

# **CFA LEARNING OUTCOMES DECODED**

In our series *Learning Outcomes Decoded* we break down a single Learning Outcome Statement (LOS) from the CFA level 1 curriculum. This article is written by Mark St. Marie, CFA, a member of the CFA team at the Princeton Review. He has extensive experience working both as an equity analyst on the sell-side and as an equity analyst, trader, and portfolio manager on the buy-side.

## CORPORATE ISSUERS: MEASURES OF LEVERAGE

**LOS: Define and explain leverage, business risk, sales risk, operating risk, and financial risk and classify a risk**

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This LOS highlights the importance of defining and explaining leverage as well as its effects on the business and financial risks that exist in companies. These risks vary widely among companies depending on the general nature of their business and choices that are made by management and the board of directors regarding the use and degree of leverage.

**Leverage** refers to the effect of fixed costs on the business (operating leverage) and financial risks of a company (financial leverage).

The effects of a company's *operating leverage* are derived from the fixed operating expenses of a company, such as salaries, depreciation, and rent.

The effects of a company's *financial leverage* are derived from a company's fixed financing costs (interest expense). A company has the option to borrow money (debt) to increase the potential return on its investments. Companies choose to issue debt instead of equity because debt is not dilutive to existing shareholders. While interest payments on debt lower a company's net income, this effect is somewhat attenuated because interest paid on the debt is tax deductible.

A company's *total leverage* is the combination of the effects of operating leverage and financial leverage on its business and financial risk.

**Business risk** is the variability a company's operating leverage has on EBIT (earnings from operations). Business risk is comprised of sales risk and operating risk.

*Sales risk* is determined by the uncertainty of a company's total revenue, which is a direct result of sales prices and unit volumes. This risk refers to the potential for a company's sales to fall short of expectations due to changes in consumer demand, increased competition, or other internal and external issues.

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*Operating risk* is determined by the company's operating cost structure. A company with high fixed costs has greater operating leverage because of its inability to quickly lower these costs in reaction (and/or in proportion) to a drop in revenue.

**Financial risk** is the variability of a company's earnings due to its fixed interest expenses. A company with a high debt ratio and interest expense has greater financial leverage because it is unable to lower its fixed interest costs in reaction (and/or in proportion) to a drop in revenue.

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### PRACTICE QUESTION

Which of the following actions is *least likely* to increase a company's overall leverage?

- A. Issuing new fixed interest rate senior bonds
- B. Increasing employee headcount due to increasing sales of a new line of products
- C. Reducing prices of older model products, selling the machinery used to manufacture these products, and purchasing new machinery with cash that will be used to produce newer models

**C is correct.** Reducing prices of older model products would likely reduce sales but would not have an impact on a company's overall leverage. While depreciation expense could increase due to the purchase of new machinery, the sale of older machinery could offset this increase. Information is not provided as to the net impact. Also, the new machinery was purchased with cash, and there is no mention of the company issuing new fixed interest rate debt. Therefore, financial leverage has not been increased.

A is incorrect. Issuing new fixed interest rate senior bonds will *most likely* result in higher financial leverage, contributing to higher overall leverage.

B is incorrect. Increasing employee headcount results in higher fixed operating costs, which causes an increase in operating (and thus overall) leverage. While an increase in sales of new products may mitigate the increased headcount *effect* on EBIT, the company's overall leverage and thus its operating *risk* is still increased.