

# Chapter 9

## Mechanics of Options Markets

### Practice Questions

#### **Consolidate**

##### **Problem 9.8**

*Explain why an American option is always worth at least as much as a European option on the same asset with the same strike price and exercise date.*

##### **Problem 9.9**

*Explain why an American option is always worth at least as much as its intrinsic value.*

##### **Problem 9.11**

*Suppose that a European call option to buy a share of Rio Tinto for AUD 100.00 costs AUD 5.00 and is held until maturity. Under what circumstances will the holder of the option make a profit? Under what circumstances will the option be exercised? Draw a diagram illustrating how the profit from a long position in the option depends on the stock price at maturity of the option.*

##### **Problem 9.12**

*Suppose that a European put option to sell a share of BHP for AUD 60 costs AUD 8 and is held until maturity. Under what circumstances will the seller of the option (the party with the short position) make a profit? Under what circumstances will the option be exercised? Draw a diagram illustrating how the profit from a short position in the option depends on the stock price at maturity of the option.*

##### **Problem 9.13**

*A trader buys a call option to buy a share of BHP with a strike price of AUD 45 and a put option to sell a share of BHP with a strike price of AUD 40. Both options have the same maturity. The call costs AUD 3 and the put costs AUD 4. Draw a diagram showing the variation of the trader's profit with the BHP stock price.*

**Problem 9.18**

*The treasurer of a corporation is trying to choose between options and forward contracts to hedge the corporation's foreign exchange risk. Discuss the advantages and disadvantages of each.*