

Corporate Finance, Module 20: “Introduction to Options”

Required reading:

(The attached PDF file has better formatting.)

Updated: July 6, 2005

{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 boxed introduction on pages 563-564. This introduction covers topics in all four of the options modules for this course. The real options discussed on page 563, from “Second, many capital investments ...” through “... to decommission an oil rig” are covered in real options; they won’t be clear to you until you have completed module 22. The paragraph on page 564 “In fact, we shall see that whenever a company borrows, it creates an option ...” is covered in Module 23. It takes a while to get used to options theory; have patience as you review these modules.

Read section 20.1, “Calls, Puts, and Shares” on pages 564-568. Before reading page 569, make sure the previous pages are clear to you. Then read the sub-section “Position Diagrams Are Not Profit Diagrams” on pages 568-569. Review Figure 20.4 on page 570, and make sure you 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 570-572. Focus on the put call parity relation on page 572: “ $c + PV(X) = p + S$.” The final exam tests this relation.

Pages 573-582 are covered in Module 23. Read these pages now (or at least skim them), but don’t worry if you don’t yet grasp all the concepts. The concepts are difficult; after working through the mathematics of Module 21 and the illustrations in Module 22, these pages are easier.

Read the summary on pages 582-583. Look at practice questions 2, 3, 5, and 6 on page 585 and 11 on page 586. These questions are a good review of the material. Now look at practice questions 13 and 14 on page 586. These two questions test your understanding

of the put call parity relation. It takes a while to get the hang of this relation; post your answer to these two questions on the discussion forum to see if you grasp the method.