

**Mergers, LBOs, Divestitures,
and Holding Companies**

- Types of mergers
- Merger analysis
- Role of investment bankers
- LBOs, divestitures, and holding companies

Types of Mergers

- Horizontal – one firm combines with another in its line of business
- Vertical - a company merges with supplier
- Congeneric – related enterprises
- Conglomerate – unrelated enterprises combine

What are some valid economic justifications for mergers?

- Synergy: Value of the whole exceeds sum of the parts. Could arise from:
 - Operating economies
 - Financial economies
 - Differential management efficiency
 - Taxes (use accumulated losses)
- (More...)

- Break-up value: Assets would be more valuable if broken up and sold to other companies.

What are some questionable reasons for mergers?

- Diversification
- Purchase of assets at below replacement cost
- Acquire other firms to increase size, thus making it more difficult to be acquired

Differentiate between hostile and friendly mergers

- Friendly merger:
 - The merger is supported by the managements of both firms.

(More...)

■ **Hostile merger:**

- **Target firm's management resists the merger.**
- **Acquirer must go directly to the target firm's stockholders, try to get 51% to tender their shares.**
- **Often, mergers that start out hostile end up as friendly, when offer price is raised.**

DCF Valuation Analysis (In Millions)

Cash Flow Statements after Merger Occurs

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
Net sales	\$60.0	\$90.0	\$112.5	\$127.5
Cost of goods sold (60%)	36.0	54.0	67.5	76.5
Selling/admin. expenses	4.5	6.0	7.5	9.0
Interest expense	<u>3.0</u>	<u>4.5</u>	<u>4.5</u>	<u>6.0</u>
EBT	\$16.5	\$25.5	\$33.0	\$36.0
Taxes (40%)	<u>6.6</u>	<u>10.2</u>	<u>13.2</u>	<u>14.4</u>
Net income	\$9.9	\$15.3	\$19.8	\$21.6
Retentions	<u>0.0</u>	<u>7.5</u>	<u>6.0</u>	<u>4.5</u>
Cash flow	<u>\$9.9</u>	<u>\$7.8</u>	<u>\$13.8</u>	<u>\$17.1</u>

Conceptually, what is the appropriate discount rate to apply to the target's cash flows?

- **Estimated cash flows are residuals that belong to the shareholders of the acquiring firm.**
- **They are riskier than the typical capital budgeting cash flows, because including fixed interest charges increases the volatility.**

(More...)

- Because the cash flows are equity flows, they should be discounted using a cost of equity rather than an overall cost of capital.
- Note that the cash flows reflect the target's business risk, not the acquiring company's.
- However, if the merger will affect the target's leverage and tax rate, then it will affect its financial risk.

Discount Rate Calculation

$$\begin{aligned}
 k_{s(\text{Target})} &= k_{RF} + (k_M - k_{RF})b_{\text{Target}} \\
 &= 9\% + (4\%)1.3 = 14.2\%.
 \end{aligned}$$

How much faith should we place in the discount rate estimate?

- Not much, because:
 - The 1.3 beta is an estimate.
 - Historical betas are questionable.
 - The market risk premium is an estimate.
 - The CAPM is based on questionable assumptions.

Discount Rate Calculation

$$\begin{aligned} \text{Terminal value} &= \frac{(2002 \text{ Cash flow})(1+g)}{k_s - g} \\ &= \frac{\$17.1(1.06)}{0.142 - 0.06} \\ &= \$221.0 \text{ million.} \end{aligned}$$

What Is the Value of the Target Firm? (In Millions)

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
Annual cash flow	\$9.9	\$7.8	\$13.8	\$ 17.1
Terminal value				<u>221.0</u>
Net cash flow	<u>\$9.9</u>	<u>\$7.8</u>	<u>\$13.8</u>	<u>\$238.1</u>

$$\begin{aligned} \text{Value} &= \frac{\$9.9}{(1.142)^1} + \frac{\$7.8}{(1.142)^2} + \frac{\$13.8}{(1.142)^3} + \frac{\$238.1}{(1.142)^4} \\ &= \$163.9 \text{ million.} \end{aligned}$$

Would another potential acquirer obtain the same value?

- No. The cash flow estimates would be different, both due to forecasting inaccuracies and to differential synergies.
- Further, a different beta estimate, financing mix, or tax rate would change the discount rate.

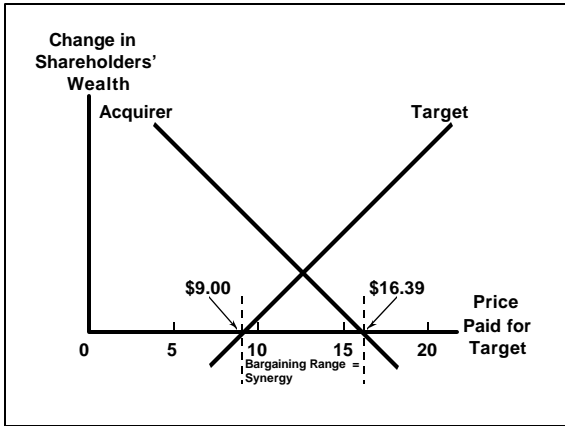
Assume the target company has 10 million shares outstanding. The stock last traded at \$9 per share, which reflects the target's value on a stand-alone basis. How much should the acquiring firm offer?

Estimate of target's value = \$163.9 million
Target's current value = \$ 90.0 million
Merger premium = \$ 73.9 million

Presumably, the target's value is increased by \$73.9 million due to merger synergies, although realizing such synergies has been problematic in many mergers.

(More...)

- The offer could range from \$9 to $\$163.9/10 = \16.39 per share.
- At \$9, all merger benefits would go to the acquiring firm's shareholders.
- At \$16.39, all value added would go to the target firm's shareholders.
- The graph on the next slide summarizes the situation.



Points About Graph

- Nothing magic about crossover price.
- Actual price would be determined by bargaining. Higher if target is in better bargaining position, lower if acquirer is.
- If target is good fit for many acquirers, other firms will come in, price will be bid up. If not, could be close to \$9. (More...)

- Acquirer might want to make high "preemptive" bid to ward off other bidders, or low bid and then plan to go up. Strategy is important.
- Do target's managers have 51% of stock and want to remain in control?
- What kind of personal deal will target's managers get?

Assuming a market multiple of 5-6 times EBITDA, use the market multiple method to value the stock.

1999 EBITDA = \$ 19.50 million

2002 EBITDA = 42.00

\$ 61.50 million

Divided by 2 = Average = \$ 30.75 million

5 x Avg. EBITDA = \$153.75 million

6 x Avg. EBITDA = \$184.50 million

Which valuation method is better, DCF or market multiple?

Both methods have significant implementation problems.

- Confidence in DCF cash flow forecasts and discount rate is often low.
- Validity of market multiple method depends on comparability of firms and ability of EBITDA to capture synergies.
- Judgment is key to final valuation.

Do mergers really create value?

- According to empirical evidence, acquisitions do create value as a result of economies of scale, other synergies, and/or better management.
- Shareholders of target firms reap most of the benefits, that is, the final price is close to full value.
 - Target management can always say no.
 - Competing bidders often push up prices.

What are the two methods of accounting for mergers?

■ **Pooling of interests:**

- Assumes a merger among equals.
- New balance sheet is merely the sum of the two existing balance sheets.
- No income statement effects other than summing the two income statements.

(More...)

■ **Purchase:**

- The assets of the acquired firm are “written up” to reflect purchase price if it is greater than the net asset value.
- Goodwill is often created, which appears as an asset on the balance sheet.
- Common equity account is increased to balance assets and claims.
- Goodwill is amortized and expensed over time, thus reducing future reported earnings.

What are some merger-related activities of investment bankers?

- Identifying targets
- Arranging mergers
- Developing defensive tactics
- Establishing a fair value
- Financing mergers
- Arbitrage operations

What is a leveraged buyout (LBO)?

- In an LBO, a small group of investors, normally including management, buys all of the publicly held stock, and hence takes the firm private.
- Purchase often financed with debt.
- After operating privately for a number of years, investors take the firm public to “cash out.”

What are the advantages and disadvantages of going private?

- Advantages:
 - Administrative cost savings
 - Increased managerial incentives
 - Increased managerial flexibility
 - Increased shareholder participation
- Disadvantages:
 - Limited access to equity capital
 - No way to capture return on investment

What are the major types of divestitures?

- Sale of an entire subsidiary to another firm.
- Spinning off a corporate subsidiary by giving the stock to existing shareholders.
- Carving out a corporate subsidiary by selling a minority interest.
- Outright liquidation of assets.

What motivates firms to divest assets?

- Subsidiary worth more to buyer than when operated by current owner.
- To settle antitrust issues.
- Subsidiary's value increased if it operates independently.
- To change strategic direction.
- To shed money losers.
- To get needed cash when distressed.

What are holding companies?

- A holding company is a corporation formed for the sole purpose of owning the stocks of other companies.
- In a typical holding company, the subsidiary companies issue their own debt, but their equity is held by the holding company, which, in turn, sells stock to individual investors.

What are the advantages and disadvantages of holding companies?

- **Advantages:**
 - Control with fractional ownership.
 - Isolation of risks.
- **Disadvantages:**
 - Partial multiple taxation.
 - Ease of enforced dissolution.
