CHAPTER 32
Mergers

Answers to Practice Questions

1. Answers here will vary, depending on student choice.

2. a. This is a version of the diversification argument. The high interest rates reflect the risk inherent in the volatile industry. However, if the merger allows increased borrowing and provides increased value from tax shields, there will be a net gain.
   
b. The P/E ratio does not determine earnings. The efficient markets hypothesis suggests that investors will be able to see beyond the ratio to the economics of the merger.
   
c. There will still be a wealth transfer from the acquiring shareholders to the target shareholders.

3. Suppose the market value of the acquiring firm is $150 million and the value of the firm with a merger is $200 million. If the probability of a merger is 70%, then the market value of the firm pre-merger could be:

\[
(150 \times 0.3) + (200 \times 0.7) = 185 \text{ million}
\]

If the acquiring managers used this value, they would underestimate the value of the acquisition.

4. a. Use the perpetual growth model of stock valuation to find the appropriate discount rate (r) for the common stock of Dietech (Company B) and Enbonpoint (Company A), respectively:

\[
\frac{5.28}{r - 0.025} = 85 \Rightarrow r = 0.0871 \approx 8.71\%
\]

\[
\frac{3.60}{r - 0.025} = 60 \Rightarrow r = 0.0850 \approx 8.50\%
\]

Therefore, the appropriate discount rate for the combined company is approximately 8.60%.
Under new management, the value of the combination (AB) is determined by first computing the earnings for AB:

\[[(€8.80 \times 5.5 \text{ million}) + (€6 \times 10 \text{ million})] \times 1.15 = €124.660 \text{ million}\]

Next, we note that the payout ratio for each firm is 60%, so that dividends for AB equal:

\[€124.660 \text{ million} \times 0.60 = €74.796 \text{ million}\]

Therefore, the value of AB is:

\[
\frac{74.796}{0.086 - 0.025} = 1,226.164 \text{ or } €1,226,164,000
\]

We now calculate the gain from the merger:

\[\text{Gain} = \text{PV}_{AB} - (\text{PV}_A + \text{PV}_B)\]

\[\text{Gain} = €1,226,164,000 - (€650,000,000 + €467,500,000) = €108,664,000\]

b. Because this is a cash acquisition:

\[\text{Cost} = \text{Cash Paid} - \text{PV}_B = €650,000,000 - €467,500,000 = €182,500,000\]

c. Because this acquisition is financed with stock, we have to take into consideration the effect of the merger on the stock price of Enbonpoint. After the merger, there will be 19.075 million shares outstanding. Hence, the share price will be:

\[€1,226,164,000/19,075,000 = €64.28\]

Therefore:

\[\text{Cost} = (€64.28 \times 9,075,000) - (€85 \times 5,500,000) = €115,841,000\]

5. It is highly unlikely that the real estate’s hidden value would be sufficient reason to launch a takeover bid. If Enbonpoint’s treasurer is correct in her belief that the real estate’s value is not reflected in Dietech’s stock price, then certainly Dietech’s management is also aware of this fact. Consequently, it would be virtually impossible for Enbonpoint to acquire Dietech stock at its current market price. Enbonpoint would have to pay a higher price that does reflect the real estate’s currently hidden value, which then produces a benefit for the shareholders of Dietech who would realize the additional value. The shareholders of Enbonpoint would be paying market value for the real estate as part of the higher price of acquiring Dietech and thus would not realize any gain from the acquisition.
6. a. We complete the table, beginning with:
   
   \[
   \begin{align*}
   \text{Total market value} &= 4,000,000 + 5,000,000 = 9,000,000 \\
   \text{Total earnings} &= 200,000 + 500,000 = 700,000 \\
   \end{align*}
   \]

   Earnings per share equal to \$2.67 implies that the number of shares outstanding is: \((700,000/2.67) = 262,172\). The price per share is:
   
   \[
   \frac{9,000,000}{262,172} = 34.33
   \]

   The price-earnings ratio is: \((34.33/2.67) = 12.9\)

   
   
   b. World Enterprises issued \((262,172 – 100,000) = 162,272\) new shares in order to take over Wheelrim and Axle, which had 200,000 shares outstanding. Thus, \((162,172/200,000) = 0.81\) shares of World Enterprises were exchanged for each share of Wheelrim and Axle.

   c. World Enterprises paid a total of \((162,172 \times 34.33) = 5,567,365\) for a firm worth \$5,000,000. Thus, the cost is:
   
   \[
   5,567,365 – 5,000,000 = 567,365
   \]

   d. The change in market value will be a decrease of \$567,365.

7. The common theme in Pickens’s attempts was to force management to operate the businesses in a way that maximized shareholders’ wealth. Through take-over attempts, Pickens forced management to re-examine operations and to find ways to cut operating costs, eliminate negative NPV projects and return cash to the shareholders. This usually involved share repurchases which increased the market value of the firm. On the whole, this is an example of the market disciplining a firm to become more efficient.

8. The decline of the dollar increases the value of a U.S. company’s dollar earnings to a foreign buyer. In other words, the foreign buyer can obtain the U.S. dollar earnings at a lower cost, measured in the foreign currency, than prior to the decline, so a foreign takeover of a U.S. company appears more desirable to the foreign buyer. However, as discussed in Chapter 28 (Managing International Risks), this does not necessarily indicate that the foreign buyer should go ahead with the acquisition. The desirability of the acquisition must be evaluated as two independent decisions: first, whether the acquisition, independent of changes in exchange rates, is a positive NPV investment; and, second, whether the decline of the dollar indicates that the foreign buyer would benefit from the change in exchange rates. If the apparent desirability of the acquisition is, in reality, a consequence of the decline in the U.S. dollar, the foreign buyer would be better off by taking advantage of the dollar’s decline in the currency markets without going ahead with the acquisition.
9. The difference in ownership should increase the frequency of mergers and acquisitions. Often, attempts by the management of a takeover target to resist the acquisition are not consistent with the best interests of the shareholders of the target firm. In these situations, takeover defenses are used to protect the position of the management of the target firm, not the interests of the shareholders. Major shareholders, such as institutional investors, can apply pressure on management to accept a takeover bid that is beneficial to the shareholders. An example is the attempted takeover of AMP by AlliedSignal. The majority of AMP’s shares were owned by institutional investors with large stakes in AMP. These institutional investors, led by the College Retirement Equities Fund, pressured AMP management, which ultimately accepted a takeover bid that was beneficial to AMP’s shareholders. The greater number of European firms with a single large shareholder increases the likelihood that shareholders will respond to a takeover bid in the same manner.
Challenge Questions

1. Answers here will vary, depending on student choice.

2. Answers here will vary, depending on one’s views of the proper role of government, as well as one’s views of the role of financial markets.