

Solutions Manual for Advanced Accounting 14th Hoyle

CHAPTER 1

THE EQUITY METHOD OF ACCOUNTING FOR INVESTMENTS

Chapter Outline

- I. Four 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. The investor recognizes income when the investee declares a dividend.
 2. Portfolios are reported at fair value. If fair values are unavailable, investment is reported at cost.
 - B. Cost Method: applied to investments without a readily determinable fair value. When the fair value of an investment in equity securities is not readily determinable, and the investment provides neither significant influence nor control, the investment may be measured at cost. The investment remains at cost unless
 1. A demonstrable impairment occurs for the investment, or
 2. An observable price change occurs for identical or similar investments of the same issuer.The investor typically recognizes its share of investee dividends declared as dividend income.
 - C. 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.
 - D. Equity method: applied when the investor has the ability to exercise significant influence over operating and financial policies of the investee.
 3. Ability to significantly influence investee is indicated by several factors including representation on the board of directors, participation in policy-making, etc.
 4. 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. The investor recognizes both investee dividends and changes in fair value over time as income.

- II. Accounting for an investment: the equity method
 - A. The investor adjusts the investment account to reflect all changes in the equity of the investee company.
 - B. The investor accrues investee income when it is reported in the investee's financial statements.
 - C. Dividends declared by the investee create a reduction in the carrying amount of the Investment account. This book 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. When the ability to exercise significant influence occurs following a series of stock purchases, the investor applies the equity method prospectively. The total fair value at the date significant influence is attained is compared to the investee's book value to determine future excess fair value amortizations.
 - 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 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 identifiable assets and liabilities of the investee. Because goodwill is an indefinite-lived asset, it is not amortized.

- V. Deferral of intra-entity gross profit in inventory
 - A. The investor's share of intra-entity profits in ending inventory are not recognized until the transferred goods are either consumed or until they are 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 intra-entity gross 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 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. Through its voting rights over an investee, an investor firm can elect members to the investee's board of directors and thus exercise power over the strategic direction of the investee in ways that align with the investor's own operating and financial interests.
2. An investor should apply the equity method when it has the ability to exercise significant influence over the operating and financial policies of the investee. However, if the investor controls the investee, consolidating the financial information of the two companies will normally be the appropriate method for reporting the investment.
3. For equity securities without readily determinable fair values, ASC 321 allows the cost method for the investment asset. The investor recognizes dividend income for its share of investee dividends declared. Under the cost method, the investment account remains at cost unless there is (a) a demonstrable impairment or (b) observable price changes for identical or similar investments of the same issuer.
4. 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.
5. Dividends received from an investee reduce the investment account. The investor does not record such dividends as 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 investors recorded dividends received 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 when reported by the investee. The investor increases its investment account for the investor's share of the investee's net income and then decreases the investment accounts as the investee distributes its net income 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.
6. 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 common 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.
7. 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 resale to outside parties or consumed by the purchasing affiliate. The initial deferral entry made by the investor reduces the investment balance while the eventual recognition of the gross profit increases this account.
8. The equity method has been criticized because it allows the investor to recognize income that may not be received in any usable form in the foreseeable future. The investor accrues income 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.

9. Accounting standards require that an investor treat a change to the equity method prospectively. Any new investment (or other investor or investee activity) that provides significant influence requires application of the equity method. At the date the investor's influence becomes significant, the investor prepares an investment fair value allocation schedule. The resulting excess fair over book value amortizations serve to compute future equity in investee earnings.
10. 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.
11. 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.

12. 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 omitted. The investor will record subsequent income 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.
13. 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 identifiable 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.
14. 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.
15. Downstream sales occur when an investor sells to the investee while upstream sales are from the investee to the investor. These titles reflect the traditional positions given to the two parties when presented on an organization-type chart. Under the equity method, no accounting distinction exists between downstream and upstream sales. Separate presentation is made in this chapter only because the distinction becomes significant in the consolidation process as demonstrated in Chapter Five.
16. The 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 investor's share of gross profit from the intra-entity transaction. The investor defers this gross profit in the recognition of equity earnings until subsequently recognized following use or resale to an unrelated party.
17. Intra-entity transfers do not affect the financial reporting of the investee except that the related party transactions must be appropriately disclosed and labeled.
18. 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. B Acquisition price	\$2,295,000
Equity income (\$750,000 × 30%)	225,000
Dividends (90,000 shares × \$1.00).....	<u>(90,000)</u>
Investment in O'Fallon as of December 31.....	<u>\$2,430,000</u>

7. A Acquisition price	\$700,000
Income accruals: 2020—\$170,000 × 20%.....	34,000
2021—\$210,000 × 20%	42,000
Amortization (see below): 2020	(10,000)
Amortization: 2021	(10,000)
Dividends: 2020—\$70,000 × 20%	(14,000)
2021—\$70,000 × 20%	<u>(14,000)</u>
Investment in Martes, December 31, 2021.....	<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>
Payment identified with undervalued		<i>life</i>	<i>amortization</i>
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>

8. (continued)

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 2020 purchase is reported using the equity method.

Purchase price of Evan stock.....	\$600,000
Book value of Evan stock (\$1,200,000 × 40%).....	<u>(480,000)</u>
Goodwill	\$120,000
Life of goodwill	<u>indefinite</u>
Annual amortization	<u>(-0-)</u>
Cost on January 1, 2020	\$600,000
2020 Income accrued (\$140,000 × 40%).....	56,000
2020 Dividend (\$50,000 × 40%).....	(20,000)
2021 Income accrued (\$140,000 × 40%).....	56,000
2021 Dividend (\$50,000 × 40%).....	(20,000)
2022 Income accrued (\$140,000 × 40%).....	56,000
2022 Dividend (\$50,000 × 40%).....	<u>(20,000)</u>
Investment in Evan, 12/31/22.....	<u>\$708,000</u>

10. D

11. A Gross profit rate (GPR): \$15,000 ÷ \$75,000 = 20%

Inventory remaining at year-end	\$30,000
GPR.....	<u>× 20%</u>
Gross profit.....	\$6,000
Ownership.....	<u>× 35%</u>
Intra-entity gross profit—deferred	<u>\$ 2,100</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>
2020 Gross profit rate = \$30,000 ÷ \$100,000 = 30%	
2021 Gross profit rate = \$54,000 ÷ \$150,000 = 36%	
2021—Equity income in Steinbart:	
Income accrual (\$110,000 × 40%)	\$44,000
Amortization (above).....	(2,500)
Recognition of 2020 deferred gross profit	
(\$25,000 × 30% GPR × 40% ownership).....	3,000
Deferral of 2021 intra-entity gross profit	
(\$45,000 × 36% GPR × 40% ownership).....	<u>(6,480)</u>
Equity income in Steinbart—2021	<u>\$38,020</u>

13. (6 minutes) (Investment account after one year)

Purchase price.....	\$1,160,000
Basic 2021 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, 2021	<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 2020 ($\$1,800,000 \times 20\%$)	\$360,000
Amortization—2020 (above)	<u>(280,000)</u>
Equity in 2020 earnings of Sauk Trail	<u>\$ 80,000</u>
Basic equity accrual 2021 ($\$1,985,000 \times 20\%$)	\$397,000
Amortization—2021 (above)	<u>(280,000)</u>
Equity in 2021 earnings of Sauk Trail	<u>\$117,000</u>
c. Acquisition price	\$2,700,000
Equity in 2020 earnings of Sauk Trail (above)	80,000
Dividends—2020 ($\$150,000 \times 20\%$)	<u>(30,000)</u>
Investment in Sauk Trail, 12/31/20	<u>\$2,750,000</u>
Investment in Sauk Trail, 12/31/20	\$2,750,000
Equity in 2021 earnings of Sauk Trail (above)	\$117,000
Dividends—2021 ($\$160,000 \times 20\%$)	<u>(32,000)</u>
Investment in Sauk Trail, 12/31/21	<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 ($\$125,000 \times 40\%$)	<u>50,000</u>
Excess payment	\$10,000
Value of patent in excess of book value ($\$15,000 \times 40\%$)	<u>6,000</u>
Goodwill	<u>\$ 4,000</u>
Amortization:	
Patent ($\$6,000 \div 6$)	\$1,000
Goodwill	<u>-0-</u>
Annual amortization	<u>\$1,000</u>
Acquisition price	\$60,000
Basic equity accrual 2020 ($\$30,000 \times 40\%$)	12,000
Dividends—2020 ($\$10,000 \times 40\%$)	(4,000)
Amortization—2020 (above)	<u>(1,000)</u>
Investment in Holister, 12/31/20	\$67,000
Basic equity accrual —2021 ($\$50,000 \times 40\%$)	20,000
Dividends—2021 ($\$15,000 \times 40\%$)	(6,000)
Amortization—2021 (above)	<u>(1,000)</u>
Investment in Holister, 12/31/21	<u>\$80,000</u>
b. Dividend income ($\$15,000 \times 40\%$)	\$6,000
Increase in fair value ($\$75,000 - \$68,000$)	<u>7,000</u>
Investment income under fair value accounting—2021	<u>\$13,000</u>

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

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

No 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. (25 Minutes) (Equity entries for one year, includes prospective application of equity method)

JANUARY 1, 2021 (Date significant influence is attained)

Purchase price of 30% of Seida's stock	\$600,000
Fair value of original 10% investment in Seida.....	<u>200,000</u>
Total fair value of 40% investment in Seida	800,000
Book value of Seida stock (\$1,850,000 × 40%).....	<u>(740,000)</u>
Fair value in excess of book value.....	\$ 60,000
Excess cost assigned to undervalued land	
(\$120,000 × 40%).....	<u>(48,000)</u>
Trademark	\$ 12,000
Remaining life of Trademark	<u>8 years</u>
Annual Amortization	<u>\$ 1,500</u>

Journal Entries:

To record acquisition of Seida stock.

Investment in Seida.....	600,000	
Cash		600,000

Investment in Seida.....	120,000	
Equity in Investee Income		120,000

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

Equity in Investee Income	1,500	
Investment in Seida		1,500
To record 2021 amortization.		
Dividend Receivable.....	44,000	
Investment in Seida		44,000
To record dividend declaration from Seida (40% of \$110,000).		
Cash.....	44,000	
Dividend Receivable.		44,000
To record collection of dividend from investee.		

19. (7 minutes) (Deferral of intra-entity gross profit)

Ending inventory (\$200,000 – \$85,000)	\$115,000	
Gross profit percentage (GP \$80,000 ÷ Sales \$200,000).....	<u>× 40%</u>	
Gross profit on sale to Eckerle	\$46,000	
Ownership	<u>× 30%</u>	
Intra-entity gross profit—deferred.....	<u>\$13,800</u>	

Entry to Defer Intra-entity Gross Profit:

Equity in Investee Income	13,800	
Investment in Eckerle		13,800

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 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 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 gross profit deferral.....	<u>\$ 3,000</u>	

- b. In 2021, the deferral of \$3,000 can be recognized by BuyCo's use or sale of this inventory. Thus, the equity accrual for 2021 will be increased by \$3,000 in that year. Recognition of this amount is simply being delayed from 2020 until 2021, the year when the goods are sold to customers outside the affiliated entity.
- 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) (Equity method with a subsequent partial investment sale)

Equity method income accrual for 2021

25 percent of \$600,000 for ½ year =	\$ 75,000
21 percent of \$600,000 for ½ year =	<u>63,000</u>
Total income accrual (no amortization or deferred gross profit)	\$138,000
Gain on sale (below)	<u>32,000</u>
Total income statement effect—2021	<u>\$170,000</u>

Gain on sale of 12,000 shares of Sedgwick:

Cost of initial acquisition—2019	\$1,480,000
25% income accrual—2019	85,000
25% of dividends—2019	(30,000)
25% income accrual—2020	120,000
25% of dividends—2020	(35,000)
25% income accrual for ½ year—2021	75,000
25% of dividends for ½ year—2021	<u>(20,000)</u>
Book value of 75,000 shares on July 1, 2021	<u>\$1,675,000</u>

Cash proceeds from the sale: 12,000 shares × \$25	\$300,000
Less: book value of shares sold: \$1,675,000 × (12,000 ÷ 75,000)	<u>268,000</u>
Gain on sale	<u>\$ 32,000</u>

22. (25 minutes) (Verbal overview of equity method.

- a. In 2020, the fair-value method was appropriate. Thus, income recognized includes dividends declared and the change in the investment's fair value.
- b. The assumption is that Echo' level of ownership now provides the company with the ability to exercise significant influence over the operating and financial policies of ProForm. 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.
- c. Despite holding 25 percent of ProForm's outstanding stock, the equity method is inappropriate absent the ability to apply significant influence. Factors indicating 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 prospective basis.
- 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, Echo 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 ProForm. In addition, an equity accrual equal to 10 percent of the investee's income for 2020 and 25 percent for 2021 is included. The investment balance will be reduced by 10 percent of any of ProForm's dividends during 2020 and 25 percent for 2021 dividends. Finally, the Investment account will be decreased by any amortization expense for both 2020 and 2021.**

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 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 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 investor's share of the 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 intra-entity 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 gross profit created by the transfers for that year are delayed in the same manner as for 2020 in (d) above. However, for 2021, the gross profit deferred from 2020 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 unrecognized.
- 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—2021 ($\$90,000 \times 30\%$)	\$27,000
Amortization—2021 (given)	(9,000)
Intra-entity profit recognized on 2020 transfer*	1,200
Intra-entity profit deferred on 2021 transfer**	<u>(2,640)</u>
Equity income recognized by Matthew in 2021	<u>\$16,560</u>
 *Gross profit rate (GPR) on 2020 transfer ($\$16,000/\$40,000$) ...	<u>40%</u>
Intra-entity gross profit:	
Remaining inventory ($40,000 \times 25\%$)	\$10,000
GPR (above)	$\times 40\%$
Ownership percentage	$\times 30\%$
Intra-entity profit deferred from 2020 until 2021	<u>\$ 1,200</u>
 **GPR on 2021 transfer ($\$22,000/\$50,000$)	<u>44%</u>
Intra-entity gross profit:	
Remaining inventory ($50,000 \times 40\%$)	\$20,000
GPR (above)	$\times 44\%$
Ownership percentage	$\times 30\%$
Intra-entity profit deferred from 2021 until 2022	<u>\$ 2,640</u>
 b. Investment in Lindman, 1/1/21	\$335,000
Equity income—2021 (see [a] above)	16,560
Dividends—2021 ($\$30,000 \times 30\%$)	<u>(9,000)</u>
Investment in Lindman, 12/31/21	<u>\$342,560</u>

26. (20 Minutes) (Equity method including prospective application; Allocate investment cost and calculate amortization expense; Fair-value accounting)**Part a****Allocation and annual amortization—12/31/20**

Purchase price of 25% interest	\$95,000
Carrying amount of 5% interest (5% × \$380,000).....	<u>19,000</u>
Total fair value of Akron's investment in Zip	114,000
Net book value (\$290,000 × 30%)	<u>(87,000)</u>
Franchise agreements	\$27,000
Remaining life of franchise agreements	÷ <u>10 years</u>
Annual amortization	<u>\$ 2,700</u>

1. Equity Income—2021

2021 basic equity income accrual (\$88,000 × 30%).....	\$26,400
2021 amortization (above)	<u>(2,700)</u>
Equity income—2021.....	<u>\$23,700</u>

2. Investment in Zip account

December 31, 2020 total fair value.....	\$114,000
2021 basic equity income (above)	23,700
2021 dividends (\$15,000 × 30%).....	<u>(4,500)</u>
Investment in Zip—December 31, 2021.....	<u>\$133,200</u>

Part b

1. Dividend income (30% × 15,000)	\$ 4,500
Increase in fair value (30% × [\$480,000 - \$380,000]).....	<u>30,000</u>
Total reported income from Investment in Zip.....	<u>\$34,500</u>
2. Investment in Zip (30% × 480,000)	<u>\$144,000</u>

27. (30 minutes) (Equity method, sale of investment, and intra-entity gross profit)

Part a

Allocation and annual amortization

Purchase price of 30 percent interest	\$312,000
Net book value (\$800,000 × 30%)	<u>(240,000)</u>
Copyright	\$ 72,000
Remaining life of Copyright.....	<u>÷ 16 yrs.</u>
Annual Amortization	<u>\$ 4,500</u>

Equity income—2020

2020 basic equity income accrual (\$180,000 × 30%)	\$54,000
2020 excess fair over book value amortization (above).....	<u>(4,500)</u>
Equity income—2020	<u>\$49,500</u>

Equity income 2021

2021 basic equity income accrual (\$230,000 × 30%)	\$69,000
2021 excess fair over book value amortization (above).....	<u>(4,500)</u>
Equity income 2021	<u>\$64,500</u>

Part b

Investment in Sheffield

Purchase price—January 1, 2020.....	\$312,000
2020 equity income (above)	49,500
2020 dividends (\$70,000 × 30%).....	(21,000)
2021 equity income above.....	64,500
2021 dividends (\$80,000 × 30%).....	<u>(24,000)</u>
Investment in Sheffield—12/31/21.....	<u>\$381,000</u>

Gain on sale of investment in Sheffield

Sales price (given)	\$400,000
Book value 1/1/22 (above)	<u>(381,000)</u>
Gain on sale of investment	<u>\$ 19,000</u>

Problem 27 continued:

Part c

2020 intra-entity gross profit to be recognized in 2021

Ending inventory	\$20,000
Gross profit percentage (\$20,000 ÷ \$50,000)	<u>× 40%</u>
Intra-entity gross profit	\$8,000
Belden's ownership	<u>× 30%</u>
Intra-entity gross profit recognized in 2021	<u>\$ 2,400</u>

Deferral of 2021 intra-entity ending inventory gross profit into 2022

Ending inventory	\$40,000
Gross profit percentage (\$27,000 ÷ \$60,000)	<u>× 45%</u>
Intra-entity gross profit	\$18,000
Belden's ownership	<u>× 30%</u>
Intra-entity gross profit deferred	<u>\$ 5,400</u>

Equity Income—2021

2021 equity income (part a above).....	\$64,500
Recognition of 2020 intra-entity profit (part c above)	2,400
Deferral of 2021 intra-entity profit (part c above)	<u>(5,400)</u>
Equity Income—2021.....	<u>\$61,500</u>

28. (25 Minutes) (Preparation of journal entries for two years, includes losses and intra-entity transfers of inventory)

Journal Entries for Harper Co.

1/1/20	Investment in Kinman Co.....	210,000	
	Cash		210,000
	(To record initial investment)		
During	Dividends Receivable	4,000	
2020	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)		
12/31/20	Equity in Investee Income.....	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)		
12/31/20	Equity in Investee Income.....	3,300	
	Investment in Kinman Co.		3,300
	(To record amortization relating to acquisition of Kinman—see Schedule 1 below)		

28. (continued)

12/31/20	Equity in Investee Income.....	2,000	
	Investment in Kinman Co.		2,000
	(To defer Harper's share of gross profit on intra-entity sale, see Schedule 2 below)		
During	Dividends Receivable	4,800	
2021	Investment in Kinman Co.		4,800
	(To record dividend declaration: \$12,000 x 40%)		
	Cash.....	4,800	
	Dividends Receivable.....		4,800
	(To record receipt of dividend)		
12/31/21	Investment in Kinman Co.....	16,000	
	Equity in Investee Income		16,000
	(To record 40% accrual of income as earned by equity investee)		
12/31/21	Equity in Investee Income.....	3,300	
	Investment in Kinman Co.		3,300
	(To record amortization relating to acquisition of Kinman)		
12/31/21	Investment in Kinman Co.....	2,000	
	Equity in Investee Income		2,000
	(To recognize income deferred from 2020)		
12/31/21	Equity in Investee Income.....	3,600	
	Investment in Kinman Co.		3,600
	(To defer Harper's share of gross profit on intra-entity sale—see Schedule 3 below)		

28. (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</i>	<i>Annual</i>
Excess payment identified with specific assets:		<i>Life</i>	<i>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 Intra-entity Gross Profit—2020

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>
Intra-entity gross profit to be deferred until 2021	<u>\$ 2,000</u>

Schedule 3—Deferral of Intra-entity Gross Profit—2021

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>
Intra-entity gross profit to be deferred until 2022	<u>\$ 3,600</u>

29. (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, 2021**

Equity income in Seacrest, Inc. (Schedule 1)	<u>\$116,000</u>
--	-------------------------

Other comprehensive loss—Seacrest, Inc.

1/1/21 to 8/1/21 ($\$120,000 \times 40\% \times 7/12$ year)	(28,000)	
8/1/21 to 12/31/21 ($\$120,000 \times 32\% \times 5/12$ year)	<u>(16,000)</u>	<u>\$(44,000)</u>

Gain on sale of 8,000 shares of Seacrest (Schedule 2)	<u>\$ 25,000</u>
---	-------------------------

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	<u>45,600</u>	\$125,400

Amortization

$\$12,000 \times 7/12$ year	\$7,000	
After 20 percent of stock is sold ($8,000 \div 40,000$ shares): $\$12,000 \times 80\% \times 5/12$ year	<u>4,000</u>	(11,000)

Recognition of intra-entity gross profit

Remaining inventory—12/31/20	\$10,000	
Gross profit percentage on original sale		
($\$20,000 \div \$50,000$)	<u>$\times 40\%$</u>	
Gross profit remaining in inventory	\$4,000	
Ownership percentage	<u>$\times 40\%$</u>	
Intra-entity gross profit recognized in 2021		<u>1,600</u>
Equity income in Seacrest, Inc.		<u>\$116,000</u>

29. (continued)

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

Book value—investment in Seacrest, Inc.—1/1/21 (given)	\$293,600
Investee income accrual—1/1/21 – 8/1/21 (Schedule 1)	79,800
Investee other comprehensive loss 1/1/21 – 8/1/21	(28,000)
Amortization—1/1/21 – 8/1/21 (Schedule 1)	(7,000)
Recognition of deferred profit (Schedule 1).....	<u>1,600</u>
Investment in Seacrest book value 8/1/21.....	\$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>

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

Part a.

Equity Income 2019

Basic equity accrual (\$598,000 × ½ year × 25%).....	\$74,750
Amortization (½ year—see Schedule 1)	<u>(30,800)</u>
Equity Income—2019.....	<u>\$43,950</u>

Equity Income 2020

Basic equity accrual (\$639,600 × 25%)	\$159,900
Amortization (see Schedule 1)	(61,600)
Deferral of intra-entity profit (see Schedule 2)	<u>(6,000)</u>
Equity Income—2020.....	<u>\$92,300</u>

Equity Income 2021

Basic equity accrual (\$692,400 × 25%)	\$173,100
Amortization (see Schedule 1)	(61,600)
Recognition of deferred profit (see Schedule 2)	<u>6,000</u>
Equity Income—2021.....	<u>\$117,500</u>

30. (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:		<u>Remaining</u> <u>Life</u>	<u>Annual</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 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, 2020	\$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>
Intra-entity gross profit deferred from 2020 until 2021	<u>\$ 6,000</u>

Part b.**Investment in Shaun—December 31, 2021 balance**

Acquisition price	\$1,144,000
2019 Equity income (above)	43,950
2019 Dividends declared during half year (88,000 shares × \$1.00)	(88,000)
2020 Equity income (above)	92,300
2020 Dividends declared (88,000 shares × \$1.00 × 2)	(176,000)
2021 Equity income (above)	117,500
2021 Dividends declared (88,000 shares × \$1.00 × 2)	<u>(176,000)</u>
Investment in Shaun—12/31/21.....	<u>\$957,750</u>

31. (35 Minutes) (Journal entries for several years. Includes sale of a portion of the investment)

1/1/20	Investment in Bowden	982,000	
	Cash		982,000
	(To record cost of 80,000 shares of Bowden Company.)		
9/15/20	Cash.....	40,000	
	Investment in Bowden		40,000
	(Annual dividend declared and received from Bowden [40% × \$100,000])		
12/31/20	Investment in Bowden	160,000	
	Equity in Investee Income		160,000
	(To accrue 2020 income based on 40% ownership of Bowden)		
12/31/20	Equity in Investee Income	4,000	
	Investment in Bowden		4,000
	(Amortization of \$60,000 excess patent fair value [indicated in problem] over 15 years)		
7/1/21	Investment in Bowden	76,000	
	Equity in Investee Income		76,000
	(To accrue ½ year income of 40% ownership = \$380,000 × ½ × 40%)		
7/1/21	Equity in Investee Income	2,000	
	Investment in Bowden		2,000
	(To record ½ year amortization of patent to establish correct book value for investment as of 7/1/21)		
7/1/21	Cash	330,000	
	Investment in Bowden		293,000
	Gain on Sale of Investment		37,000
	(20,000 shares of Bowden Company sold; investment basis computed below.)		

31. (continued)**Investment in Bowden and cost of shares sold:**

1/1/20 Acquisition	\$ 982,000
9/15/20 Dividends	(40,000)
12/31/20 Basic equity accrual.....	160,000
12/31/20 Amortization	(4,000)
7/1/21 Basic equity accrual.....	76,000
7/1/21 Amortization	<u>(2,000)</u>
Investment in Bowden—7/1/21 balance	\$1,172,000
Percentage of shares sold (20,000 ÷ 80,000)	<u>× 25%</u>
Carrying amount of shares sold	<u>\$ 293,000</u>

Because 20,000 of 80,000, or $\frac{1}{4}$, of shares are sold, the percentage retained is $\frac{3}{4}$ of 40% = 30%.

9/15/21	Cash.....	30,000	
	Investment in Bowden		30,000
	(To record annual dividend declared and received)		
12/31/21	Investment in Bowden	57,000	
	Equity in Investee Income		57,000
	(To record $\frac{1}{2}$ year income based on remaining 30% ownership: $\$380,000 \times \frac{1}{2} \times 30\%$)		
12/31/21	Equity in Investee Income	1,500	
	Investment in Bowden		1,500
	(To record $\frac{1}{2}$ year of patent amortization— computation presented below)		
	Annual patent amortization—original computation	\$4,000	
	Percentage of shares retained (60,000 ÷ 80,000)	<u>× 75%</u>	
	Annual patent amortization—current	<u>\$3,000</u>	
	Patent amortization for half year	<u>\$1,500</u>	

32. (25 Minutes) (Equity income balances for two years, intra-entity transfers)

Equity Income 2020

Basic equity accrual (\$250,000 × 30%)	\$75,000
Amortization (see Schedule 1)	(18,000)
Deferral of intra-entity gross profit (see Schedule 2)	<u>(9,000)</u>
Equity Income—2020	<u>\$48,000</u>

Equity Income (Loss—2021)

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 intra-entity gross profit (see Schedule 3)	<u>(4,500)</u>
Equity Loss—2021	<u>\$(43,500)</u>

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, 2020	\$80,000
Gross profit percentage (\$60,000 ÷ \$160,000)	<u>× 37½%</u>
Total intra-entity gross profit	\$30,000
Investor ownership percentage	<u>× 30%</u>
Intra-entity gross profit deferral—12/31/20 (To be deferred until 2021)	<u>\$ 9,000</u>

Schedule 3

Inventory remaining at December 31, 2021	\$75,000
Gross profit percentage (\$35,000 ÷ \$175,000)	<u>× 20%</u>
Total intra-entity gross profit	\$15,000
Investor ownership percentage	<u>× 30%</u>
intra-entity gross profit deferral—12/31/21 (Deferred until 2022)	<u>\$ 4,500</u>

Solutions to Develop Your Skills**Data Analysis Case 1 (less difficult)—see Connect 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>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</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%				

Data Analysis Case 2 (more difficult)—see Connect for the Excel file solution

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

Ryan's Income Statement

Sales		\$900,000
Beginning inventory	\$ -0-	
Purchases from Intergen	\$1,025,000	
Inventory remaining	25%	
Ending inventory	\$ 256,250	
Cost of goods sold		<u>\$768,750</u>
Net income		\$131,250

Income to Intergen—40%	\$ 52,500
Income to two equity partners—60%	\$ 78,750

Intergen's Income Statement

Sales	\$1,025,000
Cost of goods sold	<u>\$ 850,000</u>
Gross profit	\$ 175,000
Equity in Ryan's earnings	<u>\$ 35,000*</u>
Net income	<u>\$ 210,000</u>

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

Rate of Return Analysis

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

Ryan's Income Statement

Sales		\$900,000
Beginning inventory	\$ -0-	
Purchases from Intergen	\$1,050,000	
Inventory	25%	
Ending inventory	\$ 262,500	
Cost of goods sold		<u>\$787,500</u>
Net income		\$112,500

Income to Intergen—40%	\$ 45,000
Income to two equity partners—60%	\$ 67,500

Intergen's Income Statement

Sales	\$1,050,000
Cost of goods sold	<u>\$ 850,000</u>
Gross profit	\$ 200,000
Equity in Ryan's earnings	<u>\$ 25,000*</u>
Net income	<u>\$ 225,000</u>

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

Rate of Return Analysis

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

Solution to Coca-Cola Company Research and Discussion Case

1. In its 2018 10-K, Coca-Cola lists the following companies among its significant equity method investees (page 37):

- Monster Beverage Corporation
- Coca-Cola European Partners plc
- Coca-Cola FEMSA, S.A.B. de C.V.
- Coca-Cola Bottling Company
- Coca-Cola Amatil Limited

2. 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 2018 annual report (page 7),

...from time to time we make equity investments representing noncontrolling interests in selected bottling operations with the intention of maximizing the strength and efficiency of the Coca-Cola system's production, marketing, sales and distribution capabilities around the world by providing expertise and resources to strengthen those businesses. 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 business.

When our equity investment provides us with the ability to exercise significant influence over the investee bottler's operating and financial policies, we account for the investment under the equity method, and we sometimes refer to such a bottler as an "equity method investee bottler" or "equity method investee."

3. From the Coca-Cola Company's 2018 10-K report (page 35),

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. Our judgment regarding the level of influence over each equity method investment includes considering key factors such as our ownership interest, representation on the board of directors, participation in policy-making decisions and material intercompany transactions.

4. 2018 equity income = \$1,008 million.
5. See page 37 of Coca-Cola's 2018 10-K annual report for a listing of the fair values and carrying amounts of its equity method investment. 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: Prior to obtaining 100% of Clearwire's voting stock, despite a majority voting interest, Sprint cited substantive participating rights of the noncontrolling interest as a reason for not consolidating its investment in Clearwire. Currently, Sprint consolidates Clearwire as a wholly-owned subsidiary.

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.