

Answer Outline

ECONOMICS 353 (SECTION 2)
EXERCISE 6: 6 POINTS TOTAL

L. Tesfatsion/Spring 04
DUE: Tuesday, February 24, 2:10pm

****IMPORTANT REMINDER: LATE ASSIGNMENTS CANNOT BE ACCEPTED – NO EXCEPTIONS****

EXERCISE INSTRUCTIONS:

- (1) Please **fill in your name and student ID number** on Side 1 of your bubble sheet and write **353-2 Exercise 6** in the top margin of Side 1.
- (2) Use a number 2 pencil to **mark your answers** on Side 1 of the bubble sheet to the first **FOUR** questions Q1 through Q4, below, which are in multiple choice format.
- (3) The **FIFTH AND SIXTH** questions Q5 and Q6 are Web Browse Exercises. Please put your **name and student ID number** at the top of your answer sheet for Q5 and Q6 along with **353-2 Exercise 6** and **separately** hand in your answer sheet for Q5 and Q6 in addition to your answer bubble sheet for questions Q1 through Q4.
- (4) Each question Q1 through Q6 is worth 1 point.

Q1. The current yield on a coupon bond with a purchase price of \$700, a \$900 face value, annual coupon payments of \$80, and a 3-year maturity is

- A. the present value of the payment stream ($\$80, \$80, \$80 + \900).
- B. the coupon payment \$80 divided by the face value \$900.
- **C.** the coupon payment \$80 divided by the purchase price \$700.
- D. the purchase price \$700 of the bond.
- E. None of the above

Q2. Which of the following statements is/are TRUE for the current yield ic of a coupon bond with coupon payment C , face value F , and maturity N .

- A. For a consol bond, the ic equals the yield to maturity.
- B. For fixed C and F , the ic is a better approximation for the yield to maturity the greater is the bond's time to maturity N .
- C. For fixed C , F , and N , the ic is a better approximation for the yield to maturity the more the bond's purchase price exceeds the face value F .
- D. All of the above statements
- **E.** Only statements A and B

Q3. Letting i denote the current market interest rate (yield to maturity), in which of the following situations would you prefer to be a BORROWER:

- A. $i = 7$ percent and the expected inflation rate = 3 percent
- **B.** $i = 13$ percent and the expected inflation rate = 11 percent
- C. $i = 25$ percent and the expected inflation rate = 20 percent
- D. $i = 2$ percent and the expected inflation rate = -1 percent
- E. $i = 1$ percent and the expected inflation rate = -3 percent

Q4. Referring to the T-Bonds/Notes data reported on page 73 of Mishkin (Chapter 4) from the Wall Street Journal, which of the following statements are TRUE:

- A. These data support the claim that dealers make their profits by posting positive bid-asked spreads for prices.
- B. Bid and asked prices are quoted per \$100 of face value, so numbers less than 100 correspond to prices less than face value and vice versa.
- C. These data support the claim that the coupon rate of a coupon bond is greater than its yield to maturity if and only if the purchase price of the bond is greater than its face value.
- D. Only statements A and B
- **E.** ALL of the above statements

HINT: For answering Web browse questions Q5 and Q6, below, you might want to browse the “Websites Related to Mishkin Chapter 4” linked to the Econ 353 syllabus.

Q5. (WEB BROWSE QUESTION)

Part A: 1/4 Point Who is Alan Greenspan, and why should anyone pay attention to his statements about future interest rates? Explain briefly.

Answer Outline for Part A: Alan Greenspan has been the Chairman of the Board of Governors of the Federal Reserve System (the “Fed”) since his appointment in 1987 by President Reagan. He and the other Governors have the overall responsibility for the conduct of U.S. monetary policy, i.e., the management of the money supply and interest rates for the U.S. (see Mishkin, Chapter 2, p. 12).

Additional Note: Since the early 1990s, the Fed has targeted the Federal Funds rate (the interest rate charged by banks to other banks for overnight loans) as a way of trying to control the whole spectrum of U.S. interest rates for the ultimate purpose of sustaining economic growth and keeping inflation in check. The Fed uses “open market operations” (i.e., the purchase and sale of government securities from and to private-sector investors) to control the monetary base (currency in circulation plus bank reserves) and, through the monetary base, the Federal funds rate.

Part B: 3/4 Point In a statement issued on January 28th, 2004, Alan Greenspan and his colleagues made an announcement that caught nearly everyone on Wall Street by surprise. Many people concluded from this statement that a rise in U.S. interest rates must be in the offing. Explain more carefully what group (headed by Greenspan) issued this statement, and why, and briefly summarize the content that Wall Street found so surprising.

Answer Outline for Part B: The statement on January 28, 2004, was a press release issued by the Federal Open Market Committee (FOMC), the agency of the Federal Reserve Bank directly responsible for the conduct of U.S. monetary policy. Greenspan sits on the FOMC along with all other Governors of the Fed. The press release announced that the FOMC had decided to keep its target for the Federal funds rate at 1 percent. As explained in a “Treasury Watch” follow-up published by *Business Week: Online* on the same day, the problem was a not-so-subtle change in language from previous announcements indicating the FOMC was backing away from its earlier explicit promise to keep interest rates low “for a considerable period.” The immediate reaction was a massive selling in financial markets as holders of bonds and other debt instruments anticipated a rise in interest rates (a fall in prices) and hence capital losses.

Additional Note: As noted by Mishkin (p. 341), many decisions attributed to the “Fed” in the press are actually decisions made by the FOMC. All seven members of the Board of Governors (including Greenspan) are members of the FOMC, in addition to presidents of five Federal Reserve banks (always including the Federal Reserve Bank of New York). The FOMC meets about every six weeks and its statements are watched very closely by financial market participants for indications of future changes in interest rates.

QUESTION Q6 IS ON THE FOLLOWING PAGE.

Q6. (WEB BROWSE QUESTION) As a follow-up to Q5, check whether U.S. interest rates have indeed risen following Alan Greenspan's statement on January 28th by carrying out the following steps:

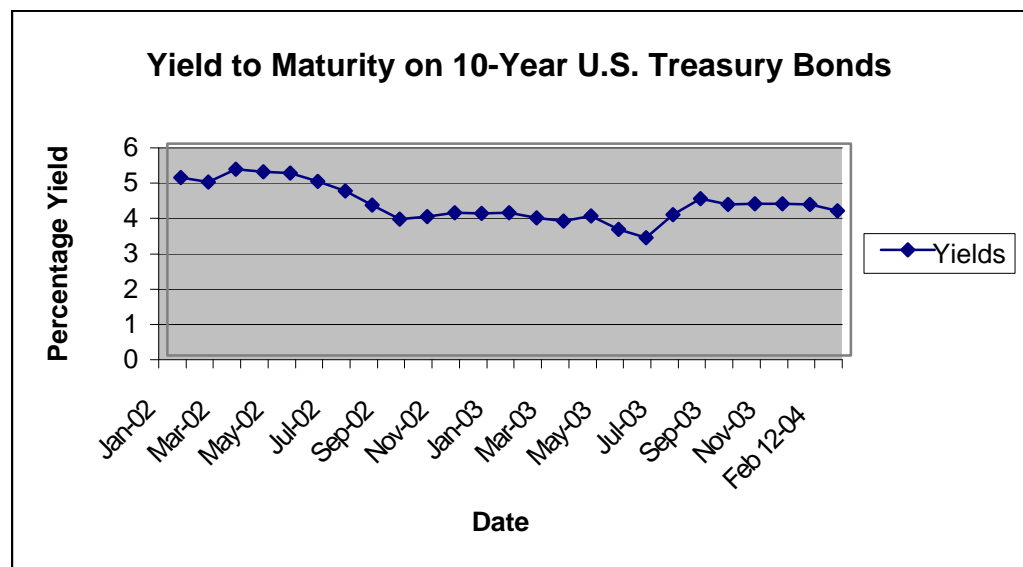
Step 1: Construct a graph indicating the yield to maturity on 10-year U.S. Treasury bonds over the past two years (2002-2003), reported by month (giving 24 data points in total).

Step 2: On the same graph, indicate the yield to maturity on a 10-year U.S. Treasury bond as determined at the close of day for some recent day in February 2004, as recent as you can find. (Indicate on your graph which day).

Step 3: Does your graphed interest rate data indicate that Greenspan's statement has indeed been followed by a rise in U.S. interest rates (at least on 10-year Treasury bonds)? Explain.

Answer Outline for Q6. The graph called for in Steps 1 and 2 appears on the next page, along with data sources. Comparing the plotted yields to maturity on 10-year U.S. Treasury bonds over 2002-2003 (before Greenspan's statement on 1/28/04) with the plotted yield for February 12, 2004 (after Greenspan's statement on 1/28/04), it would certainly *not* appear that yields have risen in any systematic way since Greenspan's statement in January 2004. Rather, the yield on 10-year U.S. Treasury bonds on February 12, 2004 was 4.10, which is actually *lower* than the yield of around 4.27 percent that attained in December 2003 (right before the statement).

Date	10-Year Rate
Jan-02	5.04
Feb-02	4.91
Mar-02	5.28
Apr-02	5.21
May-02	5.16
Jun-02	4.93
Jul-02	4.65
Aug-02	4.26
Sep-02	3.87
Oct-02	3.94
Nov-02	4.05
Dec-02	4.03
Jan-03	4.05
Feb-03	3.9
Mar-03	3.81
Apr-03	3.96
May-03	3.57
Jun-03	3.33
Jul-03	3.98
Aug-03	4.45
Sep-03	4.27
Oct-03	4.29
Nov-03	4.3
Dec-03	4.27
Feb 12-04	4.10



NOTE: Data for 2002-2003 from Federal Reserve Statistical Releases (www.federalreserve.gov/releases/) Section H.15 Selected Interest Rates, Historical Data

NOTE: Data for Feb 12, 2004, from www.federalreserve.gov/releases/h15/update/