $ 12,000 | $ 5,000 |
| Receivables | 25,000 | 15,000 |
| Investment in Sims Company (using equity method) | 78,000 | — |
| Other Assets | 85,000 | 80,000 |
| | $200,000 | $100,000 |
| **LIABILITIES AND SHAREHOLDERS' EQUITY** | | |
| Current Liabilities | $ 45,000 | $ 40,000 |
| Common Stock | 50,000 | 10,000 |
| Retained Earnings | 105,000 | 50,000 |
| | $200,000 | $100,000 |

The receivables of Ely Company and the liabilities of Sims Company contain an advance from Ely Company to Sims Company of $7,500. Ely Company purchased 100 percent of the capital stock of Sims Company on the market at January 2 of this year for $68,000. At that date, the balance in the Retained Earnings account of Sims Company was $40,000. Any excess purchase price relates to brand names, which it neither amortizes nor finds impaired.

Prepare a consolidation work sheet for Ely Company and Sims Company. The adjustment and elimination columns should contain entries to (1) eliminate the Investment in the Sims Company account and (2) eliminate intercompany obligations.

**PCSt.4** **Preparing a consolidation work sheet subsequent to year of acquisition.** The condensed balance sheets of Companies S and J on December 31, Year 2, appear in **Exhibit PCSt.12**.

**EXHIBIT PCSt.12** COMPANY S AND COMPANY J
Balance Sheet Data December 31, Year 2 (PCSt.4)

| | Company S | Company J |
|---|---|---|
| **ASSETS** | | |
| Cash | $ 36,000 | $ 26,000 |
| Accounts and Notes Receivable | 180,000 | 50,000 |
| Inventories | 440,000 | 250,000 |
| Investment in Stock of Company J (using equity method) | 726,000 | — |
| Plant Assets | 600,000 | 424,000 |
| Total Assets | $1,982,000 | $750,000 |
| **LIABILITIES AND SHAREHOLDERS' EQUITY** | | |
| Accounts and Notes Payable | $ 110,000 | $ 59,000 |
| Other Liabilities | 286,000 | 22,000 |
| Common Stock | 1,200,000 | 500,000 |
| Capital Contributed in Excess of Stated Value | — | 100,000 |
| Retained Earnings | 386,000 | 69,000 |
| Total Liabilities and Shareholders' Equity | $1,982,000 | $750,000 |

Company S owns 100 percent of the common stock of Company J. It acquired the stock of Company J on January 1, Year 1, when Company J's retained earnings amounted to $40,000. Company S holds a note issued by Company J in the amount of $16,400. Company S attributes any excess of cost over book value acquired to a patent and amortizes it over 10 years.

Prepare a work sheet for a consolidation balance sheet.

**PCSt.5** **Recording purchase of subsidiary in financial statements.** Hadfield Corporation purchases Whitney Corporation on January 1, Year 8. The balance sheets of the two companies appear in **Exhibit PCSt.13**.

**EXHIBIT PCSt.13** HADFIELD CORPORATION AND WHITNEY CORPORATION
Components of Separate Company Balance Sheets
for January 1, Year 8 (amounts in thousands) (PCSt.5)

| | Hadfield Corporation | Whitney Corporation |
|---|---|---|
| Assets | $2,000 | $1,500 |
| Liabilities | $ 800 | $ 700 |
| Common Stock ($1 par) | 100 | 100 |
| Additional Paid-in Capital | 400 | 300 |
| Retained Earnings | 700 | 400 |
| Total Equities | $2,000 | $1,500 |

Hadfield issues 50,000 shares of its common stock with a market value of $1,400,000 to the owners of McCoy in return for their 100,000 shares of McCoy Corporation common stock. The recorded assets of McCoy Corporation have a market value in excess of book value of $400,000, which Hadfield will amortize of five years. Hadfield attributes the excess of purchase price of fair value of identifiable net assets acquired to brand names and trade secrets, which it amortizes over ten years.

**a.** Prepare a consolidated balance sheet for Hadfield Corporation and Whitney Corporation on January 1, Year 8.

**b.** Income statements for Hadfield Corporation and Whitney Corporation for Year 8 before considering the effects of the merger appear below.

| | Hadfield Corporation | Whitney Corporation |
|---|---|---|
| Sales | $8,000,000 | $6,000,000 |
| Other Revenues | 100,000 | 25,000 |
| Total Revenues | $8,100,000 | $6,025,000 |
| Expenses Other Than Income Taxes | (6,300,000) | (4,825,000) |
| Pretax Income | $1,800,000 | $1,200,000 |
| Income Tax Expense | (720,000) | (480,000) |
| Net Income | $1,080,000 | $720,000 |

Make the following assumptions:

**(1)** The income tax rate for the consolidated firm is 40 percent.

**(2)** In calculations for tax returns, Hadfield Corporation cannot deduct, from taxable income, amortization of newly recorded asset costs arising from the purchase, neither the excess of identifiable assets over their old book values nor the cost of the brand names and trade secrets.

**(3)** Whitney Corporation declared no dividends.

Prepare a consolidated income statement for the first year following the merger.

**PCSt.6. Preparing consolidation work sheet entries when a minority interest exists.** Refer to the data for Parker Company and Baillie Company in **Exhibit PCSt.14**. Assume that Parker Company paid $35,000 for a 70 percent interest in Baillie Company on January 1 of the current year.

**EXHIBIT PCSt.14** PARKER COMPANY AND BAILLIE COMPANY
Balance Sheet & Statement of Income and Retained Earnings (Problem PCSt.6)

| Balance Sheets, December 31 of Current Year | Parker Company | Baillie Company |
|---|---|---|
| **ASSETS** | | |
| Cash | $ 26,800 | $ 6,000 |
| Accounts Receivable | 42,000 | 20,000 |
| Investment in Stock of Baillie Company (using equity method) | 39,200 | — |
| Other Assets | 143,000 | 85,000 |
| Total Assets | $251,000 | $111,000 |
| **EQUITIES** | | |
| Accounts Payable | $ 80,000 | $ 25,000 |
| Bonds Payable | 50,000 | 30,000 |
| Common Stock | 10,000 | 5,000 |
| Retained Earnings | 111,000 | 51,000 |
| Total Liabilities and Shareholders' Equity | $251,000 | $111,000 |
| **Statement of Income for Current Year and Retained Earnings for Beginning and End of Current Year** | | |
| Sales Revenue | $400,000 | $125,000 |
| Equity in Earnings of Valley Company | 7,000 | — |
| Cost of Goods Sold | (320,000) | (90,000) |
| Selling and Administrative Expenses | (44,000) | (20,000) |
| Income Tax Expense | (12,000) | (5,000) |
| Net Income | $ 31,000 | $ 10,000 |
| Less: Dividends | — | (4,000) |
| Retained Earnings, Beginning of Year | 80,000 | 45,000 |
| Retained Earnings, End of Year | $111,000 | $ 51,000 |

**a.** Give the consolidation work sheet entry to eliminate the investment account.
**b.** Give the consolidation work sheet entry to recognize the minority interest.

**PCSt.7. Income statement and operating cash flow effects of equity method contrasted with consolidation of less-than-wholly-owned subsidiary.** Company P owns 40 percent of the shares of Company E, which it accounts for on the equity method, and 90 percent of the shares of Company M, which it consolidates. For the year, both Company E and Company M had revenues of $400, expenses of $300 and paid dividends of $30. Aside from its investments in Company E and Company M, Company P had revenues of $1,600 and expenses of $900 for the year. All three companies have receipts equal to revenues and expenditures equal to expenses, so that for each company net income equals cash flow from operations.

Prepare Company P's consolidated income statement for the year and its consolidated cash flow from operations using the indirect method.