

34. What should be the 4-month futures price on a stock index currently standing at 350 ( $r$  is 8% and dividend yield on index is 4% per annum)?
35. A US importer of German cars wants to arrange a forward contract to buy euros in half a year. The interest rates for investments in USD and EUR are 4% and 3%, respectively, the current exchange rate being 0.9834 euros to a dollar. What should be the forward price of euros expressed in dollars? Describe arbitrage strategies if the forward price is (a) 1 USD for 1 EUR and (b) 1.1 USD for 1 EUR.
36. The spot price of silver is \$9 per ounce. The storage costs are \$0.24 per ounce per year payable quarterly in advance. Assuming that interest rates are 10% per annum for all maturities, calculate the futures price of silver for delivery in 9 months.
37. A bank offers a corporate client a choice between borrowing cash and gold at 11% and 2%, respectively, per annum, with annual compounding. (If gold is borrowed, interest must be repaid in gold. Thus, 100 ounces borrowed today would require 102 ounces to be repaid in 1 year.) The risk-free interest rate and the storage costs are 9.25% and 0.5%, respectively, per annum, with continuous compounding. Discuss whether the rate of interest on the gold loan is too high or too low in relation to the rate of interest on the cash loan.
38. A US Treasury bond pays a 7% coupon on Jan 7 and Jul 7. How much interest accrues per \$100 of principal to the bondholder between Jul 7, 2004 and Aug 9, 2004? How would your answer be different if it were a corporate bond?
39. It is Jan 9, 2005. The price of a Treasury bond with a 12% coupon that matures on Oct 12, 2009, is quoted as 102-07. What is the cash price?
40. Suppose that the Treasury bond futures price is 101-12. Which of the following four bonds is cheapest to deliver?

Bond	1	2	3	4
Price	125-05	142-15	115-31	144-02
Conversion Factor	1.2131	1.3792	1.1149	1.4026

41. The futures price for the Jun 2005 CBOT bond futures contract is 118-23.
  - (a) Find the conversion factor for a 10%-coupon bond maturing on Jan 1, 2021.
  - (b) Find the conversion factor for a 7%-coupon bond maturing on Oct 1, 2026.
  - (c) Suppose that the quoted prices of the bonds in (a) and (b) are 169.00 and 136.00, respectively. Which bond is cheaper to deliver?
  - (d) Assuming that the cheapest-to-deliver bond is actually delivered on June 25, what is the cash price received for the bond?
42. It is Jul 30, 2005. The cheapest-to-deliver bond in a Sep 2005 Treasury bond futures contract is a 13% coupon bond, and delivery is expected to be made on Sep 30, 2005. Coupon payments on the bond are made on Feb 4 and Aug 4 each year. The term structure is flat, and the rate of interest with semiannual compounding is 12% pa. The conversion factor of the bond is 1.5. The current bond price is \$110. Calculate the quoted futures price for the contract.