Module 4 Practice Quiz 1

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Correct

1 / 1 points

1. Read the following explanations for mergers

* Merger 1: Our company is acquiring a highly profitable target in an unrelated industry. While there are no synergies associated with this merger, the risk diversification that it provides is beneficial for our company.
* Merger 2: Our company is acquiring a moderately profitable target that is slightly undervalued in the market. We expect the acquisition to increase revenues and decrease costs. The acquisition will be financed with stock, and we expect a slightly negative effect on earnings-per-share.

Which of the following statements is not correct?

1. Risk diversification is not a good rationale for an M&A deal.
2. **Merger 2 should not be pursued since earnings-per-share is expected to decrease.**

**Correct Response**

Merger 2 definitely looks better since there are gains in operating performance and the target appears undervalued. The decrease in EPS should be irrelevant. Risk diversification is a bad reason to do an M&A deal.

1. Merger 1 does not add shareholder value because there are no synergies.
2. It looks as if merger 2 is based on real synergies and could increase shareholder wealth.

Correct

1 / 1 points

2. Consider the following situation in which firm A acquires firm B in a one-for-one stock deal:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Firm A | Firm B | Merged Firm |
| Earnings | 100 | 40 | 160 |
| # shares | 50 | 40 | 90 |
| Price/share | 30 | 30 |  |
| EPS | 2.00 | 1.00 | 1.78 |
| P/E | 15 | 30 |  |

Is the following statement true or false?

Despite the positive impact of the merger in total earnings, this acquisition is bad for the shareholders of the acquirer because it has a dilutive effect on earnings-per-share.

1. True
2. **False**

**Correct Response**

Based on these data, the merger looks good because there are synergistic effects on profits (profits are going up from 140 to 160). The decline in EPS should be irrelevant.

Correct

1 / 1 points

3. Caterpillar recently acquired Bucyrus for 7.6 billion dollars. Bucyrus value prior to the acquisition was 5.8 billion dollars. The market reacted positively to the acquisition, increasing the share price of both Caterpillar and Bucyrus. Based on this data, what is your estimate for the value of the synergies associated with this acquisition?

1. We do not have sufficient information to answer this question.
2. **More than 1.8 billion dollars**

**Correct Response**

Since the market increased the stock price of Caterpillar, the market believes that the deal was good for the company. In other words, even though Caterpillar paid a premium of 1.8 billion dollars, the market believes that the merger’s synergies are worth more than 1.8 billion dollars for the company.

1. More than 7.6 billion dollars
2. More than 5.6 billion dollars

Correct

1 / 1 points

4. A CFO is considering an acquisition of a target that is currently worth 2.5 billion dollars. The acquisition will produce annual after-tax cost savings of 50 million dollars. This annual cost savings is expected to begin in two years and to grow at the rate of inflation (assume it is 1%). In addition, the CFO expects that the acquisition will create an after-tax integration cost of 150 million dollars. Assume the integration cost will occur one year from now. The current discount rate of the acquirer is 8%.

The NPV of the synergies associated with this acquisition is \_\_\_\_\_\_\_\_\_.

1. -139
2. 727
3. **522**

**Correct Response**

The after-tax cost savings starts in two years, so their present value is

PV of cost savings = (50/ (8% - 1%)) / (1 + 8%) = 661

The integration cost happens in one year, so

PV of integration cost = 150 / (1 + 8%) = 139

Therefore, the NPV of the synergies is 661 - 139 = 522 million

1. 661

Correct

1 / 1 points

5. A CFO is considering an acquisition of a target that is currently worth 2.5 billion dollars. The acquisition will produce annual after-tax cost savings of 50 million dollars. This annual cost savings is expected to begin in two years and to grow at the rate of inflation (assume it is 1%). In addition, the CFO expects that the acquisition will create an after-tax integration cost of 150 million dollars. Assume the integration cost will occur one year from now. The current discount rate of the acquirer is 8%.

Which of the following values would not be a reasonable price to offer to the target?

1. 2.7 billion
2. 2.9 billion
3. **3.1 billion**

**Correct Response**

The acquirer should pay less than the value of target + value of synergies, which is approximately 3 billion. Thus, 3.1 billion is too high.

1. 2.6 billion

Correct

1 / 1 points

6. A company that has equity value of 50 billion dollars is proposing an acquisition of a competitor in the same industry whose equity is worth 40 billion dollars. The synergies associated with the merger have been estimated to be equal to 10 billion dollars.

How much should the acquirer pay for the target in this case?

1. Nothing, this is a bad deal for the acquirer.
2. 50 billion dollars
3. **Between 40 and 50 billion dollars**

**Correct Response**

Since synergies are 10 billion, the premium paid to the acquirer must be positive but lower than 10 billion. Thus, the range for prices is between 40 and 50 billion dollars.

1. Less than 40 billion dollars

Correct

1 / 1 points

7. Suppose that the acquirer has 5 billion shares outstanding, and the target has 4 billion shares outstanding. Assume that the acquirer is paying a 25% premium for the target (50 billion for the equity) and that the acquirer stock price will stay at 10 dollars a share. What should be the exchange ratio for this merger in a stock deal?

1. **1.25**

**Correct Response**

The price for the deal is $12.5 a share (25% premium over the current target stock price which is $10 a share).

$12.5 = Acquirer stock price \* Exchange ratio

Thus, the exchange ratio = 12.5 / 10 = 1.25.

1. 1
2. 0.8
3. 1.8

Correct

1 / 1 points

8. Which of the following statements is clearly incorrect?

1. If a company goes through a leveraged buyout, its stock may be delisted from the major exchanges.
2. One important characteristic of a leveraged buyout (LBO) is that the acquirer is typically not another company in the same or a related industry.
3. Many LBO deals do not create synergies, and thus, they must be motivated by other factors such as undervaluation of the target company.
4. **Leveraged buyouts are financed mostly with equity issued by the acquiring company.**

**Correct Response**

LBOs are typically financed mostly with new debt and paid for in cash, so the wrong option is that leveraged buyouts are financed mostly with equity issued by the acquiring company.

Correct

1 / 1 points

9. Almeida and partners (a private equity firm) is considering a LBO of Example Inc.,which has an equity value of 15B dollars. Example Inc. requires a 20% premium to complete the deal. Almeida and partners has 2B in cash to finance the deal and is planning to finance the rest with a new bank loan. The plan is to buy 100% of the shares of Example Inc. and take it private. Almeida and partners will assume all the existing debt of Example Inc. (existing debt is equal to 5B). Example Inc. has no cash in its balance sheet.

The new bank loan that Almeida and partners needs to complete this deal is equal to \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. 16 B

**Correct Response**

Since the premium is 20%, Almeida and partners needs to pay 18B dollars for the equity of Example Inc. The sources of funds are the 2B in cash and the new bank loan. Thus, the new bank loan is equal to 16B.

1. 22 B
2. 18 B
3. 15 B

Correct

1 / 1 points

10. Almeida and partners (a private equity firm) is considering a LBO of Example Inc.,which has an equity value of 15B dollars. Example Inc. requires a 20% premium to complete the deal. Almeida and partners has 2B in cash to finance the deal and is planning to finance the rest with a new bank loan. The plan is to buy 100% of the shares of Example Inc. and take it private. Almeida and partners will assume all the existing debt of Example Inc. (existing debt is equal to 5B). Example Inc. has no cash in its balance sheet.

What will happen to Example Inc.'s leverage ration (define it as Debt/(Debt + Equity)) as a result of this deal?

1. It goes from 25% to 80%.
2. **It goes from 25% to 87.5%.**

**Correct Response**

The current leverage ratio is 5 B / (5 B + 15 B) = 25%. Notice that the market value of assets is 20 B. After the LBO, the market value of assets will increase by 20% (to 24 B). In addition, we need to include the new bank loan in the balance sheet, so the new balance sheet will be:

|  |  |
| --- | --- |
| Assets | Debt |
| 24 B | 5 B + 16 B = 21 B |
|  | Equity |
|  | 24 B - 21 B = 3 B |

Thus, the leverage ratio goes to 21 B/24 B = 87.5%

1. It goes from 33% to 80%.
2. It goes from 33% to 87.5%.