1. A Canada-based investor buys shares of Toronto-Dominion Bank (TD.TO) for C$72.08 on 15 October 2007 with the intent of holding them for a year. The dividend rate was C$2.11 per year. The investor actually sells the shares on 5 November 2007 for C$69.52. The investor notes the following additional facts:

- No dividends were paid between 15 October and 5 November.
- The required return on TD.TO equity was 8.7 percent on an annual basis and 0.161 percent on a weekly basis.

A. State the lengths of the expected and actual holding-periods.

B. Given that TD.TO was fairly priced, calculate the price appreciation return (capital gains yield) anticipated by the investor given his initial expectations and initial expected holding period.

C. Calculate the investor's realized return.

D. Calculate the realized alpha.

2. The estimated betas for AOL Time Warner, J.P. Morgan Chase & Company, and The Boeing Company are 2.50, 1.50, and 0.80, respectively. The risk-free rate of return is 4.35 percent and the equity risk premium is 8.04 percent. Calculate the required rates of return for these three stocks using the CAPM.

3. The estimated factor sensitivities of TerraNova Energy to Fama–French factors and the risk premia associated with those factors are given in the table below:

	Factor Sensitivity	Risk Premium (%)
Market factor	1.20	4.5
Size factor	−0.50	2.7
Value factor	−0.15	4.3

   A. Based on the Fama–French model, calculate the required return for TerraNova Energy using these estimates. Assume that the Treasury bill rate is 4.7 percent.

   B. Describe the expected style characteristics of TerraNova based on its factor sensitivities.

4. Newmont Mining (NEM) has an estimated beta of −0.2. The risk-free rate of return is 4.5 percent, and the equity risk premium is estimated to be 7.5 percent. Using the CAPM, calculate the required rate of return for investors in NEM.

5. The following facts describe Larsen & Toubro Ltd's component costs of capital and capital structure. Based on the information given, calculate Larsen & Toubro's WACC.

Component Costs of Capital	(%)
Cost of equity based on the CAPM:	15.6
Pretax cost of debt:	8.28
Tax rate:	30
Target weight in capital structure:	Equity 80, Debt 20

6. Mohan Gupta je portfolio manager indického akciového fondu a analyzuje hodnotu společnosti Tata Chemicals ltd. (Bomay Stock Exchange TATACHEM). Tara Chemicals is indický hlavním producentem organické chemie a umělých potravinářských doplňků. Gupa usuzuje, že DDM jsou vhodnou skupinou modelů pro ocenění této společnosti. Během posledních 5let (březen 2004 – březen 2008) vyplatila společnost dividendy 5,5; 6,5; 7,0; 8,0 a 9,0 Rs. Tyto dividendy ukazují, že průměrná míra růstu dividendy je 13 procent. Gupa se rozhodl, že při ocenění použije třístupňový model, kdy druhá fáze bude fází lineárního poklesu míry růstu dividendy (prostřednictvím H-modelu). Průměrná míra růstu dividendy v první fázi bude 14 procent a potrvá 6 let, druhá fáze potrvá 10 let a míra růstu v poslední fázi bude 10 procent. Určete aktuální hodnotu společnosti. Požadovaná výnosová míra je 16 procent.

7. Analyzujte akcie společnosti Ansell Limited (Australian Stock Exchange, ANN), jedná se o společnost z oblasti zdravotního průmyslu. Hodnota akcie je 9,74 AD, poslední dividenda činila 0,27 Ad. Očekává se, že dividenda poroste 10 procent v následujících 3 letech a poté 8 procent perpetuitně. Požadovaná výnosová míra je 12 procent. Vypočítejte hodnotu akcie s využitím dvoustupňového modelu a od něj odvozeného H-modelu.

A. Určete hodnotu společnosti za použití dvoustupňového modelu
B. Určete, zda je akcie nadhodnocená, podhodnocené nebo správně oceněná

The following information relates to Questions 37–46

June Withers is analyzing four stocks in the processed food industry as of 31 December 2017. All stocks pay a dividend at the end of each year.

Ukon Corporation

Withers estimates a required rate of return for Ukon Corporation of 8% and notes that the dividend for 2017 was EUR 2.315 per share. Her first valuation approach is a basic two-stage dividend discount model (DDM), with dividends growing at a rate of 5% from 2018 through 2021, after which time dividends will grow at a sustainable rate of 3%. Her second valuation approach is the H-model, assuming that dividend growth of 5% in 2018 declines linearly during the years 2019 through 2021 to the 3% growth rate after 2021. Her dividend growth assumptions are summarized in Exhibit 1.

Exhibit 1. Ukon Corporation Dividend Growth Assumptions, by Model

Model	Time Period	Rate
Two-stage DDM	2018 through 2021	5%
	Beginning 2022	3%
H-model	2018	5%
	2019 through 2021	Declining linearly to 3.5%
	Beginning 2022	3%

Venus Company

Withers has assembled the data on Venus Company in Exhibit 2. After analyzing competitive pressures and financial conditions in the industry, she predicts that Venus Company will lose market share because of new entrants, but will stabilize within a few years. The required rate of return for Venus Company is 8%. Beginning with a per share dividend of USD 3.15 in 2017, she develops two scenarios regarding the growth of dividends of Venus Company. The scenarios are in Exhibit 2 and are summarized as follows:

In Scenario 1, the growth rate will fall in a linear manner over the years 2018 through 2021 from 8% to 4%. Using the H-model, she calculates a value of USD 58.79 per share of Venus Company stock.

In Scenario 2, the growth rate falls from 8% in 2017 to 6% in 2018 and 2019, to 5% in 2020 and 2021, and then to a sustainable rate of 3% for 2022 and beyond.

Exhibit 2. Venus Company Dividend Growth Scenarios

Scenarios	Time Period	Rate
Scenario 1	2018 through 2021	Declining linearly to 4%
	Beginning 2022	Remaining stable at 4%
Scenario 2	2018 and 2019	6%
	2020 and 2021	5%
	Beginning 2022	Remaining stable at 3%

Wakuni Corporation

Withers evaluates Wakuni Corporation and uses recent financial data from Exhibit 3 to calculate a sustainable growth based on the DuPont model. In addition to this estimate, she

performs a sensitivity analysis on the sustainable growth rate whereby the dividend payout ranges from 0% to 10% and the return on equity ranges from 8% to 12%.

Exhibit 3.   Selected Data for Wakuni Corporation (JPY billions)

Net income	43,923
Sales	423,474
Total assets, average during year	486,203
Shareholders' equity, beginning of year	397,925
Dividends paid	1,518

Xavier Corporation

In her analysis of the stock of Xavier Corporation, Withers observes that it has a dividend of USD 2 per share and a stock price of USD 52. Two analyst interns have offered estimates of the company's required rate of return and dividend growth rate, as shown in Exhibit 4.

Exhibit 4.   Xavier Corporation Required Rate of Return and Dividend Growth Rates (Estimates)

	Intern 1	Intern 2
Required rate of return	8.3%	7.8%
Growth rate, first four years	5.0%	4.8%
Growth rate, beyond first four years	3.6%	4.0%

37. Based on Exhibit 1, when Withers applies the first valuation approach to Ukon Corporation, the estimated value of the stock at the end of the first stage represents the:

    a. present value of the dividends beyond year 2021.

    b. present value of the dividends for years 2018 through 2021.

    c. sum of the present value of the dividends for 2018 through 2021 and the present value of dividends beyond year 2021.

38. Using her first valuation approach and Exhibit 1, Withers's forecast of the per share stock value of Ukon Corporation at the end of 2017 should be closest to:

    a. EUR 48.

    b. EUR 50.

    c. EUR 51.

39. Using Withers's assumptions for the H-model and the basic two-stage dividend discount model, the forecasted Ukon stock price at the end of the year 2021 for the H-model should be:

    a. lower than the basic two-stage model.

    b. the same as the basic two-stage model.

    c. higher than the basic two-stage model.

40. Under her Scenario 1 and based on Exhibit 2, the required rate of return that Withers used for Venus Company stock valuation is closest to:

    a. 8.0%.

    b. 9.6%.

    c. 10.0%.

41. Under Scenario 2 and based on Exhibit 2, Withers estimates that the value of the Venus Company stock to be closest to:

    a. USD 69.73.

    b. USD 71.03.

    c. USD 72.98.

42. Using the data in Exhibit 3, Withers can estimate the sustainable growth of the Wakuni Corporation as being closest to:

    a. 10.66%.

    b. 11.04%.

    c. 14.05%.

43. Withers's sensitivity analysis of Wakuni Corporation should produce a range of sustainable growth estimates between:

    a. 0.0% and 1.2%.

    b. 7.2% and 12.0%.

c. 8.0% and 13.3%.

44. Based on Exhibit 4 and Intern 1's analysis, Xavier Corporation's sustainable dividend payout ratio is closest to:

a. 43.4%.

b. 44.6%.

c. 56.6%.

45. Based on Exhibit 4, Intern 2 should conclude that the Xavier stock is:

a. underpriced.

b. fairly priced.

c. overpriced.

46. Based on Exhibit 4 and Intern 1's estimate of the required rate of return and the dividend growth rate for the first four years, the growth rate beyond the first four years consistent with the current price of USD 52 is closest to:

a. 3.80%.

b. 4.17%.

c. 4.23%.