

Corporate Finance, Module 20: "Introduction to Options"

Corporate finance module 20: Readings for Eleventh Edition

(The attached PDF file has better formatting.)

The page numbers here are for the *eleventh* edition of Brealey and Myers. You may also use the seventh, eighth, ninth, or tenth editions of this text. The page numbers for earlier editions are in separate postings. The substantive changes in the textbook are slight among these editions, but the final exam problems are based on the eleventh edition.

{The Brealey and Myers textbook is excellent. We say to read certain sections and to skip others. This does not mean that certain sections are better; it means that the homework assignments and exam problems are based on the sections that you must read for this course. Some of the skipped sections are fascinating, but they are not tested.}

Modules 20, 21, 22, and 23 cover options.

- Module 20 is an introduction to options; puts, calls, and put call parity.
- Module 21 covers basic pricing techniques: options deltas and binomial trees.
- Module 22 covers real options: follow-on investments, timing, and abandonment.
- Module 23 covers advanced topics: risky bonds, Black-Scholes, and American options.

Read the introduction on pages 512-513. This introduction covers topics in all four of the options modules for this course. The options discussed on page 512, from "Many capital investments ..." through "... to decommission an offshore oil platform" (on page 513) are covered in real options.

Read section 20.1, "Calls, Puts, and Shares" on pages 513-517. The sections are cumulative: to understand pages 518-519, make sure the previous pages are clear to you. Read the sub-section "Position Diagrams Are Not Profit Diagrams" on pages 516-517. Review Figure 21.3 on page 516; be sure to understand (i) why the horizontal line is above or below the x-axis by the amount of the option premium and (ii) why the break-even point is more or less than the strike price.

Read section 20.2, "Financial Alchemy with Options," on pages 517-522. Focus on the put call parity relation at the bottom of page 519: " $c + PV(X) = p + S$." The textbook writes this as "value of call + present value of exercise price = value of put + share price." The final exam tests this relation. Know this section well: each semester, you can expect about two exam problems that depend on the put call parity relation.

Read section 20.3, "what determines option values," on pages 523-528. Know each line in bold type; you use these relations to solve final exam problems. An exam problem may say that the price of a call option decreased from Monday to Tuesday but the price of the put option on the same stock increased and ask for the possible causes.

Pages 521-522, "spotting the option," deal with real options; you may not grasp the concepts until you complete the module on real options. Skim these two pages now, and come back to them when you study real options.

Read the summary on pages 528-529. Bullet point #3 on the top of page 529 is important.

Problem 2 on page 529 is easy; make sure you can identify the payoff diagrams for any option. In the next module (and on the final exam) you must identify the payoff diagram for any option combination, such as a short call plus a long call.

Review problems 7, 10, and 12 on page 530; expect final exam problems like 7 and 10. Review problems 15, 16, 19, 21, and 22 on page 531; and problems 24, 26, and 27 on page 532.