

CHAPTER 1

THE EQUITY METHOD OF ACCOUNTING FOR INVESTMENTS

Chapter Outline

- I. Three methods are principally used to account for an investment in equity securities along with a fair value option.
 - A. Fair value method: applied by an investor when only a small percentage of a company's voting stock is held.
 1. Income is recognized when the investee declares a dividend.
 2. Portfolios are reported at fair value. If fair values are unavailable, investment is reported at cost.
 - B. Consolidation: when one firm controls another (e.g., when a parent has a majority interest in the voting stock of a subsidiary or control through variable interests, their financial statements are consolidated and reported for the combined entity.
 - C. Equity method: applied when the investor has the ability to exercise significant influence over operating and financial policies of the investee.
 1. Ability to significantly influence investee is indicated by several factors including representation on the board of directors, participation in policy-making, etc.
 2. GAAP guidelines presume the equity method is applicable if 20 to 50 percent of the outstanding voting stock of the investee is held by the investor.

Current financial reporting standards allow firms to elect to use fair value for any new investment in equity shares including those where the equity method would otherwise apply. However, the option, once taken, is irrevocable. Investee dividends and changes in fair value over time are recognized as income.

On February 14, 2013, the FASB issued a Proposed Accounting Standards Update (ASU) entitled, Recognition and Measurement of Financial Assets and Financial Liabilities. The proposed ASU would eliminate the fair-value option for investments that qualify for equity method treatment. Fair-value accounting, however, would be extended to "equity method" investments that meet the criteria for classification as held for sale.

- II. Accounting for an investment: the equity method
 - A. The investment account is adjusted by the investor to reflect all changes in the equity of the investee company.
 - B. Income is accrued by the investor as soon as it is earned by the investee.
 - C. Dividends declared by the investee create a reduction in the carrying amount of the Investment account. The text assumes all investee dividends are declared and paid in the same reporting period.

- III. Special accounting procedures used in the application of the equity method
 - A. Reporting a change to the equity method when the ability to significantly influence an investee is achieved through a series of acquisitions.
 - 1. Initial purchase(s) will be accounted for by means of the fair value method (or at cost) until the ability to significantly influence is attained.
 - 2. At the point in time that the equity method becomes applicable, a retrospective adjustment is made by the investor to convert all previously reported figures to the equity method based on percentage of shares owned in those periods.
 - 3. This restatement establishes financial statement comparability across years.
 - B. Investee income from other than continuing operations
 - 1. The investor recognizes its share of investee reported other comprehensive income (OCI) through the investment account and the investor's own OCI.
 - 2. Income items such as extraordinary gains and losses and discontinued operations that are reported separately by the investee should be shown in the same manner by the investor. The materiality of these other investee income elements (as it affects the investor) continues to be a criterion for separate disclosure.
 - C. Investee losses
 - 1. Losses reported by the investee create corresponding losses for the investor.
 - 2. A permanent decline in the fair value of an investee's stock should be recognized immediately by the investor as an impairment loss.
 - 3. Investee losses can possibly reduce the carrying value of the investment account to a zero balance. At that point, the equity method ceases to be applicable and the fair-value method is subsequently used.
 - D. Reporting the sale of an equity investment
 - 1. The investor applies the equity method until the disposal date to establish a proper book value.
 - 2. Following the sale, the equity method continues to be appropriate if enough shares are still held to maintain the investor's ability to significantly influence the investee. If that ability has been lost, the fair-value method is subsequently used.
- IV. Excess investment cost over book value acquired
 - A. The price an investor pays for equity securities often differs significantly from the investee's underlying book value primarily because the historical cost based accounting model does not keep track of changes in a firm's fair value.
 - B. Payments made in excess of underlying book value can sometimes be identified with specific investee accounts such as inventory or equipment.
 - C. An extra acquisition price can also be assigned to anticipated benefits that are expected to be derived from the investment. In accounting, these amounts are presumed to reflect an intangible asset referred to as goodwill. Goodwill is calculated as any excess payment that is not attributable to specific assets and liabilities of the investee. Because goodwill is an indefinite-lived asset, it is not amortized.
- V. Deferral of unrealized gross profit in inventory
 - A. Profits derived from intra-entity transactions are not considered completely earned until the transferred goods are either consumed or resold to unrelated parties.

- B. Downstream sales of inventory
 1. "Downstream" refers to transfers made by the investor to the investee.
 2. Intra-entity gross profits from sales are initially deferred under the equity method and then recognized as income at the time of the inventory's eventual disposal.
 3. The amount of gross profit to be deferred is the investor's ownership percentage multiplied by the markup on the merchandise remaining at the end of the year.
- C. Upstream sales of inventory
 1. "Upstream" refers to transfers made by the investee to the investor.
 2. Under the equity method, the deferral process for unrealized profits is identical for upstream and downstream transfers. The procedures are separately identified in Chapter One because the handling does vary within the consolidation process.

Answers to Discussion Questions

The textbook includes discussion questions to stimulate student thought and discussion. These questions are also designed to allow students to consider relevant issues that might otherwise be overlooked. Some of these questions may be addressed by the instructor in class to motivate student discussion. Students should be encouraged to begin by defining the issue(s) in each case. Next, authoritative accounting literature (FASB ASC) or other relevant literature can be consulted as a preliminary step in arriving at logical actions. Frequently, the FASB Accounting Standards Codification will provide the necessary support.

Unfortunately, in accounting, definitive resolutions to financial reporting questions are not always available. Students often seem to believe that all accounting issues have been resolved in the past so that accounting education is only a matter of learning to apply historically prescribed procedures. However, in actual practice, the only real answer is often the one that provides the fairest representation of the a firm's transactions. If an authoritative solution is not available, students should be directed to list all of the issues involved and the consequences of possible alternative actions. The various factors presented can be weighed to produce a viable solution.

The discussion questions are designed to help students develop research and critical thinking skills in addressing issues that go beyond the purely mechanical elements of accounting.

Did the Cost Method Invite Manipulation?

The cost method of accounting for investments often caused a lack of objectivity in reported income figures. With a large block of the investee's voting shares, an investor could influence the amount and timing of the investee's dividend declarations. Thus, when enjoying a good earnings year, an investor might influence the investee to withhold declaring a dividend until needed in a subsequent year. Alternatively, if the investor judged that its current year earnings "needed a boost," it might influence the investee to declare a current year dividend. The equity method effectively removes managers' ability to increase current income (or defer income to future periods) through their influence over the timing and amounts of investee dividend declarations.

At first glance it may seem that the fair value method allows managers to manipulate income because investee dividends are recorded as income by the investor. However, dividends paid typically are accompanied by a decrease in fair value (also recognized in income), thus leaving reported net income unaffected.

Does the Equity Method Really Apply Here?

The discussion in the case between the two accountants is limited to the reason for the investment acquisition and the current percentage of ownership. Instead, they should be examining the actual interaction that currently exists between the two companies. Although the ability to exercise significant influence over operating and financial policies appears to be a rather vague criterion, ASC 323 "Investments—Equity Method and Joint Ventures," clearly specifies actual events that indicate this level of authority (paragraph 323-10-15-6):

Ability to exercise that influence may be indicated in several ways, such as representation on the board of directors, participation in policy-making processes, material intra-entity transactions, interchange of managerial personnel, or technological dependency. Another important consideration is the extent of ownership by an investor in relation to the concentration of other shareholdings, but substantial or majority ownership of the voting stock of an investee company by another investor does not necessarily preclude the ability to exercise significant influence by the investor.

In this case, the accountants would be wise to determine whether Dennis Bostitch or any other member of the Highland Laboratories administration is participating in the management of Abraham, Inc. If any individual from Highland's organization is on Abraham's board of directors or is participating in management decisions, the equity method would seem to be appropriate. Likewise, if significant transactions have occurred between the companies (such as loans by Highland to Abraham), the ability to apply significant influence becomes much more evident.

However, if James Abraham continues to operate Abraham, Inc., with little or no regard for Highland, the equity method should not be applied. This possibility seems especially likely in this case since one stockholder, James Abraham, continues to hold a majority (2/3) of the voting stock. Thus, evidence of the ability to apply significant influence must be present before the equity method is viewed as applicable. The mere holding of 1/3 of the stock is not conclusive.

Answers to Questions

1. The equity method should be applied if the ability to exercise significant influence over the operating and financial policies of the investee has been achieved by the investor. However, if actual control has been established, consolidating the financial information of the two companies will normally be the appropriate method for reporting the investment.
2. According to FASB ASC paragraph 323-10-15-6 "Ability to exercise that influence may be indicated in several ways, such as representation on the board of directors, participation in policy-making processes, material intra-entity transactions, interchange of managerial personnel, or technological dependency. Another important consideration is the extent of ownership by an investor in relation to the extent of ownership of other shareholdings." The most objective of the criteria established by the Board is that holding (either directly or indirectly) 20 percent or more of the outstanding voting stock is *presumed* to constitute the ability to hold significant influence over the decision-making process of the investee.
3. The dividends are reported as a deduction from the investment account, not revenue, to avoid reporting the income from the investee twice. The equity method is appropriate when an investor has the ability to exercise significant influence over the operating and financing decisions of an investee. Because dividends represent financing decisions, the investor may have the ability to influence dividend timing. If dividends were recorded as income, managers could affect reported income in a way that does not reflect actual performance. Therefore, in reflecting the close relationship between the investor and investee, the equity method employs accrual accounting to record income as it is earned by the investee. The investment account is increased for the investee's earned income and then decreased as the income is distributed, through dividends. From the investor's view, the decrease in the investment asset (from investee dividends) is offset by an immediate increase in dividends receivable and an eventual increase in cash.
4. If Jones cannot significantly influence the operating and financial policies of Sandridge, the equity method should not be applied regardless of the ownership level. However, an owner of 25 percent of a company's outstanding voting stock is assumed to possess this ability. This presumption stands until overcome by predominant evidence to the contrary.

Examples of indications that an investor may be unable to exercise significant influence over the operating and financial policies of an investee include (ASC 323-10-15-10):

- a. Opposition by the investee, such as litigation or complaints to governmental regulatory authorities, challenges the investor's ability to exercise significant influence.
 - b. The investor and investee sign an agreement under which the investor surrenders significant rights as a shareholder.
 - c. Majority ownership of the investee is concentrated among a small group of shareholders who operate the investee without regard to the views of the investor.
 - d. The investor needs or wants more financial information to apply the equity method than is available to the investee's other shareholders (for example, the investor wants quarterly financial information from an investee that publicly reports only annually), tries to obtain that information, and fails.
 - e. The investor tries and fails to obtain representation on the investee's board of directors.
5. The following events necessitate changes in this investment account.
 - a. Net income earned by Watts would be reflected by an increase in the investment balance whereas a reported loss is shown as a reduction to that same account.

- b. Dividends declared by the investee decrease its book value, thus requiring a corresponding reduction to be recorded in the investment balance.
 - c. If, in the initial acquisition price, Smith paid extra amounts because specific investee assets and liabilities had values differing from their book values, amortization of this portion of the investment account is subsequently required. As an exception, if the specific asset is land or goodwill, amortization is not appropriate.
 - d. Intra-entity gross profits created by sales between the investor and the investee must be deferred until earned through usage or resale to outside parties. The initial deferral entry made by the investor reduces the investment balance while the eventual recognition of the gross profit increases this account.
6. The equity method has been criticized because it allows the investor to recognize income that may not be received in any usable form during the foreseeable future. Income is being accrued based on the investee's reported earnings, not on the investor's share of investee dividends. Frequently, equity income will exceed the investor's share of investee cash dividends with no assurance that the difference will ever be forthcoming.

Many companies have contractual provisions (e.g., debt covenants, managerial compensation contracts) based on ratios in the main body of the financial statements. Relative to consolidation, a firm employing the equity method will report smaller values for assets and liabilities. Consequently, higher rates of return for its assets and sales, as well as lower debt-to-equity ratios may result. Meeting such contractual provisions of may provide managers incentives to maintain technical eligibility for the equity method rather than full consolidation.

7. FASB ASC Topic 323 requires that a change to the equity method be reflected by a retrospective adjustment. Although a different method may have been appropriate for the original investment, comparable balances will not be readily apparent if the equity method is now applied. For this reason, financial figures from all previous years presented are restated as *if* the equity method had been applied consistently since the date of initial acquisition.
8. In reporting equity earnings for the current year, Riggins must separate its accrual into two components: (1) net income and (2) other comprehensive income or loss. This handling enables the reader of the investor's financial statements to assess the nature of the change to the investment account.
9. Under the equity method, losses are recognized by an investor at the time that they are reported by the investee. However, because of the conservatism inherent in accounting, any permanent losses in value should also be recorded immediately. Because the investee's stock has suffered a permanent impairment in this question, the investor recognizes the loss applicable to its investment.
10. Following the guidelines established by the ASC, Wilson would recognize an equity loss of \$120,000 (40 percent) stemming from Andrews' reported loss. However, since the book value of this investment is only \$100,000, Wilson's loss is limited to that amount with the remaining \$20,000 being omitted. Subsequent income will be recorded by the investor based on investee dividends. If Andrews is ever able to generate sufficient future profits to offset the total unrecognized losses, the investor will revert to the equity method.
11. In accounting, goodwill is derived as a residual figure. It is the investor's cost in excess of its share of the fair value of the investee assets and liabilities. Although a portion of the acquisition price may represent either goodwill or valuation adjustments to specific investee

assets and liabilities, the investor records the entire cost in a single investment account. No separate identification of the cost components is made in the reporting process. Subsequently, the cost figures attributed to specific accounts (having a limited life), besides goodwill and other indefinite life assets, are amortized based on their anticipated lives. This amortization reduces the investment and the accrued income in future years.

12. On June 19, Princeton removes the portion of this investment account that has been sold and recognizes the resulting gross profit or loss. For proper valuation purposes, the equity method is applied (based on the 40 percent ownership) from the beginning of Princeton's fiscal year until June 19. Princeton's method of accounting for any remaining shares after June 19 will depend upon the degree of influence that is retained. If Princeton still has the ability to significantly influence the operating and financial policies of Yale, the equity method continues to be appropriate based on the reduced percentage of ownership. Conversely, if Princeton no longer holds this ability, the fair-value method becomes applicable, based on the remaining equity value after the sale.
13. Downstream sales are made by the investor to the investee while upstream sales are from the investee to the investor. These titles have been derived from the traditional positions given to the two parties when presented on an organization-type chart. Under the equity method, no accounting distinction is actually drawn between downstream and upstream sales. Separate presentation is made in this chapter only because the distinction does become significant in the consolidation process as will be demonstrated in Chapter Five.
14. The unrealized portion of an intra-entity gross profit is computed based on the markup on any transferred inventory retained by the buyer at year's end. The markup percentage (based on sales price) multiplied by the intra-entity ending inventory gives the seller's profit remaining in the buyer's ending inventory. The product of the ownership percentage and this profit figure is the unrealized gross profit from the intra-entity transaction. This profit is deferred in the recognition of equity earnings until subsequently earned through use or resale to an unrelated party.
15. Intra-entity transfers do not affect the financial reporting of the investee except that the related party transactions must be appropriately disclosed and labeled.
16. Under fair value accounting, firms report the investment's fair value as an asset and changes in fair value as earnings. Dividends from an investee are included in earnings under the fair value accounting. Dividends are not recognized in income but instead reduce the investment account under the equity method. Also, under the equity method, firms recognize their ownership share of investee profits adjusted for excess cost amortizations and intra-entity profits.

Answers to Problems

1. D

2. B

3. C

4. B

5. D

6. A Acquisition price	\$1,600,000
Equity income (\$560,000 × 40%)	224,000
Dividends (50,000 shares × \$2.00).....	<u>(100,000)</u>
Investment in Harrison Corporation as of December 31.....	<u>\$1,724,000</u>

7. A Acquisition price	\$700,000
Income accruals: 2014—\$170,000 × 20%.....	34,000
2015—\$210,000 × 20%	42,000
Amortization (see below): 2014.....	(10,000)
Amortization: 2015	(10,000)
Dividends: 2014—\$70,000 × 20%	(14,000)
2015—\$70,000 × 20%.....	<u>(14,000)</u>
Investment in Martes, December 31, 2015.....	<u>\$728,000</u>

Acquisition price of Martes.....	\$700,000
Acquired net assets (book value) (\$3,000,000 × 20%)	<u>(600,000)</u>
Excess cost over book value to patent	<u>\$100,000</u>
Annual amortization (10 year remaining life)	<u>\$10,000</u>

8. B Purchase price of Johnson stock	\$500,000
Book value of Johnson (\$900,000 × 40%).....	<u>(360,000)</u>
Cost in excess of book value	\$140,000

		<i>Remaining</i>	<i>Annual</i>
		<i>life</i>	<i>amortization</i>
Payment identified with undervalued			
Building (\$140,000 × 40%)	56,000	7 yrs.	\$8,000
Trademark (\$210,000 × 40%)	<u>84,000</u>	10 yrs.	<u>8,400</u>
Total	\$ -0-		<u>\$16,400</u>

Investment purchase price	\$500,000
Basic income accrual (\$90,000 × 40%)	36,000
Amortization (above).....	(16,400)
Dividends declared (\$30,000 × 40%)	<u>(12,000)</u>
Investment in Johnson.....	<u>\$507,600</u>

9. D The 2014 purchase is reported using the equity method.

Purchase price of Evan stock.....	\$600,000
Book value of Evan stock (\$1,200,000 × 40%).....	(480,000)
Goodwill	\$120,000
Life of goodwill	<u>indefinite</u>
Annual amortization	<u>(-0-)</u>
Cost on January 1, 2014	\$600,000
2014 Income accrued (\$140,000 × 40%).....	56,000
2014 Dividend (\$50,000 × 40%).....	(20,000)
2015 Income accrued (\$140,000 × 40%).....	56,000
2015 Dividend (\$50,000 × 40%).....	(20,000)
2016 Income accrued (\$140,000 × 40%).....	56,000
2016 Dividend (\$50,000 × 40%).....	<u>(20,000)</u>
Investment in Evan, 12/31/16.....	<u>\$708,000</u>

10. D

11. A Gross profit rate (GPR): $\$36,000 \div \$90,000 = 40\%$

Inventory remaining at year-end	\$20,000
GPR.....	<u>× 40%</u>
Unrealized gross profit	\$8,000
Ownership	<u>× 30%</u>
Intra-entity gross profit—deferred	<u>\$ 2,400</u>

12.B Purchase price of Steinbart shares	\$530,000
Book value of Steinbart shares (\$1,200,000 × 40%).....	<u>(480,000)</u>
Trade name	\$ 50,000
Remaining life of trade name.....	<u>20 years</u>
Annual amortization	<u>\$ 2,500</u>
2014 Gross profit rate = \$30,000 ÷ \$100,000 = 30%	
2015 Gross profit rate = \$54,000 ÷ \$150,000 = 36%	
2015—Equity income in Steinbart:	
Income accrual (\$110,000 × 40%).....	\$44,000
Amortization (above).....	(2,500)
Recognition of 2014 unrealized gross profit	
(\$25,000 × 30% GPR × 40% ownership).....	3,000
Deferral of 2015 unrealized gross profit	
(\$45,000 × 36% GPR × 40% ownership).....	<u>(6,480)</u>
Equity income in Steinbart—2015	<u>\$38,020</u>

13. (6 minutes) (Investment account after one year)	
Purchase price.....	\$1,160,000
Basic 2015 equity accrual (\$260,000 × 40%)	104,000
Amortization of copyright:	
Excess payment (\$1,160,000 – \$820,000 = \$340,000)	
to copyright allocated over 10 year remaining life	(34,000)
Dividends (50,000 × 40%).....	<u>(20,000)</u>
Investment account balance at year end.....	<u>\$1,210,000</u>

14. (7 minutes)	
a. Purchase price.....	\$ 2,290,000
Equity income accrual (\$720,000 × 35%).....	252,000
Other comprehensive loss accrual (\$100,000 × 35%).....	(35,000)
Dividends (20,000 × 35%).....	<u>(7,000)</u>
Investment in Steel at December 31, 2015	<u>\$2,500,000</u>

b. Equity income of Steel = \$252,000 (does not include OCI share which is reported separately).

15. (15 minutes) (Investment account after 2 years)

a. Acquisition price	\$2,700,000
Book value acquired ($\$5,175,000 \times 20\%$)	<u>1,035,000</u>
Excess payment	\$1,665,000
Excess fair value: Computing equipment ($\$700,000 \times 20\%$)	140,000
Excess fair value: Patented technology ($\$3,900,000 \times 20\%$)	780,000
Excess fair value: Trademark ($\$1,850,000 \times 20\%$)	<u>370,000</u>
Goodwill	<u>\$ 375,000</u>
Amortization:	
Computing equipment ($\$140,000 \div 7$)	\$ 20,000
Patented technology ($\$780,000 \div 3$)	260,000
Trademark (indefinite)	-0-
Goodwill (indefinite)	<u>-0-</u>
Annual amortization	<u>\$280,000</u>
b. Basic equity accrual 2014 ($\$1,800,000 \times 20\%$)	\$360,000
Amortization—2014 (above)	<u>(280,000)</u>
Equity in 2014 earnings of Sauk Trail	<u>\$ 80,000</u>
Basic equity accrual 2015 ($\$1,985,000 \times 20\%$)	\$397,000
Amortization—2015 (above)	<u>(280,000)</u>
Equity in 2015 earnings of Sauk Trail	<u>\$117,000</u>
c. Acquisition price	\$2,700,000
Equity in 2014 earnings of Sauk Trail (above)	80,000
Dividends—2014 ($\$150,000 \times 20\%$)	<u>(30,000)</u>
Investment in Sauk Trail, 12/31/14	<u>\$2,750,000</u>
Investment in Sauk Trail, 12/31/14	\$2,750,000
Equity in 2015 earnings of Sauk Trail (above)	\$117,000
Dividends—2015 ($\$160,000 \times 20\%$)	<u>(32,000)</u>
Investment in Sauk Trail, 12/31/15	<u>\$2,835,000</u>

16. (10 minutes) (Investment account after 2 years with fair value accounting included)

a. Acquisition price	\$60,000
Book value—assets minus liabilities (\$125,000 × 40%)	<u>50,000</u>
Excess payment	\$10,000
Value of patent in excess of book value (\$15,000 × 40%)	<u>6,000</u>
Goodwill	<u>\$ 4,000</u>
Amortization:	
Patent (\$6,000 ÷ 6).....	\$1,000
Goodwill.....	<u>-0-</u>
Annual amortization	<u>\$1,000</u>
Acquisition price	\$60,000
Basic equity accrual 2014 (\$30,000 × 40%)	12,000
Dividends—2014 (\$10,000 × 40%)	(4,000)
Amortization—2014 (above)	<u>(1,000)</u>
Investment in Holister, 12/31/14	\$67,000
Basic equity accrual —2015 (\$50,000 × 40%).....	20,000
Dividends—2015.....	(6,000)
Amortization—2015 (above)	<u>(1,000)</u>
Investment in Holister, 12/31/15	<u>\$80,000</u>
b. Dividend income (\$15,000 × 40%)	\$6,000
Increase in fair value (\$75,000 – \$68,000).....	<u>7,000</u>
Investment income under fair value accounting—2015.....	<u>\$13,000</u>

17. (10 minutes) (Equity entries for one year, includes intra-entity transfers but no unearned gross profit)

Purchase price of Burks stock.....	\$210,000
Book value of Burks stock (\$360,000 × 40%)	<u>(144,000)</u>
Unidentified asset (goodwill).....	\$ 66,000
Life	indefinite
Annual amortization	<u>\$ -0-</u>

No unearned intra-entity profit exists at year's end because all of the transferred merchandise was used during the period.

17. (continued)

Investment in Burks, Inc.	210,000	
Cash (or a Liability)		210,000
To record acquisition of a 40 percent interest in Burks.		
 Investment in Burks, Inc.	 32,000	
Equity in Investee Income		32,000
To recognize 40 percent income earned during period by Burks, an equity method investment.		
 Dividend Receivable.....	 10,000	
Investment in Burks, Inc.....		10,000
To record investee dividend declaration.		
 Cash.....	 10,000	
Dividend Receivable.		10,000
To record collection of dividend from investee.		

18. (20 Minutes) (Equity entries for one year, includes conversion to equity method)

The 2014 purchase must be restated to the equity method.

FIRST PURCHASE—JANUARY 1, 2014

Purchase price of McKenzie stock.....	\$210,000
Book value of McKenzie stock (\$1,700,000 × 10%).....	<u>(170,000)</u>
Cost in excess of book value	\$40,000
Excess cost assigned to undervalued land (\$100,000 × 10%).....	<u>(10,000)</u>
Trademark	\$30,000
Remaining life of trademark	<u>10 years</u>
Annual amortization	<u>\$ 3,000</u>

BOOK VALUE—MCKENZIE—JANUARY 1, 2015 (before second purchase)

January 1, 2014 book value (given)	\$1,700,000
2014 Net income	240,000
2014 Dividends	<u>(90,000)</u>
January 1, 2015 book value	<u>\$1,850,000</u>

18. (continued)

SECOND PURCHASE—JANUARY 1, 2015

Purchase price of McKenzie stock.....	\$600,000
Book value of McKenzie stock (above) (\$1,850,000 × 30%)	<u>(555,000)</u>
Cost in excess of book value	\$45,000
Excess cost assigned to undervalued land (\$120,000 × 30%).....	<u>(36,000)</u>
Trademark	\$ 9,000
Remaining life of Trademark	<u>9 years</u>
Annual Amortization	<u>\$ 1,000</u>

Journal Entries:

To record second acquisition of McKenzie stock.

Investment in McKenzie	600,000	
Cash		600,000

Investment in McKenzie	12,000	
Retained Earnings—Prior Period Adjustment— 2014 Equity Income.....		12,000

To restate reported figures for 2014 to the equity method. Reported income is \$24,000 (10% of McKenzie’s income) less \$3,000 (amortization on first purchase) = \$21,000. Originally, Austin reported \$9,000 (10% of the dividends). The adjustment increases the \$9,000 to \$21,000 for 2014.

Investment in McKenzie	120,000	
Equity Income—Investment in McKenzie.....		120,000

To record income for the year: 40% of the \$300,000 reported income.

Dividend Receivable.....	44,000	
Investment in McKenzie.....		44,000

To record dividend declaration from McKenzie (40% of \$110,000).

Cash.....	44,000	
Dividend Receivable.		44,000

To record collection of dividend from investee.

Equity Income—Investment in McKenzie	4,000	
Investment in McKenzie.....		4,000

To record 2015 amortization: \$3,000 for first purchase, \$1,000 for second.

19. (7 minutes) (Deferral of unrealized gross profit)

Ending inventory (\$225,000 – \$105,000)	\$120,000
Gross profit percentage (GP \$75,000 ÷ Sales \$225,000).....	<u>× 33⅓%</u>
Unrealized gross profit.....	\$40,000
Ownership	<u>× 25%</u>
Intra-entity unrealized gross profit—deferred	<u>\$10,000</u>

Entry to Defer Unrealized Gross Profit:

Equity Income from Schilling	10,000	
Investment in Schilling		10,000

20. (10 minutes) (Reporting of equity income and transfers)

a. Equity in investee income:

Equity income accrual (\$100,000 × 25%).....	\$25,000
Less: deferral of intra-entity unrealized gross profit (below)	(3,000)
Less: patent amortization (given)	<u>(10,000)</u>
Equity in investee income.....	<u>\$12,000</u>

Deferral of intra-entity unrealized gross profit:

Remaining inventory—end of year.....	\$32,000
Gross profit percentage (GP \$30,000 ÷ Sales \$80,000).....	<u>× 37½%</u>
Profit within remaining inventory	\$12,000
Ownership percentage	<u>× 25%</u>
Intra-entity unrealized gross profit	<u>\$ 3,000</u>

b. In 2015, the deferral of \$3,000 will likely become realized by BuyCo’s use or sale of this inventory. Thus, the equity accrual for 2015 will be increased by \$3,000 in that year. Recognition of this amount is simply being delayed from 2014 until 2015, the year actually earned.

c. The direction (upstream versus downstream) of the intra-entity transfer does not affect the above answers. However as discussed in Chapter Five, a controlling interest calls for a 100% gross profit deferral for downstream intra-entity transfers. In the presence of only signification influence, however, equity method accounting is identical regardless of whether an intra-entity transfer is upstream or downstream.

21. (25 minutes) (Conversion from fair-value method to equity method with a subsequent sale of a portion of the investment)

Equity method income accrual for 2015	
30 percent of \$644,000 for ½ year =	\$ 96,600
24 percent of \$644,000 for ½ year =	<u>77,280</u>
Total income accrual (no amort. or unearned gross profit)	\$173,880
Gain on sale (below)	<u>31,000</u>
Total income statement effect – 2015	<u>\$204,880</u>

Gain on sale of 9,000 shares of Marion:

Cost of initial acquisition—2013	\$435,000
10% income accrual (conversion made to equity method).....	35,900
10% of dividends	(10,700)
Cost of second acquisition—2014	1,000,000
30% income accrual—2014.....	150,300
30% of dividends—2014.....	(39,750)
30% income accrual for ½ year—2015.....	96,600
30% of dividends for ½ year—2015.....	<u>(22,350)</u>
 Book value of 45,000 shares on July 1, 2015	<u>\$1,645,000</u>
Cash proceeds from the sale: 9,000 shares × \$40	\$360,000
Less: book value of shares sold: \$1,645,000 × (9,000 ÷ 45,000) ..	<u>329,000</u>
 Gain on sale	<u>\$ 31,000</u>

22. (25 minutes) (Verbal overview of equity method, includes conversion to equity method)

- a. In 2014, the fair-value method (available-for-sale security) was appropriate. Thus, the only income recognized was the dividends declared. Collins should originally have reported dividend income equal to 10 percent of Merton’s dividends.

- b. The assumption is that Collins’ level of ownership now provides the company with the ability to exercise significant influence over the operating and financial policies of Merton. Factors that indicate such a level of influence are described in the textbook and include representation on the investee’s board of directors, material intra-entity transactions, and interchange of managerial personnel.

22. (continued)

- c. Despite holding 25 percent of Merton's outstanding stock, application of the equity method is inappropriate absent the ability to apply significant influence. Factors that indicate a lack of such influence include: an agreement whereby the owner surrenders significant rights, a concentration of the remaining ownership, and failure to gain representation on the board of directors.**

- d. The equity method attempts to reflect the relationship between the investor and the investee in two ways. First, the investor recognizes investment income as soon as it is earned by the investee. Second, the Investment account reported by the investor is increased and decreased to indicate changes in the underlying book value of the investee.**

- e. Criticisms of the equity method include**
 - its emphasis on the 20-50% of voting stock in determining significant influence vs. control**
 - allowing off-balance sheet financing**
 - potential biasing of performance ratios**

Relative to consolidation, the equity method will report smaller amounts for assets, liabilities, revenues and expenses. However, income is typically the same as reported under consolidation. Therefore, companies that use the equity method, and avoid consolidation, often show enhanced debt-to-equity ratios, as well as ratios for returns on assets and sales.

- f. When an investor buys enough additional shares to gain the ability to exert significant influence, accounting for any shares previously owned must be adjusted to the equity method on a retrospective basis. Thus, in this case, the 10 percent interest held by Collins in 2014 must now be reported using the equity method. In this manner, the 2014 statements will be more comparable with those of 2015 and future years.**

- g. The price paid for each purchase is first compared to the equivalent book value on the date of acquisition. Any excess payment is then assigned to specific assets and liabilities based on differences between book value and fair value. If any residual amount of the purchase price remains unexplained, it is assigned to goodwill.**

22. (continued)

- h. Investee dividends reduce its book value. Because the investor's Investment account tracks the investee's book value, Collins records the dividend as a reduction in its Investment account. This method of recording also avoids double-counting of the revenue since the investor has already recorded the amount when earned by the investee. Under the equity method, revenues are recognized when earned by the investee but not through dividends as a distribution of the same earnings.**
- i. The Investment account will show the costs to obtain ownership of Merton. In addition, an equity accrual equal to 10 percent of the investee's income for 2014 and 25 percent for 2015 is included. The investment balance will be reduced by 10 percent of any of Merton's dividends during 2014 and 25 percent for 2015 dividends. Finally, the Investment account will be decreased by any amortization expense for both 2014 and 2015.**

23. (20 minutes) (Verbal overview of intra-entity transfers and their impact on application of the equity method)

- a. An upstream transfer goes from investee to investor whereas a downstream transfer is made by the investor to the investee.**
- b. The direction of an intra-entity transfer has no impact on reporting when the equity method is applied. The direction of the transfers was introduced in Chapter One because it does have an important impact on consolidation accounting as explained in Chapter Five.**
- c. To determine the intra-entity unrealized gross profit when applying the equity method, the transferred inventory that remains at year's end is multiplied by the gross profit percentage. This computation derives the unrealized gross profit. The intra-entity portion of this gross profit is found by multiplying it by the percentage of the investee that is owned by the investor.**
- d. Parrot, as the investor, will accrue 42 percent of the income reported by Sunrise. However, this equity income will then be reduced by the amount of the unrealized intra-entity gross profit. These amounts can be combined and recorded as a single entry, increasing both the Investment account and an Equity Income account. As an alternative, separate entries can be made. The equity accrual is added to these two accounts while the deferral of the unrealized gross profit serves as a reduction.**

23. (continued)

- e. In the second year, Parrot again records an equity accrual for 42 percent of the income reported by Sunrise. The intra-entity portion of the unrealized gross profit created by the transfers for that year are delayed in the same manner as for 2014 in (d) above. However, for 2015, the gross profit deferred from 2014 must now be recognized. This transferred merchandise was sold during this second year so that the earnings process has now been culminated.**
- f. If none of the transferred merchandise remains at year-end, the intra-entity transactions create no impact on the recording of the investment when applying the equity method. No gross profit remains unrealized.**
- g. The intra-entity transfers create no direct effects for Sunrise, the investee. However, as related party transactions, the amounts, as well as the relationship, must be properly disclosed and labeled.**

24. (15 minutes) (Verbal overview of the sale of a portion of an investment being reported on the equity method and the accounting for any shares that remain)

- a. The equity method must be applied up to the date of the sale. Therefore, for the current year until August 1, Einstein records an equity accrual recognizing 40 percent of Brooks' reported income for that period. In addition, Einstein records any dividends declared by Brooks as a reduction in the carrying amount of the investment account. Finally, amortization of acquisition-date excess fair over book values are recorded through August 1. These entries establish an appropriate book value as of the date of sale. Then, an amount of that book value equal to the portion of the shares sold is removed to compute a gain or loss on sale.**
- b. Subsequent accounting for the remaining shares depends on the influence retained post-sale. If Einstein maintains the ability to apply significant influence to the operating and financial decisions of Brooks, the equity method is still applicable based on the smaller new ownership percentage. However, if significant influence has been lost, Einstein should report the remaining shares by means of the fair-value method.**
- c. In this situation, three figures would be reported by Einstein. First, an equity income balance is recorded that includes both the accrual and amortization prior to August 1. Second, a gain or loss should be shown for the sale of the shares. Third, any investee dividends declared after August 1 must be included in Einstein's income statement as dividend revenue.**

24. (continued)

- d. No, the ability to apply significant influence to the investee was present prior to August 1 so that the equity method was appropriate. No change is made in those figures. However, after the sale, the remaining investment must be accounted for by means of the fair-value method.

25. (12 minutes) (Equity balances for one year includes intra-entity transfers)

a. Equity income accrual—2015 ($\$90,000 \times 30\%$)	\$27,000
Amortization—2015 (given)	(9,000)
Intra-entity profit recognized on 2014 transfer*	1,200
Intra-entity profit deferred on 2015 transfer**	<u>(2,640)</u>
Equity income recognized by Matthew in 2015	<u>\$16,560</u>
*Gross profit rate (GPR) on 2014 transfer ($\$16,000/\$40,000$)...	<u>40%</u>
Unrealized gross profit:	
Remaining inventory ($40,000 \times 25\%$)	\$10,000
GPR (above)	x 40%
Ownership percentage	<u>x 30%</u>
Intra-entity profit deferred from 2014 until 2015	<u>\$ 1,200</u>
**GPR on 2015 transfer ($\$22,000/\$50,000$)	<u>44%</u>
Unrealized gross profit:	
Remaining inventory ($50,000 \times 40\%$)	\$20,000
GPR (above)	x 44%
Ownership percentage	<u>x 30%</u>
Intra-entity profit deferred from 2015 until 2016	<u>\$ 2,640</u>
b. Investment in Lindman, 1/1/15	\$335,000
Equity income—2015 (see [a] above)	16,560
Dividends—2015 ($\$30,000 \times 30\%$)	<u>(9,000)</u>
Investment in Lindman, 12/31/15	<u>\$342,560</u>

26. (20 Minutes) (Equity method balances after conversion to equity method. Must determine investee's book value)

Part a

1. Allocation and annual amortization—first purchase 1/1/2014

Purchase price of 15 percent interest	\$62,000
Net book value (\$280,000 × 15%)	<u>(42,000)</u>
Franchise agreements	\$20,000
Remaining life of franchise agreements	÷ <u>10 years</u>
Annual amortization	<u>\$ 2,000</u>

Allocation and annual amortization—second purchase 1/1/2015

Purchase price of 10 percent interest	\$43,800
Net book value \$280,000 + \$80,000 - \$30,000 = \$330,000. (\$330,000 × 10%).....	<u>(33,000)</u>
Franchise agreements	\$10,800
Remaining life of franchise agreements	÷ <u>9 years</u>
Annual amortization	<u>\$ 1,200</u>

Investment in Bellevue account

January 1, 2014 purchase.....	\$62,000
2014 basic equity income accrual (\$80,000 × 15%).....	12,000
2014 amortization on first purchase (above)	(2,000)
2014 dividends (\$30,000 × 15%).....	<u>(4,500)</u>
Equity method balance 12/31/2014	\$67,500
January 1, 2015 purchase.....	43,800
2015 basic equity income accrual (\$100,000 × 25%).....	25,000
2015 amortization on first purchase (above)	(2,000)
2015 amortization on second purchase (above)	(1,200)
2015 dividends (\$40,000 × 25%).....	<u>(10,000)</u>
Investment in Bellevue—December 31, 2015	<u>\$123,100</u>

2. Equity Income—2015

2015 basic equity income accrual (\$100,000 × 25%).....	\$25,000
2015 amortization on first purchase (above)	(2,000)
2015 amortization on second purchase (above)	<u>(1,200)</u>
Equity income—2015.....	<u>\$21,800</u>

26. (continued)

3. The January 1, 2015 retrospective adjustments to convert the Investment in Bellevue to the equity method is as follows:

Unrealized Holding Gain—Shareholders' Equity	3,700
Fair Value Adjustment (Available-for-Sale Securities)	3,700
To eliminate AFS fair value adjustment account balances for the investment in Bellevue (15% × \$438,000 = \$65,700 less \$62,000 = \$3,700)	
Investment in Bellevue	5,500
Retained Earnings (January 1, 2015)	5,500
Retrospective adjustment to retained earnings to record 2014 equity method income for 15% investment (15% × \$80,000 less \$2,000 excess amortization less \$4,500 dividend income recognized in 2014). [Alternative: Equity method balance of investment \$67,500 less cost \$62,000 = \$5,500.]	

Part b

1. Investment in Bellevue (25% × 468,000)	<u>\$117,000</u>
2. Dividend income (25% × 40,000)	\$10,000
Increase in fair value (25% × [\$468,000 - \$438,000])	<u>7,500</u>
Reported income from Investment in Bellevue	<u>\$17,500</u>

27. (30 minutes) (Conversion to equity method, sale of investment, and unrealized gross profit)

Part a

Allocation and annual amortization—first purchase

Purchase price of 10 percent interest	\$92,000
Net book value (\$800,000 × 10%)	<u>(80,000)</u>
Copyright	\$12,000
Remaining life of Copyright.....	<u>÷ 16 yrs</u>
Annual Amortization	<u>\$ 750</u>

27. Part a (continued)

Allocation and annual amortization—second purchase	
Purchase price of 20 percent interest	\$210,000
Net book value (\$800,000 is increased by \$180,000 income but decreased by \$80,000 in dividends) (\$900,000 × 20%)	<u>(180,000)</u>
Copyright	\$30,000
Remaining life of copyright	÷ <u>15 years</u>
Annual amortization	<u>\$ 2,000</u>
 Equity income—2013 (after conversion to establish comparability)	
2013 basic equity income accrual (\$180,000 × 10%)	\$18,000
2013 amortization on first purchase (above).....	<u>(750)</u>
Equity income—2013	<u>\$17,250</u>
 Equity income 2014	
2014 basic equity income accrual (\$210,000 × 30%).....	\$63,000
2014 amortization on first purchase (above)	(750)
2014 amortization on second purchase (above)	<u>(2,000)</u>
Equity income 2014	<u>\$60,250</u>
 Part b	
Investment in Barringer	
Purchase price—January 1, 2013.....	\$92,000
2013 equity income (above)	17,250
2013 dividends (\$80,000 × 10%).....	(8,000)
Purchase price January 1, 2014	210,000
2014 equity income (above)	60,250
2014 dividends (\$100,000 × 30%).....	(30,000)
2015 basic equity income accrual (\$230,000 × 30%).....	69,000
2015 amortization on first purchase (above)	(750)
2015 amortization on second purchase (above)	(2,000)
2015 dividends (\$100,000 × 30%).....	<u>(30,000)</u>
Investment in Barringer—12/31/15.....	<u>\$377,750</u>

27. Part b (continued)

Gain on sale of investment in Barringer	
Sales price (given)	\$400,000
Book value 1/1/16 (above)	<u>(377,750)</u>
Gain on sale of investment	<u>\$ 22,250</u>

Part c

Deferral of 2014 unrealized gross profit into 2015	
Ending inventory	\$20,000
Gross profit percentage (\$15,000 ÷ \$50,000)	<u>× 30%</u>
Unrealized gross profit.....	\$6,000
Anderson's ownership.....	<u>× 30%</u>
Unrealized intra-entity gross profit	<u>\$ 1,800</u>

Deferral of 2015 unrealized gross profit into 2016	
Ending inventory	\$40,000
Gross profit percentage (\$27,000 ÷ \$60,000)	<u>× 45%</u>
Unrealized gross profit.....	\$18,000
Anderson's ownership.....	<u>× 30%</u>
Unrealized intra-entity gross profit	<u>\$ 5,400</u>

Equity Income—2015	
2015 equity income accrual (\$230,000 × 30%)	\$69,000
2015 amortization on first purchase (above)	(750)
2015 amortization on second purchase (above)	(2,000)
Realization of 2014 intra-entity profit (above).....	1,800
Deferral of 2015 intra-entity profit (above)	<u>(5,400)</u>
Equity Income—2015.....	<u>\$62,650</u>

28. (40 Minutes) (Conversion to equity method and equity reporting after several years)

a. Annual Amortization

October 1, 2013 purchase

Purchase price		\$7,475
Book value, 10/1/13:		
As of 1/1/13	\$100,000	
Equity increase 1/1/13 to 10/1/13		
(\$20,000 income less \$8,000 dividends = \$12,000)		
× ¾ year	<u>9,000</u>	
Book value of Barker, first purchase date	\$109,000	
Acquired percentage	<u>× 5%</u>	5,450
Intangible assets		\$2,025
Remaining life.....		<u>15 years</u>
Annual amortization—first purchase.....		<u>\$ 135</u>

July 1, 2014 purchase

Purchase price		\$14,900
Book value, 7/1/14:		
As of 1/1/14 (\$100,000 + \$20,000 - \$8,000)	\$112,000	
Equity increase 1/1/14 to 7/1/14		
(\$30,000 income less \$16,000 dividends = \$14,000)		
× ½ year	<u>7,000</u>	
Book value of Barker, second purchase date	\$119,000	
Acquired percentage	<u>× 10%</u>	11,900
Intangible assets		\$3,000
Remaining life.....		<u>15 years</u>
Annual amortization—second purchase.....		<u>\$ 200</u>

December 31, 2015 purchase

Purchase price		\$34,200
Book value, 12/31/15:		
As of 1/1/15 (\$112,000 + \$30,000 - \$16,000)	\$126,000	
Equity increase 1/1/15 to 12/31/15		
(\$24,000 income less \$9,000 dividends).....	<u>15,000</u>	
Book value of Barker, third purchase	\$141,000	
Acquired percentage	<u>× 20%</u>	28,200

28.a (continued)

Intangible assets	\$6,000
Remaining life.....	<u>15 years</u>
Annual amortization—third purchase	<u>\$ 400</u>

Equity Income Reported by Smith

Reported for 2013 (3 months) after conversion to equity method:

Accrual ($\$20,000 \times \frac{1}{4} \text{ year} \times 5\%$)	\$250.00
Amortization on first purchase ($\$135 \times \frac{1}{4} \text{ year}$) ..	<u>(33.75)</u>
Equity income 2013.....	<u>\$216.25</u>

Reported for 2014 (5% for entire year and an additional 10% for last 6 months) (after conversion to equity method):

Accrual—first purchase ($\$30,000 \text{ entire year} \times 5\%$)	1,500
Accrual—second purchase ($\$30,000 \times \frac{1}{2} \text{ year} \times 10\%$) ..	1,500
Amortization on first purchase, entire year	(135)
Amortization on second purchase ($\$200 \times \frac{1}{2} \text{ year}$)	<u>(100)</u>
Equity income—2014	<u>\$2,765</u>

Reported for 2015 (15% for entire year; because final acquisition occurred at year end, neither income nor amortization is recognized):

Basic equity accrual ($\$24,000 \times 15\%$)	\$3,600
Amortization on first purchase	(135)
Amortization on second purchase.....	<u>(200)</u>
Equity income—2015	<u>\$3,265</u>

b. Investment in Barker

Cost—first purchase.....	\$ 7,475.00
Cost—second purchase	14,900.00
Cost—third purchase.....	34,200.00
Equity Income (above)	
2013	216.25
2014	2,765.00
2015	3,265.00

28. b (continued)

Less: investee dividends	
2013 (\$8,000 × 1/4 × 5%).....	(100.00)
2014 (\$16,000 × 5% and \$16,000 × 2/4 × 10%).....	(1,600.00)
2015 (\$9,000 × 15%).....	<u>(1,350.00)</u>
Balance	<u>\$59,771.25</u>

29. (25 Minutes) (Preparation of journal entries for two years, includes losses and intra-entity transfers of inventory)

Journal Entries for Harper Co.

1/1/14	Investment in Kinman Co.....	210,000	
	Cash		210,000
	(To record initial investment)		
During	Dividends Receivable.....	4,000	
2014	Investment in Kinman Co.		4,000
	(To record dividend declaration: \$10,000 x 40%)		
	Cash.....	4,000	
	Dividends Receivable		4,000
	(To record receipt of dividend)		
12/31/14	Equity in Kinman Income—Loss .	16,000	
	Other Comprehensive Loss of Kinman	8,000	
	Investment in Kinman Co.		24,000
	(To record accrual of income and OCI from equity investee, 40% of reported balances)		
12/31/14	Equity in Kinman Income—Loss .	3,300	
	Investment in Kinman Co.		3,300
	(To record amortization relating to acquisition of Kinman—see Schedule 1 below)		

29. (continued)

12/31/14	Equity in Kinman Income-Loss ... Investment in Kinman Co. (To defer unrealized gross profit on intra-entity sale see Schedule 2 below)	2,000	2,000
During 2015	Dividends Receivable..... Investment in Kinman Co. (To record dividend declaration: \$12,000 x 40%)	4,800	4,800
	Cash..... Dividends Receivable..... (To record receipt of dividend)	4,800	4,800
12/31/15	Investment in Kinman Co..... Equity in Kinman Income..... (To record 40% accrual of income as earned by equity investee)	16,000	16,000
12/31/15	Equity in Kinman Income..... Investment in Kinman Co. (To record amortization relating to acquisition of Kinman)	3,300	3,300
12/31/15	Investment in Kinman Co..... Equity in Kinman Income..... (To recognize income deferred from 2014)	2,000	2,000
12/31/15	Equity in Kinman Income..... Investment in Kinman Co. (To defer unrealized gross profit on intra-entity sale—see Schedule 3 below)	3,600	3,600

29. (continued)

Schedule 1—Allocation of Purchase Price and Related Amortization

Purchase price				\$210,000
Percentage of book value acquired				
(\$400,000 × 40%).....			(160,000)	
Payment in excess of book value				\$50,000
				<i>Remaining Annual</i>
Excess payment identified with specific assets:				<i>Life Amortization</i>
Building (\$40,000 × 40%)	\$16,000	10 yrs.		\$1,600
Royalty agreement (\$85,000 × 40%)	34,000	20 yrs.		<u>1,700</u>
Total annual amortization				<u>\$3,300</u>

Schedule 2—Deferral of Unrealized Gross Profit—2014

Inventory remaining at end of year		\$15,000
Gross profit percentage (\$30,000 ÷ \$90,000).....		<u>× 33⅓%</u>
Gross profit remaining in inventory		\$5,000
Ownership percentage		<u>× 40%</u>
Unrealized gross profit to be deferred until 2015.....		<u>\$ 2,000</u>

Schedule 3—Deferral of Unrealized Gross Profit—2015

Inventory remaining at end of year (30%)		\$24,000
Gross profit percentage (\$30,000 ÷ \$80,000).....		<u>× 37½%</u>
Gross profit remaining in inventory		\$9,000
Ownership percentage		<u>× 40%</u>
Unrealized gross profit to be deferred until 2016.....		<u>\$ 3,600</u>

30. (35 Minutes) (Investment sale with equity method applied both before and after. Includes other comprehensive loss and intra-entity inventory transfer)

Income effects for year ending December 31, 2015

Equity income in Seacrest, Inc. (Schedule 1) \$116,000

Other comprehensive loss—Seacrest, Inc.

1/1/15 to 8/1/15 ($\$120,000 \times 40\% \times 7/12$ year) (28,000)

8/1/15 to 12/31/15 ($\$120,000 \times 32\% \times 5/12$ year) (16,000) \$(44,000)

Gain on sale of 8,000 shares of Seacrest (Schedule 2) \$ 25,000

Schedule 1—Equity Income in Seacrest, Inc.

Investee income accrual—operations

$\$342,000 \times 40\% \times 7/12$ year \$79,800

$\$342,000 \times 32\% \times 5/12$ year 45,600 \$125,400

Amortization

$\$12,000 \times 7/12$ year \$7,000

After 20 percent of stock is sold (8,000 ÷ 40,000 shares): $\$12,000 \times 80\% \times 5/12$ year 4,000 (11,000)

Recognition of unrealized gross profit

Remaining inventory—12/31/14 \$10,000

Gross profit percentage on original sale

$(\$20,000 \div \$50,000)$ x 40%

Gross profit remaining in inventory \$4,000

Ownership percentage x 40%

Intra-entity gross profit recognized in 2015 1,600

Equity income in Seacrest, Inc. \$116,000

30. (continued)

Schedule 2—Gain on Sale of Investment in Seacrest, Inc.

Book value—investment in Seacrest, Inc.—1/1/15 (given)	\$293,600
Investee income accrual—1/1/15 – 8/1/15 (Schedule 1)	79,800
Investee other comprehensive loss 1/1/15 – 8/1/15	(28,000)
Amortization—1/1/15 – 8/1/15 (Schedule 1)	(7,000)
Recognition of deferred profit (Schedule 1)	<u>1,600</u>
Investment in Seacrest book value 8/1/15	\$340,000
Percentage of investment sold (8,000 ÷ 40,000 shares)	<u>× 20%</u>
Book value of shares being sold	\$ 68,000
Proceeds from sale of shares	<u>93,000</u>
Gain on sale of 8,000 shares of Seacrest	<u>\$ 25,000</u>

31. (30 Minutes) (Compute equity balances for three years. Includes intra-entity inventory transfer)

Part a.

Equity Income 2013

Basic equity accrual ($\$598,000 \times \frac{1}{2} \text{ year} \times 25\%$)	\$74,750
Amortization ($\frac{1}{2}$ year—see Schedule 1)	<u>(30,800)</u>
Equity Income—2013	<u>\$43,950</u>

Equity Income 2014

Basic equity accrual ($\$639,600 \times 25\%$)	\$159,900
Amortization (see Schedule 1)	(61,600)
Deferral of unrealized profit (see Schedule 2)	<u>(6,000)</u>
Equity Income—2014	<u>\$92,300</u>

Equity Income 2015

Basic equity accrual ($\$692,400 \times 25\%$)	\$173,100
Amortization (see Schedule 1)	(61,600)
Recognition of deferred profit (see Schedule 2)	<u>6,000</u>
Equity Income—2015	<u>\$117,500</u>

31. (continued)

Schedule 1—Acquisition Price Allocation and Amortization

Acquisition price (88,000 shares × \$13)	\$1,144,000
Book value acquired (\$2,925,600 × 25%)	<u>731,400</u>
Payment in excess of book value	<u>\$412,600</u>

Excess payment identified with specific assets:	<i>Remaining Annual</i>	
	<u>Life</u>	<u>Amortization</u>
Equipment (\$364,000 × 25%)	\$91,000 7 yrs.	\$13,000
Copyright (\$972,000 × 25%)	243,000 5 yrs.	48,600
Goodwill	78,600 indefinite	<u>-0-</u>
Total annual amortization (full year)		<u>\$61,600</u>

Schedule 2—Deferral of Unrealized Intra-entity Gross Profit

Intra-entity Gross Profit Percentage:

Sales	\$152,000
Cost of goods sold	<u>91,200</u>
Gross profit	<u>\$ 60,800</u>
Gross profit percentage: \$60,800 ÷ \$152,000 =	40%

Inventory remaining at December 31, 2014.....	\$60,000
Gross profit percentage	<u>× 40%</u>
Total profit on intra-entity sale still held by affiliate.....	\$24,000
Investor ownership percentage.....	<u>× 25%</u>
Unrealized intra-entity gross profit deferred from 2014 until 2015.....	<u>\$ 6,000</u>

Part b.

Investment in Shaun—December 31, 2015 balance

Acquisition price	\$1,144,000
2013 Equity income (above)	43,950
2013 Dividends declared during half year (88,000 shares × \$1.00)	(88,000)
2014 Equity income (above)	92,300
2014 Dividends declared (88,000 shares × \$1.00 × 2).....	(176,000)
2015 Equity income (above)	117,500
2015 Dividends declared (88,000 shares × \$1.00 × 2).....	<u>(176,000)</u>
Investment in Shaun—12/31/15.....	<u>\$957,750</u>

32. (65 Minutes) (Journal entries for several years. Includes conversion to equity method and a sale of a portion of the investment)

1/1/13	Investment in Sumter	192,000	
	Cash		192,000
	(To record cost of 16,000 shares of Sumter Company.)		
9/15/13	Cash.....	8,000	
	Dividend Income.....		8,000
	(Annual dividends declared and received from Sumter Company. Because declaration and payment are on same day, a dividend receivable account is unnecessary.)		
9/15/14	Cash.....	8,000	
	Dividend Income.....		8,000
	(Annual dividends declared and received from Sumter Company.)		
1/1/15	Investment in Sumter	965,750	
	Cash		965,750
	(To record cost of 64,000 additional shares of Sumter Company.)		
1/1/15	Investment in Sumter	36,800	
	Retained Earnings—Prior Period		
	Adjustment—Equity in Investee Income		36,800
	(Retrospective adjustment necessitated by change to equity method. Change in figures previously reported for 2013 and 2014 are calculated as follows.)		

32. (continued)

<i>2013 as reported</i>	<i>2013—equity method (as restated)</i>
Income (dividends)..... <u>\$8,000</u>	Income (8% of \$300,000 reported income)..... <u>\$24,000</u>
Change in investment Balance <u>-0-</u>	Change in investment balance (equity income less dividends)..... <u>\$16,000</u>
<i>2014 as reported</i>	<i>2014—equity method (as restated)</i>
Income (dividends)..... <u>\$8,000</u>	Income (8% of \$360,000 reported income)..... <u>\$28,800</u>
Change in investment Balance <u>-0-</u>	Change in investment balance (equity income less dividends)..... <u>\$20,800</u>

2013 increase in reported income (\$24,000 – \$8,000).....	\$16,000
2014 increase in reported income (\$28,800 – \$8,000).....	<u>20,800</u>
Retrospective adjustment—income (above).....	<u>\$36,800</u>

2013 increase in investment in Sumter balance—equity method	\$16,000
2014 increase in investment in Sumter balance—equity method	<u>20,800</u>
Retrospective adjustment—Investment in Sumter (above)..	<u>\$36,800</u>

9/15/15	Cash.....	40,000	
	Investment in Sumter.....		40,000
	(Annual dividend declared and received from Sumter [40% × \$100,000])		
12/31/15	Investment in Sumter	160,000	
	Equity in Investee Income		160,000
	(To accrue 2015 income based on 40% ownership of Sumter)		
12/31/15	Equity in Investee Income	3,370	
	Investment in Sumter.....		3,370
	(Amortization of \$50,550 patent [indicated in problem] over 15 years)		

32. (continued)

7/1/16	Investment in Sumter	76,000	
	Equity in Investee Income		76,000
	(To accrue 1/2 year income of 40% ownership = \$380,000 × 1/2 × 40%)		
7/1/16	Equity in Investee Income	1,685	
	Investment in Sumter.....		1,685
	(To record 1/2 year amortization of patent to establish correct book value for investment as of 7/1/16)		
7/1/16	Cash	425,000	
	Investment in Sumter (rounded)		346,374
	Gain on Sale of Investment		78,626
	(20,000 shares of Sumter Company sold; investment basis computed below.)		

Investment in Sumter and cost of shares sold:

1/1/13 Acquisition		\$ 192,000	
1/1/15 Acquisition.....		965,750	
1/1/15 Retrospective adjustment		36,800	
9/15/15 Dividends		(40,000)	
12/31/15 Basic equity accrual.....		160,000	
12/31/15 Amortization		(3,370)	
7/1/16 Basic equity accrual.....		76,000	
7/1/16 Amortization		(1,685)	
	Investment in Sumter—7/1/16 balance.....		\$1,385,495
	Percentage of shares sold (20,000 ÷ 80,000)		× 25%
	Cost of shares sold (rounded).....		<u>\$ 346,374</u>

Because 20,000 of 80,000, or 1/4, of shares are sold, the percentage retained is 3/4 of 40% = 30%.

9/15/16	Cash.....	30,000	
	Investment in Sumter.....		30,000
	(To record annual dividend declared and received)		

32. (continued)

12/31/16	Equity in Sumter	57,000
	Equity in Investee Income	57,000
	(To record ½ year income based on remaining 30% ownership: \$380,000 × 1/2 × 30%)	
12/31/16	Equity in Investee Income	1,264 (rounded)
	Investment in Sumter.....	1,264
	(To record ½ year of patent amortization—computation presented below)	
	Annual patent amortization—original computation	\$3,370
	Percentage of shares retained (60,000 ÷ 80,000)	<u>× 75%</u>
	Annual patent amortization—current	<u>\$2,528.50</u>
	Patent amortization for half year	<u>\$1,263.75</u>

33. (25 Minutes) (Equity income balances for two years, includes intra-entity transfers)

Equity Income 2014

Basic equity accrual (\$250,000 × 30%)	\$75,000
Amortization (see Schedule 1)	(18,000)
Deferral of unrealized gross profit (see Schedule 2)	<u>(9,000)</u>
Equity Income—2014.....	<u>\$48,000</u>

Equity Income (Loss—2015)

Basic equity accrual (\$100,000 [loss] × 30%)	\$(30,000)
Amortization (see Schedule 1)	(18,000)
Realization of deferred gross profit (see Schedule 2)	9,000
Deferral of unrealized gross profit (see Schedule 3)	<u>(4,500)</u>
Equity Loss—2015.....	<u>\$(43,500)</u>

33. (continued)

Schedule 1

Purchase price.....	\$770,000		
Book value acquired (\$1,200,000 × 30%).....	<u>360,000</u>		
Payment in excess of book value	\$410,000		
Excess payment identified with specific assets:		<i>Remaining</i>	<i>Annual</i>
Customer list (\$300,000 × 30%)	<u>90,000</u>	<i>Life</i>	<i>Amortization</i>
Excess not identified with specific accounts		5 yrs.	\$18,000
Goodwill	\$320,000	indefinite	<u>-0-</u>
Total annual amortization			<u>\$18,000</u>

Schedule 2

Inventory remaining at December 31, 2014.....	\$80,000
Gross profit percentage (\$60,000 ÷ \$160,000).....	<u>× 37½%</u>
Total unrealized gross profit	\$30,000
Investor ownership percentage.....	<u>× 30%</u>
Unrealized intra-entity gross profit —12/31/14	
(To be deferred until realized in 2015).....	<u>\$ 9,000</u>

Schedule 3

Inventory remaining at December 31, 2015.....	\$75,000
Gross profit percentage (\$35,000 ÷ \$175,000).....	<u>× 20%</u>
Total unrealized gross profit	\$15,000
Investor ownership percentage.....	<u>× 30%</u>
Unrealized intra-entity gross profit —12/31/15	
(To be deferred until realized in 2016).....	<u>\$ 4,500</u>

Solutions to Develop Your Skills**Excel Assignment No. 1 (less difficult)—see textbook Website for the Excel file solution**

Parts 1, 2 and 3

Growth rate in income	10%
Dividends	\$30,000
Cost	\$700,000 (given in problem)
Annual amortization	\$15,000
1st year PHC income	\$185,000
Percentage owned	40%

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
PHC reported income	\$74,000	\$81,400	\$89,540	\$98,494	\$108,343
Amortization	<u>15,000</u>	<u>15,000</u>	<u>15,000</u>	<u>15,000</u>	<u>15,000</u>
Equity earnings	<u>\$59,000</u>	<u>\$66,400</u>	<u>\$74,540</u>	<u>\$83,494</u>	<u>\$93,343</u>
Beginning Balance	\$700,000	\$747,000	\$801,400	\$863,940	\$935,434
Equity earnings	59,000	66,400	74,540	83,494	93,343
Dividends	<u>(12,000)</u>	<u>(12,000)</u>	<u>(12,000)</u>	<u>(12,000)</u>	<u>(12,000)</u>
Ending Balance	<u>\$747,000</u>	<u>\$801,400</u>	<u>\$863,940</u>	<u>\$935,434</u>	<u>\$1,016,777</u>
ROI	8.43%	8.89%	9.30%	9.66%	9.98%
Average	9.25%				

Part 3

Growth rate in income	10%
Dividends	\$30,000
Cost	\$639,794 (Determined through Solver under Tools command)
Annual amortization	\$15,000
1 st year PHC income	\$185,000
Percentage owned	40%

PHC reported income	\$74,000	\$81,400	\$89,540	\$98,494	\$108,343
Amortization	<u>15,000</u>	<u>15,000</u>	<u>15,000</u>	<u>15,000</u>	<u>15,000</u>
Equity earnings	<u>\$59,000</u>	<u>\$66,400</u>	<u>\$74,540</u>	<u>\$83,494</u>	<u>\$93,343</u>
Beginning Balance	\$639,794	\$686,794	\$741,194	\$803,734	\$875,228
Equity earnings	59,000	66,400	74,540	83,494	93,343
Dividends	<u>(12,000)</u>	<u>(12,000)</u>	<u>(12,000)</u>	<u>(12,000)</u>	<u>(12,000)</u>
Ending Balance	<u>\$686,794</u>	<u>\$741,194</u>	<u>\$803,734</u>	<u>\$875,228</u>	<u>\$956,571</u>
ROI	9.22%	9.67%	10.06%	10.39%	10.67%
Average	10.00%				

Excel Assignment No. 2 (more difficult)—see textbook Website for the Excel file solution

Intergen's ownership percentage of Ryan 40% Intra-entity Transfer Price = \$1,025,000

<u>Ryan's Income Statement</u>			<u>Intergen's Income Statement</u>		Cell F4 ↓
Sales		\$900,000	Sales	\$1,025,000	
Beginning inventory	\$ -0-		Cost of goods sold	\$ 850,000	
Purchases from Intergen	\$1,025,000		Gross profit	\$ 175,000	
Inventory remaining	25%		Equity in Ryan's earnings	\$ 35,000*	
Ending inventory	\$ 256,250		Net income	\$ 210,000	
Cost of goods sold		\$768,750			
Net income		\$131,250			
Income to Intergen—40%		\$ 52,500			
Income to two equity partners—60%		\$ 78,750			

*(52,500 – (40% × 256,250 × 175,000/1,025,000))

<u>Rate of Return Analysis</u>		
	Investment Base	Rate of Return
Intergen	\$1,000,000	21.00%
Two outside equity partners	\$300,000	26.25%
Difference		-5.25%

Use Goal Seek or Solver under the Tools command to set Cell D20 to zero by changing Cell F4

Intergen's ownership percentage of Ryan = 40% Intra-entity Transfer Price = 1,050,000

<u>Ryan's Income Statement</u>			<u>Intergen's Income Statement</u>		
Sales		\$900,000	Sales	\$1,050,000	
Beginning inventory	\$ -0-		Cost of goods sold	\$ 850,000	
Purchases from Intergen	\$1,050,000		Gross profit	\$ 200,000	
Inventory	25%		Equity in Ryan's earnings	\$ 25,000*	
Ending inventory	\$ 262,500		Net income	\$ 225,000	
Cost of goods sold		\$787,500			
Net income		\$112,500			
Income to Intergen—40%		\$ 45,000			
Income to two equity partners—60%		\$ 67,500			

*[45,000 – (40% × 262,500 × 200,000 ÷ 1,050,000)]

<u>Rate of Return Analysis</u>		
	Investment Base	Rate of Return
Intergen	\$1,000,000	22.50%
Two outside equity partners	\$300,000	22.50%
Difference		0.00%

Solution to Coca-Cola Company Analysis Case

1. In its 2012 10-K, Coca-Cola lists the following companies as significant equity method investees:

- Coca-Cola Hellenic Bottling Company S.A. ("Coca-Cola Hellenic").
- Coca-Cola FEMSA, S.A.B. de C.V. ("Coca-Cola FEMSA").
- Coca-Cola Amatil Limited ("Coca-Cola Amatil").

As part of strategic business alliances, each of these companies bottle, market, and distribute Coca-Cola's products in various designated geographic areas throughout the world, thus generating substantial revenues for the Coca-Cola Company. According to Coca-Cola's 2012 annual report (page 10),

We make equity investments in selected bottling operations with the intention of maximizing the strength and efficiency of the Coca-Cola system's production, distribution and marketing capabilities around the world. These investments are intended to result in increases in unit case volume, net revenues and profits at the bottler level, which in turn generate increased concentrate sales for our Company's concentrate and syrup business. When this occurs, both we and our bottling partners benefit from long-term growth in volume, improved cash flows and increased shareowner value.

2. From the Coca-Cola Company's 2012 10-K report (page 85),

We use the equity method to account for investments in companies, if our investment provides us with the ability to exercise significant influence over operating and financial policies of the investee. Our consolidated net income includes our Company's proportionate share of the net income or loss of these companies.

3. 2012 equity income = \$819 million.

4. In general, the equity method provides cost-based values while fair values provide exit-based values. The relevance of the equity method valuation derives from the investment's nature as a productive asset for the investor. Because of their business relationship the investee represents an extension of the investor and frequently a key part of the investor's business model. Coca-Cola, for example, has a high level of operational influence over its investees who, in turn receive exclusive rights to bottle and distribute Coca-Cola products in specific geographic areas. Because of its significance influence, investors may wish to judge the results of operations of Coca-Cola's investees as it related to Coca-Cola's ownership. Additionally, the equity method provides results consistent with accrual accounting recognizing the net effect of investee revenues and expenses as they are earned by the investor.

When possible, fair values are measured using market prices for the investor's shares of the investee. Although exit prices represent a "hypothetical" sale transaction, they indicate the market's assessment of the investor's position in the investee and thus may be relevant. However, if the investor has no plans to sell the shares, exit prices may be of limited relevance for investors' decision making.

RESEARCH AND ANALYSIS CASE—IMPAIRMENT

1. Paragraph 323-10-35-32 of the FASB ASC states that

A loss in value of an investment which is other than a temporary decline shall be recognized. Evidence of a loss in value might include, but would not necessarily be limited to, absence of an ability to recover the carrying amount of the investment or inability of the investee to sustain an earnings capacity which would justify the carrying amount of the investment. A current fair value of an investment that is less than its carrying amount may indicate a loss in value of the investment. However, a decline in the quoted market price below the carrying amount or the existence of operating losses is not necessarily indicative of a loss in value that is other than temporary. All are factors to be evaluated.

2. Given the facts in the case, a very good case can be made that the decline in value appears permanent. The change in competitive environment, decline in revenues, drop in share value, and the lack of a responsive business plan all point to a loss that is other than temporary.
3. No, according to FASB ASC para. 350-20-35-59, the equity method investment as a whole is reviewed for impairment, not the underlying assets. The FASB concluded that because equity method goodwill is not separable from the related investment, that goodwill should not be separately tested for impairment.

Research Case Solution -- Noncontrolling Shareholder Rights

1. Protective Rights (ASC Topic 810, Consolidation 810-10-25-10)

Noncontrolling rights (whether granted by contract or by law) that would allow the noncontrolling shareholder to block corporate actions would be considered protective rights and would not overcome the presumption of consolidation by the investor with a majority voting interest in its investee. The following list is illustrative of the protective rights that often are provided to the noncontrolling shareholder but is not all-inclusive:

- a. Amendments to articles of incorporation of the investee
- b. Pricing on transactions between the owner of a majority voting interest and the investee and related self-dealing transactions
- c. Liquidation of the investee or a decision to cause the investee to enter bankruptcy or other receivership
- d. Acquisitions and dispositions of assets that are not expected to be undertaken in the ordinary course of business (noncontrolling rights relating to acquisitions and dispositions of assets that are expected to be made in the ordinary course of business are participating rights; determining whether such rights are substantive requires judgment in light of the relevant facts and circumstances [see paragraphs 810-10-25-13 and 810-10-55-1])
- e. Issuance or repurchase of equity interests.

2. Substantive Participating Rights (ASC Topic 810, Consolidation 810-10-25-11)

Noncontrolling rights (whether granted by contract or by law) that would allow the noncontrolling shareholder to participate in determining certain financial and operating decisions in the ordinary course of business shall be considered substantive participating rights and would overcome the presumption that the investor with a majority voting interest shall consolidate its investee.

Example: In its 2012 10-K annual report, Sprint cited substantive participating rights of the noncontrolling interest as a reason for not consolidating its investment in Clearwire.

3. (FASB ASC Topic 810, Consolidation 810-10-25-11)

Substantive participating rights would overcome the presumption that the investor with a majority voting interest shall consolidate its investee. The following list is illustrative of substantive participating rights, but is not necessarily all-inclusive:

- a. Selecting, terminating, and setting the compensation of management responsible for implementing the investee's policies and procedures

- b. Establishing operating and capital decisions of the investee, including budgets, in the ordinary course of business.
4. Assessing Individual Noncontrolling Rights (FASB ASC Topic 810, Consolidation 810-10-55-1 b and c)
- b. Existing facts and circumstances should be considered in assessing whether the rights of the noncontrolling shareholder relating to an investee's incurring additional indebtedness are protective or participating rights. For example, if it is reasonably possible or probable that the investee will need to incur the level of borrowings that requires noncontrolling shareholder approval in its ordinary course of business, the rights of the noncontrolling shareholder would be viewed as substantive participating rights. □
 - c. The rights of the noncontrolling shareholder relating to dividends or other distributions may be protective or participating and should be assessed in light of the available facts and circumstances. For example, rights to block customary or expected dividends or other distributions may be substantive participating rights, while rights to block extraordinary distributions would be protective rights.