

Principles of Managerial Finance Solution

Lawrence J. Gitman

CHAPTER 17

Mergers, LBOs, Divestitures, And Business Failure

INSTRUCTOR'S RESOURCES

Overview

This chapter covers the fundamentals of mergers, leveraged buyouts (LBOs), and divestitures, as well as methods for reorganizing or liquidating a firm in the event of a business failure. The motives for and types of mergers, as well as procedures to analyze and negotiate mergers, are discussed. The techniques for estimating the value of a target firm and analyzing cash or stock swap transactions are presented. The chapter next explains leveraged buyouts (LBOs), another technique to finance acquisitions, and international merger practices. Finally, the student is introduced to the types of business failure and the private and legal means of resolution (reorganization and bankruptcy) for creditors and stockholders.

PMF DISK

This chapter's topics are not covered in the *PMF Tutor* or the *PMF Problem-Solver*.

PMF Templates

Spreadsheet templates are provided for the following problems:

<u>Problem</u>	<u>Topic</u>
17-1	Tax effects of acquisition
17-4	Asset acquisition decision
17-7	EPS and merger terms

Study Guide

The following *Study Guide* examples are suggested for classroom presentation:

<u>Example</u>	<u>Topic</u>
1	Tax effects of acquisition
2	Asset acquisition decision

ANSWERS TO REVIEW QUESTIONS

- 17-1**
- a.** A *merger* is the combination of two or more firms such that the resulting firm maintains the identity of one of the merged firms, while a *consolidation* is the combination of two or more firms to form a completely new corporation. Consolidations are generally made between similarly sized firms; mergers normally result from a large firm acquiring the assets or stock of a smaller company. The larger firm pays for its acquisition in either cash or stock (common and/or preferred). A *holding company* is a corporation that has a voting control in one or more other corporations. The companies controlled by a holding company are normally referred to as subsidiaries. The holding company arrangement differs from consolidation and merger in that the holding company consists of a group of subsidiary firms, each operating as a separate corporate entity, while a consolidated or merged firm is a single corporation.
 - b.** In a merger, the *acquiring company* attempts to acquire the *target company*.
 - c.** A *friendly merger* is one where the target company's management supports the acquiring company's proposal, and the firms work together to negotiate the transaction. If the target company is not receptive to the takeover proposal, a *hostile merger* situation exists, and the acquirer must try to gain control by buying enough shares in the market, often through tender offers.
 - d.** *Strategic mergers* are undertaken to achieve economies of scale by combining operations of the merged firms for greater productivity and profit. The goal of *financial mergers* is to restructure the acquired company to improve cash flow. The acquiring firm believes there is hidden value that can be unlocked through restructuring activities, including cost cutting and/or divestiture of unprofitable or incompatible assets.
- 17-2**
- a.** A company can use a merger to quickly grow in size or market share or to diversify its product offerings by acquiring a going concern that meets its objectives.
 - b.** *Synergy* refers to the economies of scale resulting from reduced overhead in the merged firms.
 - c.** Mergers can improve a firm's ability to raise funds, since acquiring a cash-rich company increases borrowing power.
 - d.** A firm may merge with another in order to acquire increased managerial skills or technology that will enable it to more quickly achieve greater wealth maximization.
 - e.** Mergers can be undertaken to achieve tax savings; a profitable firm can merge with a firm with tax loss carry forwards to reduce taxable income, thereby increasing after-tax earnings of the merged firm.
 - f.** Increased ownership liquidity can result when small firms merge to create a larger entity whose shares are more marketable.
 - g.** Mergers are also used as a defense against unfriendly takeovers; the target company finances an acquisition by adding substantial debt, thereby making itself unattractive to its potential purchaser.

- 17-3** a. A *horizontal merger* is the merger of two firms in the same line of business.
- b. A *vertical merger* involves the acquisition of a customer or supplier.
- c. A *congener merger* is the acquisition of a firm in the same general industry but neither in the same line of business as, nor a supplier or customer to, the acquiring firm.
- d. A *conglomerate merger* occurs when firms in unrelated businesses merge.
- 17-4** A *leveraged buyout (LBO)* is a form of financial merger, using large amounts of debt (typically 90% or more) to finance the acquisition. Three key attributes for an LBO acquisition candidate are 1) good position in its industry, with solid profit history and growth potential; 2) low level of debt and high level of assets to serve as loan collateral; and 3) stable and predictable cash flows for debt service and working capital.
- 17-5** A *divestiture* is the sale of some of a firm's assets to achieve a more focused, streamlined operation and to increase profitability. An *operating unit* is part of a business that contributes to the firm's actual operations. It can be a plant, division, product line, or subsidiary. Four ways firms divest themselves of operating units are 1) sale of a product line to another firm; 2) sale of a unit to existing management, usually through an LBO; 3) spinning off the unit into an independent company; and 4) liquidation of the unit. *Breakup value* refers to what the sum of the value of the operating units would be if each unit was sold separately.
- 17-6** *Capital budgeting techniques* are used to value target companies. If assets are being acquired, the acquisition price, tax losses, and benefits from the asset purchase are analyzed. The resulting after-tax cash flows are discounted at the cost of capital; if the net present value is greater than zero, the acquisition is acceptable. Going concerns are also valued using similar techniques, although it is more difficult to estimate cash and risk. Pro forma financial statements showing expected revenues and expenses after the merger are used to develop cash flow projections. Risk adjustments are made by choosing a cost of capital figure that reflects any changes in the capital structure (financial risk) of the merged entity. This discount rate is applied to the cash inflows; a positive net present value supports the acquisition. An acquisition of a going concern using a stock swap is analyzed based on the *ratio of exchange* of shares and the effects of this ratio on the post-merger firm's earnings per share and price-earnings ratio.
- 17-7** The *ratio of exchange* is the amount paid per share of the target firm divided by the market price of the acquiring firm's shares. The ratio of exchange is not based on the current price per share of the acquired firm but on the negotiated price per share of the target firm and the market price per share of the acquiring firm. Since the ratio of exchange indicates the number of shares the acquiring firm gives for each share of the firm acquired through a stock swap, concern must be directed primarily toward the price paid through a stock swap, rather than the current market price of the acquired firm's stock. Although the acquired firm's stock price may affect the exchange ratio, the ratio itself is concerned solely with the price paid of the acquiring firm's stock.

The initial impact of a stock swap acquisition may be a decrease in earnings per share for the merged company. However, the expected growth in earnings of the merged firm can have a significant impact on the long-run earnings per share of the merged firm. Combining two or more firms may

make it possible for the sum of their earnings to exceed the total earnings of the firms when viewed separately, depending on the earnings and forecast growth of the firms to be combined. A long-run view may forecast a higher future EPS of the merged firm than the EPS of the acquiring firm alone, so it is important to consider more than just the initial impact when making the merger decision.

- 17-8** The role of the *investment banker* is to find a suitable merger partner and assist in the negotiations between the parties. *Tender offers* are made by a firm to its stockholders to buy a certain number of shares at a specified price, at a premium over the prevailing market price. When management negotiations for an acquisition break down, tender offers may be used to negotiate a merger directly with the firm's owners. Sometimes the tender offer is used to add pressure to existing merger negotiations; in other cases, it is made without warning in order to catch management off guard.
- 17-9**
- a. In a *white knight* takeover defense, the target firm finds an acquirer, leading to competition between the white knight and hostile acquirer for control of the target.
 - b. *Poison pills* are securities issued with special rights, such as voting rights or the right to purchase additional securities, effective only when a takeover is attempted. These special rights are designed to make the target a less attractive candidate for takeover.
 - c. *Greenmail* is the privately negotiated repurchase of a large block of stock at a premium from one or more stockholders to deter a hostile takeover by those shareholders.
 - d. *Leveraged recapitalization* is the payment of a large cash dividend financed with debt. By increasing financial leverage, the target firm becomes unattractive. Recapitalization may also include an increase in existing management's equity and control.
 - e. Key executives may receive *golden parachutes*, employment contract provisions for sizable compensation packages if a takeover occurs. The large cash outflows may deter hostile takeovers.
 - f. *Shark repellents* are anti-takeover amendments to a firm's corporate charter constraining the transfer of managerial control as a result of a merger.
- 17-10** The advantages of the holding company arrangement are the leverage effect resulting from being able to control large amounts of assets with relatively small dollar investments; the risk protection resulting from the diversification of risk; legal benefits resulting in reduced taxes and the autonomy of subsidiaries; and the lack of negotiation required to gain control of a subsidiary.

The disadvantages of the holding company arrangement are increased risk from the leverage obtained by a holding company (losses as well as gains are magnified); double taxation, which results because a portion of the holding company's income is from a subsidiary whose earnings have already been taxed before paying dividends that are taxed at the parent level; the difficulty in analyzing holding companies due to their complexity, which may depress price-earnings multiples; and high administrative costs from managing the diverse entities in a holding company.

Pyramiding of holding companies occurs when one holding company controls other holding companies. This arrangement causes even greater magnification of earnings or losses.

- 17-11** Differences exist in merger practices between U.S. companies and non-U.S. companies. In other countries, notably Japan, takeovers are less common. Hostile takeovers are more a U.S. phenomenon and are not typically found elsewhere. Also, the style of corporate control is different. For example, there is less emphasis on shareholder value. Control of another foreign company is made more difficult from differences in capital market financing, more emphasis on stakeholder interests, and company ownership by fewer large shareholders.

However, in recent years there has been a shift toward the American model of corporate governance, due in part to the increased competitiveness of the global marketplace. The move toward European economic integration has resulted in more cross-border mergers. There has also been an increase in the number of takeovers of U.S. companies by European and Japanese companies.

- 17-12** The three types of business failure are: 1) low or negative returns, 2) technical insolvency, and 3) bankruptcy.

Technical insolvency occurs when a firm cannot pay its liabilities as they come due, while *bankruptcy* is the situation in which a firm's liabilities exceed the fair value of its assets. A bankrupt firm is therefore one having a negative net worth. The courts treat both technical insolvency and bankruptcy the same way. In a legal sense, technical insolvency is considered a type of bankruptcy. The primary cause of bankruptcy is mismanagement; other causes include unfavorable economic conditions and corporate maturity.

- 17-13** In an *extension*, creditors receive payment in full but on an extended schedule. A *composition* is a pro rata cash settlement of creditor claims. An extension and composition may be combined to produce a settlement plan in which each creditor would receive a pro rata share of his claim, to be paid out on a predetermined schedule over a specified number of years. The pro rata payment would represent a composition, while paying out the claims over future years would be an extension.

A voluntary settlement resulting in liquidation occurs when recommended by a creditor committee or if creditors cannot agree upon a settlement to sustain the firm. The creditors must assign the power to liquidate the firm to a committee or adjustment bureau. The assignee then liquidates the assets, obtaining the best price possible. The proceeds are then distributed to the creditors and owners, and the creditors sign a release of the obligation; if they do not sign the release, bankruptcy may result. *Assignment* is the process in which a third party, known as an assignee or trustee, is given the power to liquidate and distribute the proceeds on behalf of the owners of the firm.

17-14 Chapter 11 of the Bankruptcy Reform Act of 1978 outlines the procedures for reorganization of a failed firm.

1. The filing firm is called the *Debtor in Possession (DIP)*. Its first responsibility is the valuation of the firm, estimating both the *liquidation value* and the *going concern value*, in order to determine if reorganization is feasible.
2. If reorganization is feasible, the DIP must draw up a plan for reorganization, which results in a new capital structure and a scheme for exchanging securities in order to recapitalize the firm.
3. The *exchange of securities* recommended by the DIP must abide by the *rules of priority*, which indicate the order in which the claims of various parties must be satisfied in the recapitalization process. In general, senior claims must be satisfied prior to junior claims.

17-15 Chapter 7 of the Bankruptcy Reform Act of 1978 specifies the manner and priority for the distribution of assets in liquidation. The firm is liquidated when the court has determined that reorganization is not feasible. A company that has been declared bankrupt, voluntarily or involuntarily, may be liquidated. The judge appoints a *trustee* to perform the routine duties required in administering the bankruptcy. The trustee's responsibilities include liquidating the firm, disbursing money, keeping records, examining creditor claims, furnishing information as required, and making final reports on the liquidation.

17-16 Using the alphabetic characters to identify the items listed, the appropriate priority ordering of claims is (c), (j), (h), (i), (k), (g), (f), (b), (e), (a), (d).

SOLUTIONS TO PROBLEMS**17-1 LG 1, 3: Tax Effects of Acquisition**

a.	Years	Earnings	Tax Liability	After-Tax Earnings
	1-15	\$280,000	\$112,000	\$168,000

Tax liability = \$112,000 x 15 = \$1,680,000

b.	Years	Earnings after Write-off	Tax Liability	Tax Savings
	1	\$280,000 - \$280,000 = 0	\$ 0	\$112,000
	2	\$280,000 - \$280,000 = 0	0	112,000
	3	\$280,000 - \$240,000 = \$40,000	16,000	96,000
	4-15	\$280,000 - 0 = \$280,000	112,000	<u>0</u>
			Total =	<u>\$320,000</u>

- c. With respect to tax considerations only, the merger would not be recommended because the savings (\$320,000) are less than the cost (\$350,000). The merger must also be justified on the basis of future operating benefits or on grounds consistent with the goal of maximizing shareholder wealth.

17-2 LG 1, 3: Tax Effects of Acquisition

a.		Net Profits Before Taxes	Taxes .40 x (1)	Net Income (1) - (2)
	Year	(1)	(2)	(3)
	1	\$ 150,000	\$ 60,000	\$ 90,000
	2	400,000	160,000	240,000
	3	450,000	180,000	270,000
	4	600,000	240,000	360,000
	5	600,000	<u>240,000</u>	360,000
	Total taxes without merger		<u>\$880,000</u>	

b.		Net Profits Before Taxes	Taxes .40 x (1)
	Year	(1)	(2)
	1	\$150,000 - \$150,000 = 0	\$ 0
	2	\$400,000 - \$400,000 = 0	0
	3	\$450,000 - \$450,000 = 0	0
	4	\$600,000 - \$600,000 = 0	0
	5	\$600,000 - \$200,000 = \$400,000	<u>160,000</u>
	Total taxes with merger		<u>\$160,000</u>

- c. Total benefits (ignoring time value): \$880,000 - \$160,000 = \$720,000

- d. Net benefit = Tax benefits - (cost - liquidation of assets)
 = (\$1,800,000 x .4) - (\$2,100,000 - \$1,600,000) = \$220,000

The proposed merger is recommended based on the positive net benefit of \$226,060.

17-3 LG 1, 3: Tax Benefits and Price

a. Reilly Investment Group

Year	Net Profit Before Tax (1)	Taxes .40 x (1) (2)	Tax Advantage (3)
1	\$200,000 - \$200,000	\$ 0	\$ 80,000
2	\$200,000 - \$200,000	0	80,000
3	\$200,000 - \$200,000	0	80,000
4	\$200,000 - \$200,000	0	80,000
5-7	\$200,000	80,000	0
	Total Tax Advantage		<u>\$320,000</u>

b. Webster Industries

Year	Net Profit Before Tax (1)	Taxes .40 x (1) (2)	Tax Advantage (3)
1	\$80,000 - \$80,000	\$ 0	\$ 32,000
2	\$120,000 - \$120,000	0	48,000
3	\$200,000 - \$200,000	0	80,000
4	\$300,000 - \$300,000	0	120,000
5	\$400,000 - \$100,000	120,000	<u>40,000</u>
6	\$400,000	160,000	0
7	\$500,000	200,000	0
	Total Tax Advantage		<u>\$320,000</u>

c. Reilly Investment Group - PV of benefits:

$$PV_{15\%,4 \text{ Yrs.}} = \$80,000 \times 2.855 = \$228,400 \text{ (Calculator solution: } \$228,398.27)$$

Webster Industries - PV of benefits:

Year	Cash Flow x PV Factor (15%, n yrs.)	PV of Benefits
1	\$ 32,000 x .870	= \$ 27,840
2	\$ 48,000 x .756	= 36,288
3	\$ 80,000 x .658	= 52,640
4	\$120,000 x .572	= 68,640
5	\$ 40,000 x .497	= <u>19,880</u>
	Total	<u>\$205,288</u>
	Calculator solution:	\$205,219.74

Reilly would pay up to \$228,400.

Webster would pay no more than \$205,288.

- d.** Both firms receive \$320,000 in tax shield benefits. However, Reilly can use these at an earlier time; therefore, the acquisition is worth more to this firm.

17-4 LG 3: Asset Acquisition Decision

- a.** Effective cost of press: = \$60,000 + \$90,000 - \$65,000 = \$85,000

$$NPV_{14\%,10\text{yrs.}} = (\$20,000 \times 5.216) - \$85,000 = \$19,320$$

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Calculator solution: \$19,322.31

b. Zarin should merge with Freiman, since the NPV is greater than zero.

c. $NPV_{14\%,10\text{yrs.}} = (\$26,000 \times 5.216) - \$120,000 = \$15,616$
 Calculator solution: \$15,619.01

Since the NPV of the acquisition is greater than the NPV of the new purchase, the firm should make the acquisition of the press from Freiman. The advantage of better quality from the new press would have to be considered on a subjective basis.

17-5 LG 3: Cash Acquisition Decision

a. PV of cash inflows

Year	Cash Flow x PVA Factor (15%)	PV	Calculator solution
1-5	\$ 25,000 x 3.352	\$ 83,800	\$ 83,803.88
6-10	\$ 50,000 x (5.019 - 3.352)	<u>83,350</u>	<u>53,330.68</u>
Total present value of cash inflows		\$167,150	\$167,134.56
Less Cost of acquisition		<u>125,000</u>	<u>125,000.00</u>
NPV		\$ 42,150	\$ 42,134.56

Since the NPV is positive, the acquisition is recommended. Of course, the effects of a rise in the overall cost of capital would need to be analyzed.

b. PV of equipment purchase (12%, 10yrs.):
 $PV = \$40,000 \times 5.650 = \$226,000$
 Calculator solution: \$226,008.92

$NPV = \$226,000 - \$125,000 = \$101,000$

The purchase of equipment results in a higher NPV (\$101,000 versus \$42,150). This is partially due to the lower discount factor (12% versus 15%). The equipment purchase is recommended.

c. PV of cash inflows

Year	Cash Flow x PVIFA _{12%}	PV	Calculator solution
1-5	\$ 25,000 x 3.605	\$ 90,125	\$ 90,119.41
6-10	\$ 50,000 x (5.650 - 3.605)	<u>102,250</u>	<u>102,272.34</u>
Total present value of cash inflows		\$192,375	\$192,391.75
Less Cost of acquisition		<u>125,000</u>	<u>125,000.00</u>
NPV		\$ 67,375	\$ 67,391.75

No, the recommendation would not change. The NPV of the equipment purchase (\$101,000) remains greater than the NPV of the acquisition (\$67,375).

17-6 LG 3: Ratio of Exchange and EPS

a. Number of additional shares needed = $1.8 \times 4,000$ = 7,200
 EPS of merged firm = $\$28,000 \div (20,000 + 7,200)$ = \$1.029
 EPS of Marla's = \$1.029
 EPS of Victory = $\$1.029 \times 1.8$ = \$1.852

b. Number of additional shares needed = $2.0 \times 4,000$ = 8,000
 EPS of merged firm = $\$28,000 \div (20,000 + 8,000)$ = \$1.00
 EPS of Marla's = \$1.00
 EPS of Victory = $\$1.00 \times 2.0$ = \$2.00

c. Number of additional shares needed = $2.2 \times 4,000$ = 8,800
 EPS of merged firm = $\$28,000 \div (20,000 + 8,800)$ = \$.972
 EPS of Marla's = \$.972
 EPS of Victory = $\$.972 \times 2.2$ = \$2.139

d. P/E calculations:

(a) Price paid per share: $\$12.00 \times 1.8 = \21.60

$$\text{P/E paid} = \frac{\text{Price paid per share}}{\text{EPS of target}} = \frac{\$21.60}{\$2.00} = 10.8$$

(b) Price paid per share: $\$12.00 \times 2.0 = \24.00

$$\text{P/E paid} = \frac{\text{Price paid per share}}{\text{EPS of target}} = \frac{\$24.00}{\$2.00} = 12.0$$

(c) Price paid per share: $\$12.00 \times 2.2 = \26.40

$$\text{P/E paid} = \frac{\text{Price paid per share}}{\text{EPS of target}} = \frac{\$26.40}{\$2.00} = 13.2$$

When the P/E paid (10.8) is less than the P/E of the acquiring firm (12.0), as in (a), the EPS of the acquiring firm increases and the EPS of the target firm decreases.

When the P/E paid (12.0) is the same as the P/E of the acquiring firm (12.0), as in (b), the EPS of the acquiring and target firms remain the same.

When the P/E paid (13.2) is more than the P/E of the acquiring firm (12.0), as in (c), the EPS of the acquiring firm decreases and the EPS of the target firm increases.

17-7 LG 3: EPS and Merger Terms

Part 6 Special Topics in Managerial Finance

- a. $20,000 \times 0.4 = 8,000$ new shares
- b. $(\$200,000 + \$50,000) \div 58,000 = \$4.31$ per share
- c. $\$4.31 \times 0.4 = \1.72 per share
- d. \$4.31 per share. There is no change from the figure for the merged firm.

17-8 LG 3: Ratio of Exchange

Case	Ratio of Exchange	Market Price Ratio of Exchange
A	$\$30 \div \$50 = 0.60$	$(\$50 \times 0.60) \div \$25 = 1.20$
B	$\$100 \div \$80 = 1.25$	$(\$80 \times 1.25) \div \$80 = 1.25$
C	$\$70 \div \$40 = 1.75$	$(\$40 \times 1.75) \div \$60 = 1.17$
D	$\$12.50 \div \$50 = 0.25$	$(\$50 \times 0.25) \div \$10 = 1.25$
E	$\$25 \div \$25 = 1.00$	$(\$50 \times 1.00) \div \$20 = 2.50$

The ratio of exchange of shares is the ratio of the amount paid per share of the target firm to the market price of the acquiring firm's shares. The market price ratio of exchange indicates the amount of market price of the acquiring firm given for every \$1.00 of the acquired firm.

17-9 LG 3: Expected EPS-Merger Decision

- a. Graham & Sons - Premerger

Year	Earnings	EPS
2000	\$200,000	\$2.000
2001	\$214,000	\$2.140
2002	\$228,980	\$2.290
2003	\$245,009	\$2.450
2004	\$262,160	\$2.622
2005	\$280,511	\$2.805

Graham & Sons – Post merger

- b.

(1) New shares issued = $100,000 \times .6 = 60,000$

Year	Earnings/Shares	EPS
2000	$[(\$800,000 + \$200,000) \div 260,000] \times 0.6$	= \$2.308
2001	$[(\$824,000 + \$214,000) \div 260,000] \times 0.6$	= \$2.395
2002	$[(\$848,720 + \$228,980) \div 260,000] \times 0.6$	= \$2.487
2003	$[(\$874,182 + \$245,009) \div 260,000] \times 0.6$	= \$2.583
2004	$[(\$900,407 + \$262,160) \div 260,000] \times 0.6$	= \$2.683
2005	$[(\$927,419 + \$280,511) \div 260,000] \times 0.6$	= \$2.788

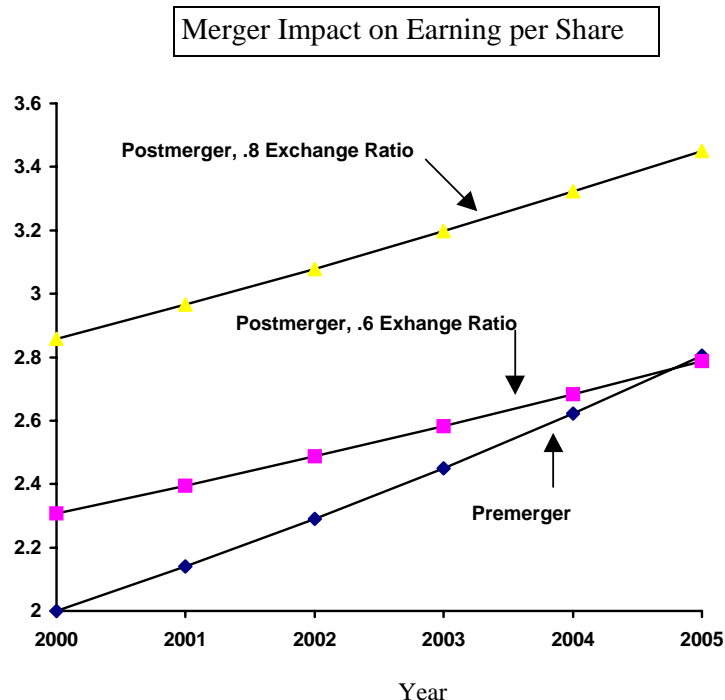
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(2) New shares issued = $100,000 \times .8 = 80,000$

Year	Earnings/Shares	EPS
2000	$[(\$800,000 + \$200,000) \div 280,000] \times 0.8$	= \$2.857
2001	$[(\$824,000 + \$214,000) \div 280,000] \times 0.8$	= \$2.966
2002	$[(\$848,720 + \$228,980) \div 280,000] \times 0.8$	= \$3.079
2003	$[(\$874,182 + \$245,009) \div 280,000] \times 0.8$	= \$3.198
2004	$[(\$900,407 + \$262,160) \div 280,000] \times 0.8$	= \$3.322
2005	$[(\$927,419 + \$280,511) \div 280,000] \times 0.8$	= \$3.451

c.

d. Graham & Sons' are much better off at the ratio of 0.8 than the firm without the merger. Here probably management would recommend the merger be rejected.



Sons' shareholders would be better off at the 0.8 exchange. The management would probably recommend the merger be rejected. If the ratio is 0.6, the firm would have earned below what it would have earned being acquired.

17-10 LG 3: EPS Price

and Postmerger

a. Market price ratio of exchange: $(\$45 \times 1.25) \div \$50 = 1.125$

b. Henry Company	EPS	=	$\$225,000 \div 90,000$	=	\$2.50
	P/E	=	$\$45 \div \2.50	=	18 times
Mayer Services	EPS	=	$\$50,000 \div 15,000$	=	\$3.33
	P/E	=	$\$50 \div \3.33	=	15 times

c. Price paid = Ratio of exchange x Market price of acquirer
 Price paid = $1.25 \times \$45 = \56.25
 P/E = $\$56.25 \div \$3.33 = 16.89$ times

d. New shares issued = $1.25 \times 15,000 = 18,750$
 Total shares = $90,000 + 18,750 = 108,750$
 EPS = $\$275,000 \div 108,750 = \2.529

e. New market price = New EPS x P/E
 = $\$2.529 \times 18 = \45.52

The market price increases due to the higher P/E ratio of the acquiring firm and the fact that the P/E ratio is not expected to change as a result of the acquisition.

17-11 LG 4: Holding Company

a. Total assets controlled: $\$35,000 \div (\$500,000 + \$900,000) = 2.5\%$

b. Outside company's equity ownership:

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$$\$5,250 \div (\$500,000 + \$900,000) = 0.375\%$$

- c. By gaining voting control in a company for a small investment, then using that company to gain voting control in another, a holding company provides control for a relatively small investment.
- d. (a) Total assets controlled:
 $\$35,000 \div (\$500,000 + \$900,000 + \$400,000 + \$50,000 + \$300,000 + \$400,000)$
 $= 1.37\%$
- (b) Outside company's equity ownership: $0.15 \times 1.37\% = .206\%$

17-12 LG 5: Voluntary Settlements

- a. Composition
- b. Extension
- c. Combination

17-13 LG 5: Voluntary Settlements

- a. Extension
- b. Composition (with extension of terms)
- c. Composition
- d. Extension

17-14 LG 5: Voluntary Settlements-Payments

- a. \$75,000 now; composition
- b. \$75,000 in 90 days, \$45,000 in 180 days; composition
- c. \$75,000 in 60 days, \$37,500 in 120 days, \$37,500 in 180 days; extension
- d. \$50,000 now, \$85,000 in 90 days; composition

CHAPTER 17 CASE

Deciding Whether to Acquire or Liquidate Procras Corporation

In this case, the student is asked to analyze two alternatives, acquiring a bankrupt firm or liquidating it to see which makes more sense for Rome Industries.

a. Ratio of exchange in market price:
$$= \frac{.6 \times \$32}{\$30} = .64$$

	<u>Rome</u>	<u>Procras</u>
Earnings per share	\$1.60	\$3.00
Price/earnings ratio	20	10

b. Postmerger EPS:

New shares: $.60 \times 60,000 = 36,000$
 Total shares: $400,000 + 36,000 = 436,000$

EPS:
$$\frac{\$640,000 + \$180,000}{436,000} = \frac{\$820,000}{436,000} = \$1.88$$

c. Expected market price per share: $\$1.88 \times 18.5 = \34.78

d. Change in value if Rome acquires Procras:

Gain in market price per share: $\$34.78 - \$32.00 = \$2.78$
 Increase in value: $\$2.78 \times 436,000 \text{ shares} = \$1,212,000$

e. Claimants' Receipts in Liquidation:

Proceeds from liquidation	<u>\$3,200,000</u>
Payment to trustee	150,000
Intervening period expenses	100,000
Accrued wages	120,000
Customer deposits	60,000
Taxes due	<u>70,000</u>
Funds available for creditors	\$2,700,000
First mortgage	300,000
Second mortgage	<u>200,000</u>
Funds available for general creditors	<u>\$2,200,000</u>

Claims of General Creditors:

<u>Creditor Claims</u>	<u>Amount</u>	<u>Settlement at 50% *</u>
Accounts payable	\$2,700,000	\$1,350,000

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Notes payable - bank	1,300,000	650,000
Unsecured bonds	<u>400,000</u>	<u>200,000</u>
Totals	<u>\$4,400,000</u>	<u>\$2,200,000</u>

$$* \frac{\$2,200,000 \text{ available for creditors}}{\$4,400,000 \text{ creditor claims}} = 50\%$$

- f.** Amount due Rome Industries from a liquidation of Procras:
\$1,900,000 accounts receivable x 50% = \$950,000
- g.** Rome Industries would increase in value \$1,112,000 if it acquires Procras. This exceeds the \$950,000 it would receive in liquidation. The acquisition appears to make sense in terms of "fit," vertical integration achieved, expansion of product lines, etc., so it is the best alternative. (However, management should feel confident that it has adequate resources in terms of management expertise and capital funds so that its expectations for Procras' future earnings are realistic and achievable.)
- h.** The merger would be a better alternative for the common stockholders, who would receive .6 shares of Rome Industries, a profitable company, per Procras share. Under the liquidation scenario, part **e.** above, the common stockholders would receive nothing because there would be no funds left after creditor claims are paid.