25.1: Derivatives and Their Functions

Learning Objectives

- What are financial derivatives and what economic needs do they fulfill?

Financial derivatives are special types of **financial instruments**, the prices of which are ultimately *derived from* the price or performance of some underlying **asset**. Investors use derivatives to hedge (*decrease* **return volatility**) or to speculate (*increase the volatility of returns*).

Although often derided in the press and movies, *derivatives are inherently neither good nor bad, they are merely tools used to limit losses (hedge) or to multiply gains and losses (speculate)*. Speculation has a bad rep but in fact it makes hedging possible because *investors can hedge only if they can find a speculator willing to assume the risks that they wish to eschew*.

Ultimately, the prices of derivatives are a function of supply and demand, both of which are subject to valuation models too mathematically complex to address here. The basic forms and functions of the four main types of derivatives—forwards, futures, options, and swaps—are easily narrated and understood, however, and form the basis of this chapter.

Stop and Think Box

If you could, would you receive a guaranteed grade of B for this course? Or would you rather have a chance of receiving an A even if that meant that you might fail the course?

If you take the guaranteed B, you are hedging or reducing your return (grade) variability. If you are willing to accept an A or an F, you are acting like a speculator and may end up on the dean's list or on academic probation. Neither choice is wrong or bad but is merely a tool by which you can achieve your preferences.

KEY TAKEAWAYS

- Derivatives are instruments, the price of which derives from the price or performance of some underlying asset.
- Derivatives can be used to hedge (reduce risk) or to speculate (increase risk).
- Derivatives are just tools that investors can use to increase or decrease return volatility and hence are not inherently bad. Speculation is the obverse of hedging, which would be impossible to do without speculators serving as counterparties.