



Article Notes

Select another article | [Reading, Time & Task Manager](#) | [Web Notes](#) | [Printer Friendly Version](#)

Inv C14: Bond Prices and Yields - BKM

Section 1. Noteworthy Concepts/Issues within the Article

There have been few substantive changes in content within this chapter, resulting from the release of the 6th edition of the *Investments* text. The bottom of page 458 in the text (bond pricing between coupon dates, page 163 in your manual), and the middle of page 466 in the text (horizon analysis, page 166 in your manual) contains NEW content. Further, some content changes have taken place in remaining sections within the chapter

General Comments

After reading through the chapter and our summary of the chapter, one of the best ways to prepare for CAS questions is to work problems. We have reviewed the concept check questions and recommend that you work the following:

Concept check questions:

Read section 14.2 (pages 162-163 in your manual and 455-459 in the text). Answer concept check question # 2 on page 457 in the text.

Q. Calculate the price of the 30-year, 8% coupon bond for a market interest rate of 3% per half-year. Compare the capital gains for the interest rate decline to the losses incurred when the rate increases to 5%.

A. Using the BA-35 battery calculator, enter the following into the calculator's annuity registers:

[CPT] [PV] (60, 3.0, 40, -, 1000) = 1,276.76, which results in a capital gain of \$276.76. This exceeds the capital loss of \$189.29 (\$1,000 - \$810.71) when the semiannual interest rate increased to 5%. (Alternatively, see the solution on page 485).

Read section 14.3 (pages 164-166 in your manual and 459-466 in the text). Answer concept check question # 5 on page 464 in the text.

Q. A 20-year maturity 9% coupon bond paying coupons semiannually is callable in five years at a call price of \$1,050. The bond currently sells at a yield to maturity of 8%. What is the yield to call?

A. Using the BA-35 battery calculator, enter the following into the calculator's annuity registers:

Step 1: Calculate the PV of the bond. [CPT] [PV] (40, 4.0, 45, -, 1000) = **1,098.96**

Step 2: Calculate the Yield to call: N = 10; PV = **1,098.96**; FV = 1050; PMT = 45; [CPT][%i] = 3.72 %. (Alternatively, see the solution on page 458).

Read section 14.4 (pages 166-167 in your manual and 466-470 in the text). Answer concept check question # 8 on page 470 in the text.

Q. Show that if yield to maturity increases, then holding-period return is less than initial yield. For example, suppose that by the end of the first year, the bond's yield to maturity is 8.5%. Find the 1-year holding-period return and compare it to the bond's initial 8% yield to maturity.

A. See the solution on page 458.

There are excellent end of chapter problems for candidates to work as well, and we encourage candidates to do so.

The learning objectives and knowledge statements are very specific, and so keep these in mind as you review past CAS questions and as you review the questions in the study manual which apply to them as well as the questions at the end of the chapter. Further, reference these concepts to the other 3 articles which reference them in the 3rd column shown in section 2 below.

Section 2. Learning Objectives / Knowledge Statements

C. Fixed Income Securities

Range of weight for Section C: 15-20 percent

Learning Objective: 1. Describe and give examples of various types of fixed income securities, including unique aspects of each.

Knowledge Statement:

- Treasury Notes and Bonds
- Corporate Bonds

Other articles applicable to:

Insurance Securitization (Gorvett, R.W.)

- c. Preferred Stock
- d. Asset-Backed Securities
- e. Catastrophe Bonds
- f. International Bonds
- g. Indexed Bonds (e.g., TIPS)

Learning Objective: 2. Determine the quoted price, cash price, and yield to maturity of U.S. Treasury Bonds and Corporate Bonds.

Knowledge Statement:

- a. Accrued interest
- b. Quoted or Clean price
- c. Sale, Invoice, Cash or Dirty price
- d. Alternative yield measures-current yield, yield to maturity, yield to call, par yield
- e. Prices and yields for Zero Coupon Bonds
- f. Annual, quarterly and continuous compounding
- g. Day count conventions

Other articles applicable to:

- Options C4: Interest Rates (Hull, J.C.)
- Options C6: Interest Rate Futures (Hull, J.C.)

Learning Objective: 3. Calculate the pre-tax and after-tax holding period returns, taking into account taxes associated with the amortization of original issue discount.

Knowledge Statement:

- a. Holding Period Returns
- b. Original Issue Discount

Other articles applicable to:

Learning Objective: 7. Describe the process used to rate the default risk on corporate bonds and the various mechanisms used to limit this risk to investors.

Knowledge Statement:

- a. Methods to estimate bond default probabilities, including Financial Ratios and Altman's Z-Score
- b. Bond indentures including, sinking funds, subordination, dividend restrictions, and collateral

Other articles applicable to:

Learning Objective: 8. Determine the promised (stated) yield and expected yield for Corporate Bonds, taking into account default probabilities and expected recovery rates.

Knowledge Statement:

- a. Promised (stated) yield
- b. Expected yield
- c. Unconditional default probability
- d. Conditional default probability, default intensity or hazard rate
- e. Default premium or yield spread

Other articles applicable to:

- Options C20: Credit Risk (Hull, J.C.)

Section 3. Content Examined

First year on syllabus: 2003

Points Tested Since 2000

2001	2002	2003	2004	2005	2006	3 Yr Avg	5 Yr Avg
--	--	5.00	2.25	3.50	4.00	3.25	2.95

Past CAS Questions

After reviewing the questions in your Study Manual, click on the hyperlinked question number below to test yourself. Further, with your Study Manual in-hand, take the time to rank the questions using the ranking system below. Ranking each question's level of difficulty **only takes a couple of minutes**, and enables you to do two things:

1. You can view a filtered list of questions in your Study Manual which includes only the questions you found most difficult on a per-article basis (use the "limit display" link below),
2. You can dynamically generate a list of only those questions you ranked as "Most Difficult" across a set of articles within a Syllabus Section. This functionality is accessed from the initial [Web Notes page](#) using the "View" link under the "Difficult" heading.

In both cases, this helps to focus your efforts at a later point in time (e.g., 1-2 months) on the questions that you found most challenging.

(Currently showing **All** questions. [Click to limit display to Most Difficult questions](#))

Topic ▾	Yr ▾	Q. No.	Q Type ▾	Pts ▾	Question Ranking (1-3) Easiest to Most Difficult	Avg Rank
Briefly describe the unique features of Reverse Floaters and Treasury Inflation Protection Securities (TIPS)	2003	21	Essay	1	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> Rank it	N/A
Given a 10-yr maturity, 9.0% semiannually coupon bond selling at a YTM of 8.0%, calculate the current yield, and the holding period return.	2003	22	Comp	2	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> Rank it	N/A
Briefly discuss two different bond indenture provisions and how they protect the rights of the bondholders.	2003	24	Essay	2	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> Rank it	N/A
A bond has a current yield of 6.0% and a YTM of 7.0%. Is the bond selling above or below par value?, etc	2004	13	Essay	1	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> Rank it	N/A
A 10-year maturity, 7.0% coupon bond is selling at a YTM of 5.0%. Calculate the current yield and the holding period return.	2004	14	Comp	1.25	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> Rank it	N/A
Given corporate bond info from the WSJ, calculate what would be paid for a GWBC bond on 8/5/05; what does "Est Spread" measures?	2005	15	Comp	1	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> Rank it	N/A
Bond A is callable at 102, Bond B is callable at 106, and Bond C is not callable. List the bonds in order of YTM (from highest to lowest)	2005	18	Essay	1	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> Rank it	N/A
Given information about a 0 coupon bond, determine the investor's after-tax return on the bond if sold at the end of the year.	2005	20	Comp	1.5	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> Rank it	N/A

If hyperlinked questions appear above, you may click the link to view and answer a sample question from a prior year's exam.

Section 4. Your Notes

The text area below allows you to enter notes about the article that you may want to access at a later point while the content within the article is fresh in your mind.

Key concepts:
Key lists:
Key definitions:
Concepts yet untested:

Save