Investment Management and Corporate Finance

Tutorial Questions

Topic 2: Fundamentals of Economics

1. Movement along the demand curve for good X occurs due to a change in:
   A. income.
   B. the price of good X.
   C. the price of a substitute for good X.
   D. revenue

2. A wireless phone manufacturer introduced a next-generation phone that received a high level of positive publicity. Despite running several high-speed production assembly lines, the manufacturer is still falling short in meeting demand for the phone nine months after introduction. Which of the following statements is the most plausible explanation for the demand/supply imbalance?
   A. The phone price is low relative to the equilibrium price.
   B. Competitors introduced next-generation phones at a similar price.
   C. Consumer incomes grew faster than the manufacturer anticipated
   D. The economy is currently in a recession.

3. Which of the following statements is the most appropriate description of gross domestic product (GDP)?
   A. The total income earned by all households, firms, and the government whose value can be verified
   B. The total amount spent on all final goods and services produced within the economy during a given period
   C. The total market value of resalable and final goods and services produced within the economy during a given period
   D. The total revenue earned by all companies within the country's borders.

4. Which of the following conditions is least likely to increase a country's GDP?
   A. An increase in net exports
   B. Increased investment in capital goods
   C. Increased government transfer payments
   D. Increase in public sector highway construction projects

5. Which of the following would be included in Malaysian GDP for a given year? The market value of:
   A. grapes grown in Malaysia by US citizens.
   B. electronics made in Japan and sold in Malaysia.
   C. movies produced outside Malaysia by Malaysian filmmakers
   D. All of the above

6. From the beginning to the ending years of a decade, the annual value of final goods and services for country X increased from €100 billion to €300 billion. During that

period, the GDP deflator increased from 111 to 200. Over the decade, real GDP for country X increased by approximately:

A. 50%.
B. 67%.
C. 200%.
D. 400%

7. The numerator of the GDP price deflator reflects:
   A. the value of base year output at current prices.
   B. the value of current year output at current prices.
   C. the value of current year output at base year prices.
   D. the value of base year output at base year prices.

8. Consider the following data for a country X:

Account name	Amount ($ trillions)
Consumption	15.0
Capital consumption allowance	1.5
Government spending	3.8
Imports	1.7
Gross private domestic investment	4.0
Exports	1.5

   Based only on the data given, the gross domestic product and national income are respectively closest to:

   A. 21.1 and 20.6.
   B. 22.6 and 21.1.
   C. 22.8 and 20.8.
   D. 23.5 and 29.6

9. Monetary policy is least likely to include:
   A. setting an inflation rate target.
   B. changing an official interest rate.
   C. enacting a transfer payment program.
   D. a change in inflation targeting focus.

10. Which role is a central bank least likely to assume?
    A. Lender of last resort.
    B. Sole supervisor of banks.
    C. Supplier of the currency.
    D. Setting of monetary policy.

11. Which of the following is the most likely example of a tool of fiscal policy?
    A. Public financing of a power plant.
    B. Regulation of the payment system.
    C. Central bank's purchase of government bonds.
    D. Change in inflation targeting tools.

12. Which of the following best represents a contractionary fiscal policy?
    A. Public spending on a high-speed railway.
    B. A temporary suspension of payroll taxes.
    C. A freeze in discretionary government spending.
    D. Increased government transfers.

Topic 3: Strategic Management

1. Which of the following is NOT one of the three basic corporate level strategies?
   A. Growth strategy
   B. Divestiture strategy
   C. Stability strategy
   D. Retrenchment strategy

2. Which of the following is an example of a retrenchment strategy?
   A. Expanding operations into a new market
   B. Investing in research and development to create new products
   C. Selling off unprofitable business units to focus on core competencies
   D. Maintaining the status quo and continuing with existing business operations

3. Which of the following is NOT one of the three primary business-level strategies?
   A. Cost leadership
   B. Differentiation
   C. Focus
   D. Diversification

4. What is the key attribute of a cost leadership strategy?
   A. Offering unique products or services
   B. Charging premium prices for high-quality offerings
   C. Identifying and exploiting niche markets
   D. Providing products or services at a lower cost than competitors

5. What is the key objective of the focus strategy?
   A. To serve the entire market with a broad range of offerings
   B. To provide offerings that are unique in the market
   C. To target a specific market segment or niche and tailor offerings to meet their needs
   D. To charge premium prices for high quality offerings

6. Which of the following is NOT one of Porter's Five Forces in his framework for analyzing industry competition?
   A. Bargaining power of suppliers
   B. Threat of new entrants
   C. Bargaining power of buyers
   D. Threat of complementary products

7. In the BCG growth-share matrix, what is the term used to describe business units with high market share in a slow-growing industry?
   A. Stars
   B. Cash cows
   C. Dogs
   D. Question marks

8. Which of the following statements about the BCG growth-share matrix is true?
   A. It considers only market growth rate and market share as criteria for classifying SBU's
   B. It offers insights into which businesses are worth investing in and which are not
   C. It provides inputs for strategic planning and decision-making in mature industries
   D. It places equal emphasis on the present and future potential of a business unit.

Financial Analysis Techniques

Case Questions

Statement of Comprehensive Income

	20X2	20X3
Net Sales	156,508	108,249
Cost of Sales	87,846	64,431
Gross Margin	**68,662**	**43,818**
Total Operating Expenses	13,421	10,028
Operating Income	55,241	33,790
Other Income/(Expense), net	522	415
Income before provision for income taxes	55,763	34,205
Provision for Income Taxes	14,030	8,283
Net Income	**41,733**	**25,922**
Statement of Financial Position		
Current Assets		
Cash and cash equivalents	10,746	9,815
Short Term marketable securities	18,383	16,137
Accounts Receivable	10,930	5,369
Inventories	791	776
Other Current Assets	**16,803**	**12,891**
Total Current Assets	**57,653**	**44,988**
Long term marketable securities	92,122	55,618
Property, plant and equipment, net	15,452	7,777
Goodwill	1,135	896
Acquired intangible assets, net	4,224	3,536
Other Assets	5,478	3,556
Total Assets	**176,064**	**116,371**
Current Liabilities		
Accounts Payable	21,175	14,632
Accrued Expenses	11,414	9,247
Deferred Revenue	5,953	4,091
Total Current Liabilities	**38,542**	**27,970**
Deferred Revenue - Non current	2,648	1,686
Other non-current liabilities	16,664	10,100
Total Liabilities	**57,854**	**39,756**
Shareholders Equity		
Common stock: 1,800,000 shares authorised; 939,208 and 929,277 shares issued and outstanding, respectively	16,422	13,331
Retained Earnings	101,289	62,841
Accumulated OCI	499	443
Total Shareholders' Equity	**118,210**	**76,615**
Total Liabilities and Shareholders' Equity	**176,064**	**116,371**
Cash Flow Statements		
Cash Generated by Operating Activities	50,856	37,529
Cash Used in Investing Activities	- 48,227	- 40,419
Cash (used in)/generated by Financing Activities	- 1,698	1,444

Case Question 2

The following financial statements for ABC Berhad are to be used to answer the next 9 questions.

ABC Balance Sheet (As at December 31) (RM'000)

	20X0	20X1
Assets		
Current Assets		
Cash	683	325
Accounts Receivable	1,490	3,599
Inventories	1,415	2,423
Prepaid Expenses	15	13
Total Current Assets	3,603	6,360
Property, Plant and Equipment, Net	1,066	1,541
Other	123	157
Total Assets	4,792	8,058
Liabilities		
Current Liabilities		
Notes Payable to bank	-	875
Current Portion of Long term Debt	38	116
Accounts Payable	485	933
Estimated Income Tax	588	472
Accrued Expenses	576	586
Customer Advance Payments	34	963
Total Current Liabilities	1,721	3,945
Long term Debt	122	179
Obligations under Capitalized Leases	81	131
Total Liabilities	1,924	4,255
Shareholders' Equity		
Common Stock, RM1.00 par Value 1,000,000 shares authorized; 550,000 and 829,000 outstanding, respectively	550	829
Preferred Stock Share, Series A 10%; RM25.0 par value; 25,000 authorized; 20,000 and 18,000 outstanding, respectively	500	450
Additional Paid in Capital	450	575
Retained Earnings	1,368	1,949
Total Shareholders' Equity	2,868	3,803
Total Liabilities and Shareholders' Equity	4,792	8,058

ABC Income Statement (As at December 31) (RM'000)

	20X0	20X1
Total Revenues	7,831	12,410
Cost of Goods Sold	4,850	8,048
General, administrative and marketing expense	1,531	2,025
Interest Expense	22	78
Total Cost and Expenses	6,403	10,151
Net Income before Tax	1,428	2,259
Income Tax	628	994
Net Income	800	1,265

1. The quick (acid test) ratio for 20X1 is:
    a. .08
    b. .99
    c. 1.26
    d. 1.46

2. The after tax return on assets for 20X1 is:
    a. 15.7%
    b. 16.2%
    c. 20.4%
    d. 22.3%

3. The return on common shareholders' equity for 20X1 is:
    a. 36.4%
    b. 37.7%
    c. 42.7%
    d. 45.6%

4. The times interest charges earned for 20X1 is:
    a. 16.2 x
    b. 17.2 x
    c. 30.0 x
    d. 35.2x

5. The average number of days of inventory on hand for 20X1 is
    a. 56.4 days
    b. 87.0 days
    c. 105.8 days
    d. 109.3 days

6. The earnings per share for 20X1 is
    a. $1.47
    b. $1.53
    c. $1.77
    d. $1.98

7. The inventory turnover ratio for 20X1 is:
    a. 3.32 x
    b. 4.98 x
    c. 4.19 x
    d. 5.23 x

8. The long term debt/total (long-term) capital ratio for 20X1
    a. 4.7%
    b. 4.5%
    c. 7.5%
    d. 8.6%

9. The pretax profit margin on product sales for 20X1 is
    a. 18.2%
    b. 18.7%
    c. 10.5%
    d. 6.5%

10. Comparison of a company's financial results to other peer companies for the same time period is called:
    A. technical analysis.
    B. time-series analysis.
    C. cross-sectional analysis.
    D. fundamental analysis.

11. In order to assess a company's ability to fulfill its long-term obligations, an analyst would most likely examine:
    A. activity ratios.
    B. liquidity ratios.
    C. solvency ratios.
    D. coverage ratios

12. Which ratio would a company most likely use to measure its ability to meet short-term obligations?
    A. Current ratio.
    B. Payables turnover.
    C. Gross profit margin.
    D. Payables days.

13. An analyst is interested in assessing both the efficiency and liquidity of Spherion PLC. The analyst has collected the following data for Spherion:

	FY3	FY2	FY1
Days of inventory on hand	32	34	40
Days sales outstanding	28	25	23
Number of days of payables	40	35	35

Based on this data, what is the analyst least likely to conclude?

A. Inventory management has contributed to improved liquidity.
B. Management of payables has contributed to improved liquidity.
C. Management of receivables has contributed to improved liquidity.
D. Higher days sales outstanding indicates higher tax liabilities.

14. An analyst is evaluating the solvency and liquidity of Apex Manufacturing and has collected the following data (in millions of RM):

	FY5 (RM)	FY4 (RM)	FY3 (RM)
Total debt	2,000	1,900	1,750
Total equity	4,000	4,500	5,000

Which of the following would be the analyst's most likely conclusion?

A. The company is becoming increasingly less solvent, as evidenced by the increase in its debt-to-equity ratio from 0.35 to 0.50 from FY3 to FY5.
B. The company is becoming less liquid, as evidenced by the increase in its debt-to-equity ratio from 0.35 to 0.50 from FY3 to FY5.
C. The company is becoming increasingly more liquid, as evidenced by the increase in its debt-to-equity ratio from 0.35 to 0.50 from FY3 to FY5.
D. The company is becoming increasingly more solvent, as evidenced by the increase in its debt-to-equity ratio from 0.35 to 0.50 from FY3 to FY5.

15. With regard to the data in Question 14, what would be the most reasonable explanation of the financial data?

A. The decline in the company's equity results from a decline in the market value of this company's common shares.
B. The RM250 increase in the company's debt from FY3 to FY5 indicates that lenders are viewing the company as increasingly creditworthy.
C. The decline in the company's equity indicates that the company may be incurring losses, paying dividends greater than income, and/or repurchasing share.
D. The decline in company debt from FY3 to FY5 indicates that equity holders are more optimistic about the company's prospects.

The following information relates to Question 16 – 19

The data in Exhibit 1 appear in the five-year summary of a major international company. A business combination with another major manufacturer took place in FY13.

Financial Statements

Income Statements	FY10	FY11	FY12	FY13	FY14
Revenue	4,390	3,624	3,717	8,167	11,366
Profit before Interest and Taxation	844	700	704	933	1,579
Net Interest Payable	-80	-54	-98	-163	-188
Taxation	-186	-195	-208	-349	-579
Minorities	-94	-99	-105	-125	-167
Profit for the year	484	352	293	296	645

Balance Sheet	FY10	FY11	FY12	FY13	FY14
Fixed Assets	3,510	3,667	4,758	10,431	11,483
Current Asset investment, Cash at bank and in Hand	316	218	290	561	682
Other Current Assets	558	514	643	1,258	1,634
Total Assets	4,384	4,399	5,691	12,250	13,799
Interest Bearing Debt (long term)	-602	-1,053	-1,535	-3,523	-3,707
Other Creditors and provisions (current)	-1,223	-1,054	-1,102	-2,377	-3,108
Total Liabilities	-1,825	-2,107	-2,637	-5,900	-6,815
Net Assets	2,559	2,292	3,054	6,350	6,984
Shareholders' Funds	2,161	2,006	2,309	5,572	6,165
Equity minority Interests	398	286	745	778	819
Capital Employed	2,559	2,292	3,054	6,350	6,984
Cash Flow					
Working Capital Movements	-53	5	71	85	107
Net Cash Inflow from operating Activities	864	859	975	1,568	2,292

16. The company's total assets at year-end FY9 were RM3,500 million. Which of the following choices best describes reasonable conclusions an analyst might make about the company's efficiency?
    A. Comparing FY14 with FY10, the company's efficiency improved, as indicated by a total asset turnover ratio of 0.86 compared with 0.64.
    B. Comparing FY14 with FY10, the company's efficiency deteriorated, as indicated by its current ratio.
    C. Comparing FY14 with FY10, the company's efficiency deteriorated due to asset growth faster than turnover revenue growth.

D. Comparing FY14 with FY10, the company's efficiency improved as indicated by its better payout ratios.

17. Which of the following choices best describes reasonable conclusions an analyst might make about the company's solvency?
    A. Comparing FY14 with FY10, the company's solvency improved, as indicated by an increase in its debt-to-assets ratio from 0.14 to 0.27.
    B. Comparing FY14 with FY10, the company's solvency deteriorated, as indicated by a decrease in interest coverage from 10.6 to 8.4.
    C. Comparing FY14 with FY10, the company's solvency improved, as indicated by the growth in its profits to GBP 645 million.
    D. Comparing FY14 with FY10, the company's solvency deteriorated, as indicated by a decrease in its profit margin from 14.3 to 12.2.

18. Which of the following choices best describes reasonable conclusions an analyst might make about the company's liquidity?
    A. Comparing FY14 with FY10, the company's liquidity improved, as indicated by an increase in its debt-to-assets ratio from 0.14 to 0.27.
    B. Comparing FY14 with FY10, the company's liquidity deteriorated, as indi- cated by a decrease in interest coverage from 10.6 to 8.4.
    C. Comparing FY14 with FY10, the company's liquidity improved, as indicated by an increase in its current ratio from 0.71 to 0.75.
    D. Comparing FY14 with FY10, the company's liquidity deteriorated, as indicated by an increase in its ROA from 5.6 to 7.5.

19. Which of the following choices best describes reasonable conclusions an analyst might make about the company's profitability?
    A. Comparing FY14 with FY10, the company's profitability improved, as indicated by an increase in its debt-to-assets ratio from 0.14 to 0.27.
    B. Comparing FY14 with FY10, the company's profitability deteriorated, as indicated by a decrease in its net profit margin from 11.0 percent to 5.7 percent.
    C. Comparing FY14 with FY10, the company's profitability improved, as indicated by the growth in its shareholders' equity to GBP 6,165 million.
    D. Comparing FY14 with FY10, the company's profitability deteriorated, as indicated by the decline in its days of inventory to 13 days.

20. A decomposition of ROE for Integra SA is as follows:

	FY12	FY11
ROE	18.90%	18.90%
Tax burden	0.70	0.75
Interest burden	0.90	0.90
EBIT margin	10.00%	10.00%
Asset turnover	1.50	1.40
Leverage	2.00	2.00

Which of the following choices best describes reasonable conclusions an analyst might make based on this ROE decomposition?

A. Profitability and the liquidity position both improved in FY12.
B. The higher average tax rate in FY12 offset the improvement in profitability, leaving ROE unchanged.
C. The higher average tax rate in FY12 offset the improvement in efficiency, leaving ROE unchanged.
D. Revenues declined as shown by the higher tax burden.

21. A decomposition of ROE for Company A and Company B is as follows:

	Company A		Company B	
	FY15	FY14	FY15	FY14
ROE	26.46%	18.90%	26.33%	18.90%
Tax Burden	0.70	0.75	0.75	0.75
Interest Burden	0.90	0.90	0.90	0.90
EBIT margin	7.00%	10.00%	13.00%	10.00%
Asset Turnover	1.50	1.40	1.50	1.40
Leverage	4.00	2.00	2.00	2.00

An analyst is most likely to conclude that:

A. Company A's ROE is higher than Company B's in FY15, and one explanation consistent with the data is that Company A may have purchased new, more efficient equipment.
B. Company A's ROE is higher than Company B's in FY15, and one explanation consistent with the data is that Company A has made a strategic shift to a product mix with higher profit margins.
C. The difference between the two companies' ROE in FY15 is very small and Company A's ROE remains similar to Company B's ROE mainly due to Company A increasing its financial leverage.
D. The increase in ROEs from FY14 to FY15 for both companies is primarily due to a decrease in tax rates.

Introduction to Present Value

1. A couple plans to set aside RM20,000 per year in a conservative portfolio projected to earn 7 percent a year. If they make their first savings contribution one year from now, how much will they have at the end of 20 years?

2. Two years from now, a client will receive the first of three annual payments of RM20,000 from a small business project. If she can earn 9 percent annually on her investments and plans to retire in six years, how much will the three business project payments be worth at the time of her retirement?

3. To cover the first year's total college tuition payments for his two children, a father will make a RM75,000 payment five years from now. How much will he need to invest today to meet his first tuition goal if the investment earns 6 percent annually?

4. A client can choose between receiving 10 annual RM100,000 retirement payments, starting one year from today, or receiving a lump sum today. Knowing that he can invest at a rate of 5 percent annually, he has decided to take the lump sum. What lump sum today will be equivalent to the future annual payments?

5. You are considering investing in two different instruments. The first instrument will pay nothing for three years, but then it will pay RM20,000 per year for four years. The second instrument will pay RM20,000 for three years and RM30,000 in the fourth year. All payments are made at year-end. If your required rate of return on these investments is 8 percent annually, what should you be willing to pay for:

   A The first instrument?

   B The second instrument (use the formula for a four-year annuity)?

6. Suppose you plan to send your daughter to college in three years. You expect her to earn two-thirds of her tuition payment in scholarship money, so you estimate that your payments will be RM10,000 a year for four years. To estimate whether you have set aside enough money, you ignore possible inflation in tuition payments and assume that you can earn 8 percent annually on your investments. How much should you set aside now to cover these payments?

7. A client plans to send a child to college for four years starting 18 years from now. Having set aside money for tuition, she decides to plan for room and board also. She estimates these costs at RM20,000 per year, payable at the beginning of each year, by the time her child goes to college. If she starts next year and makes 17 payments into a savings account paying 5 percent annually, what annual payments must she make?

8. A couple plans to pay their child's college tuition for 4 years starting 18 years from now. The current annual cost of college is RM7,000, and they expect this cost to rise at an annual rate of 5 percent. In their planning, they assume that they can earn 6 percent annually. How much must they put aside each year, starting next year, if they plan to make 17 equal payments?

9. A client requires RM100,000 one year from now. If the stated annual rate is 2.50% compounded weekly, the deposit needed today is closest to:
   A. RM97,500.
   B. RM97,532.
   C. RM97,561.
   D. RM97,970.

10. A client invests RM20,000 in a four-year certificate of deposit (CD) that annually pays interest of 3.5%. The annual CD interest payments are automatically reinvested in a separate savings account at a stated annual interest rate of 2% compounded monthly. At maturity, the value of the combined asset is closest to:
   A. RM21,670.
   B. RM22,890.
   C. RM22,950.
   D. RM23,550.

Cost of Capital

1. An analyst's data source shows that Newmont Mining (NEM) Berhad has an estimated beta of –0.2. The risk-free rate of return is 2.5%, and the equity risk premium is estimated to be 4.5%.

A Using the CAPM, calculate the required rate of return for investors in NEM.

B The analyst notes that the current yield to maturity on corporate bonds with a credit rating similar to NEM is approximately 3.9%. How should this information affect the analyst's estimate?

2. An analyst assembles the following facts concerning a company's component costs of capital and capital structure. **Based on the information given, calculate the company's WACC.**

Facts	%
Cost of equity based on the CAPM	15.60
Pretax cost of debt	8.28
Corporate tax rate	30.00
Capital structure weight	Equity 80, Debt 20

3. The cost of equity is equal to the:
   A. expected market return.
   B. rate of return required by stockholders.
   C. cost of retained earnings plus dividends.
   D. dividend yield spread with long term maturity bonds.

4. Which of the following statements is correct?
   A. The appropriate tax rate to use in the adjustment of the before-tax cost of debt to determine the after-tax cost of debt is the average tax rate because interest is deductible against the company's entire taxable income.
   B. For a given company, the after-tax cost of debt is generally less than both the cost of preferred equity and the cost of common equity.
   C. For a given company, the after-tax cost of debt is generally higher than both the cost of preferred equity and the cost of common equity.
   D. Debt is generally more costly than preferred or common stock. The cost of debt is further increased due to the tax deductibility of interest expense.

5. Kumpulan Gearbox has an after-tax cost of debt capital of 4%, a cost of preferred stock of 8%, a cost of equity capital of 10%, and a weighted average cost of capital of 7%. Gearbox intends to maintain its current capital structure as it raises additional capital. In making its capital-budgeting decisions for the average-risk project, the relevant cost of capital is:
   A. 4%.
   B. 7%.
   C. 8%.
   D. 10%.

6. Fatimah McClure, of Alba Advisers, is estimating the cost of capital of Frontier Corporation as part of her valuation analysis of Frontier. McClure will be using this estimate, along with projected cash flows from Frontier's new projects, to estimate the effect of these new projects on the value of Frontier. McClure has gathered the following information on Frontier Corporation:

	Current Year (RM)	Forecasted for next year (RM)
Book value of debt	50	50
Market value of debt	62	63
Book value of equity	55	58
Market value equity	210	220

The weights that McClure should apply in estimating Frontier's cost of capital

for debt and equity are, respectively:

   A. wd = 0.200 and we = 0.800.
   B. wd = 0.185 and we = 0.815.
   C. wd = 0.223 and we = 0.777.
   D. wd = 0.50 and we = 0.50.

Investment Appraisal Methods

1. The net present value (NPV) of an investment is equal to the sum of the expected cash flows discounted at the:
   A. internal rate of return.
   B. risk-free rate.
   C. opportunity cost of capital.
   D. cost of debt

2. A RM2.2 million investment will result in the following cash flows:

Year	Year-End Cash Flow (millions)
1	RM 1.3
2	RM 1.6
3	RM 1.9
4	RM 0.8

Using an 8% opportunity cost of capital, the investment's net present value is closest to:

   A. RM2.47 million.
   B. RM3.40 million.
   C. RM4.67 million.
   D. RM5.98 million.

3. The internal rate of return (IRR) is best described as the:
   A. opportunity cost of capital.
   B. time-weighted rate of return.
   C. discount rate that makes the net present value equal to zero.
   D. The cost of capital weighted according to its individual components.

4. A three-year investment requires an initial outlay of RM1,000. It is expected to provide three year-end cash flows of RM200 plus a net salvage value of RM700 at the end of three years. Its internal rate of return is closest to:
   A. 10%.
   B. 11%.
   C. 20%.
   D. 28%

5. Given the following cash flows for a capital investment, calculate the NPV and IRR. The required rate of return is 8%.

Year	0	1	2	3	4	5
Cash flow	-50,000	15,000	15,000	20,000	10,000	5,000

	NPV	IRR
A.	RM 1,905	10.9%
B.	RM 1,905	26.0%
C.	RM 3,379	10.9%
D.	RM 5,678	15.3%

6. An investment of RM100 generates after-tax cash flows of RM40 in Year 1, RM80 in Year 2, and RM120 in Year 3. The required rate of return is 20%. The net present value is closest to:
   A. RM42.22.
   B. RM58.33.
   C. RM68.52.
   D. RM74.30.

7. An investment of RM150,000 is expected to generate an after-tax cash flow of RM100,000 in one year and another RM120,000 in two years. The cost of capital is 10%. What is the internal rate of return?
   A. 28.39%.
   B. 28.59%.
   C. 28.79%.
   D. 29.45%

8. Kim Corporation is considering an investment of 750 million won with expected after-tax cash inflows of 175 million won per year for seven years. The required rate of return is 10%. What is the NPV and IRR of the investment?

	NPV?	IRR?
A.	102 million won	14.0%
B.	157 million won	23.3%
C.	193 million won	10.0%
D.	205 million won	7.8%

9. Erin Chou is reviewing a profitable investment that has a conventional cash flow pattern. If the cash flows for the investment, initial outlay, and future after-tax cash flows all double, Chou would predict that the IRR would:
   A. increase and the NPV would increase.
   B. stay the same and the NPV would increase.
   C. stay the same and the NPV would stay the same.
   D. No change in either IRR or NPV.

10. Catherine Ndereba is an energy analyst tasked with evaluating a crude oil exploration and production company. The company previously announced that it plans to embark on a new project to drill for oil offshore. As a result of this announcement, the stock price ran up by 10%. After conducting her analysis, Ms. Ndereba concludes that the project does indeed have a positive NPV. Which statement is true?
   A. The stock price should remain where it is because Ms. Ndereba's analysis confirms that the recent run-up was justified.
   B. The stock price should go even higher now that an independent source has confirmed that the NPV is positive.
   C. The stock price could remain steady, move higher, or move lower.
   D. The information given is not sufficient.

Use the following data to answer Questions 11 to 12.

A company is considering the purchase of a copier that costs RM5,000. Assume a required rate of return of 10% and the following cash flow schedule:

- Year 1: RM3,000.
- Year 2: RM2,000.
- Year 3: RM2,000.

11. What is the project's payback period?
   A. 1.5 years.
   B. 2.0 years.
   C. 2.5 years.
   D. 3.5 years.

12. The project's discounted payback period is closest to:
   A. 1.4 years.
   B. 2.0 years.
   C. 2.4 years.
   D. 3.0 years.

Risk and Return

1. The following exhibit shows the annual returns for Fund Y.

	Fund Y (%)
Year 1	19.5
Year 2	−1.9
Year 3	19.7
Year 4	35.0
Year 5	5.7

The geometric mean return for Fund Y is closest to:

A. 14.9%.
B. 15.6%.
C. 19.5%.
D. 23.4%

2. The average return for Portfolio A over the past twelve months is 3%, with a standard deviation of 4%. The average return for Portfolio B over this same period is also 3%, but with a standard deviation of 6%. The geometric mean return of Portfolio A is 2.85%. The geometric mean return of Portfolio B is:
   A. less than 2.85%.
   B. equal to 2.85%.
   C. greater than 2.85%.
   D. Information given not sufficient

The following information relates to Questions 3–5

A fund had the following experience over the past 10 years:

Year	Return
1	4.5%
2	6.0%
3	1.5%
4	−2.0%
5	0.0%
6	4.5%
7	3.5%
8	2.5%
9	5.5%
10	4.0%

3. The arithmetic mean return over the 10 years is closest to:
    A. 2.97%.
    B. 3.00%.
    C. 3.33%.
    D. 5.67%

4. The geometric mean return over the 10 years is closest to:
    A. 2.94%.
    B. 2.97%.
    C. 3.00%.
    D. 5.00%

5. The standard deviation of the 10 years of returns is closest to:
    A. 2.40%.
    B. 2.53%.
    C. 7.58%.
    D. 9.56%

An analyst examined a cross-section of annual returns for 252 stocks and calculated the following statistics:

Arithmetic Average	9.986%
Geometric Mean	9.909%
Variance	0.001723
Skewness	0.704
Excess Kurtosis	0.503

6. The coefficient of variation is closest to:
    A. 0.02.
    B. 0.42.
    C. 2.41.
    D. 3.56

Portfolio Theory

Portfolio Management

1. An investor performs the following transactions on the shares of a firm.

- At t = 0, she purchases a share for RM1,000.
- At t = 1, she receives a dividend of RM25 and then purchases three additional shares for RM1,055 each.
- At t = 2, she receives a total dividend of RM100 and then sells the four shares for RM1,100 each.

The money-weighted rate of return is closest to:

A. 4.5%
B. 6.9%
C. 7.3%
D. 9.5%

2. A fund receives investments at the beginning of each year and generates returns as shown in the table.

Years of investment	AUM at beginning of each year	Return during year of investment
1	RM1,000	15%
2	RM4,000	14%
3	RM45,000	-4%

Which return measure over the three-year period is negative?

A. Geometric mean return
B. Time-weighted rate of return
C. Money-weighted rate of return
D. All are positive

The following information relates to Questions 3–5

A portfolio manager creates the following portfolio:

Security	Expected Annual Return (%)	Expected Standard Deviation (%)
1	16	20%
2	12	20%

1. If the portfolio of the two securities has an expected return of 15%, the proportion invested in Security 1 is:
   A. 25%.
   B. 50%.
   C. 75%.
   D. 100%

2. If the correlation of returns between the two securities is −0.15, the expected standard deviation of an equal-weighted portfolio is closest to:
   A. 13.04%.
   B. 13.60%.
   C. 13.87%.
   D. 16.75%

3. If the two securities are uncorrelated, the expected standard deviation of an equal-weighted portfolio is closest to:
   A. 14.00%.
   B. 14.14%.
   C. 20.00%.
   D. 24.56%

4. Which of the following statements is least accurate? The efficient frontier is the set of all attainable risky assets with the:
   A. highest expected return for a given level of risk
   B. lowest amount of risk for a given level of return.
   C. highest expected return relative to the risk-free rate.
   D. highest number of asset classes including the risk-free rate.

5. The portfolio on the minimum-variance frontier with the lowest standard deviation is:
   A. unattainable.
   B. the optimal risky portfolio.
   C. the global minimum-variance portfolio.
   D. The portfolio with the lowest Jensen's alpha.

6. The set of portfolios on the minimum-variance frontier that dominates all sets of portfolios below the global minimum-variance portfolio is the:
   A. capital allocation line.
   B. Markowitz efficient frontier.
   C. set of optimal risky portfolios.
   D. standard deviation of portfolios.

7. The line depicting the total risk and expected return of portfolio combinations of a risk-free asset and any risky asset is the:
   A. security market line.
   B. capital allocation line.
   C. security characteristic line.
   D. The Markowitz line.

8. With respect to capital market theory, an investor's optimal portfolio is the combination of a risk-free asset and a risky asset with the highest:
   A. expected return.

B. indifference curve.
C. capital allocation line slope.
D. Treynor ratio.

9. The capital market line (CML) is the graph of the risk and return of portfolio combinations consisting of the risk-free asset and:
   A. any risky portfolio.
   B. the market portfolio.
   C. the leveraged portfolio.
   D. the indifference portfolio.

10. Relative to portfolios on the CML, any portfolio that plots above the CML is considered:
   A. inferior.
   B. inefficient.
   C. unachievable.
   D. risky.

11. Which of the following types of risk is most likely avoided by forming a diversified portfolio?
   A. Total risk.
   B. Systematic risk.
   C. Nonsystematic risk.
   D. Risk free.

The following information relates to Questions 14–17

Security	Expected Standard Deviation (%)	Beta
1	25	1.5
2	15	1.4
3	20	1.6

12. With respect to the capital asset pricing model, if the expected market risk premium is 6% and the risk-free rate is 3%, the expected return for Security 1 is closest to:
   A. 9.0%.
   B. 12.0%.
   C. 13.5%.
   D. 15.7%

13. With respect to the capital asset pricing model, if expected return for Security 2 is equal to 11.4% and the risk-free rate is 3%, the expected return for the market is closest to:
   A. 8.4%.
   B. 9.0%.

C. 10.3%.
D. 13.0%

14. With respect to the capital asset pricing model, if the expected market risk premium is 6% the security with the highest expected return is:
    A. Security 1.
    B. Security 2.
    C. Security 3.
    D. Market.

15. With respect to the capital asset pricing model, a decline in the expected market return will have the greatest impact on the expected return of:
    A. Security 1.
    B. Security 2.
    C. Security 3.
    D. Market

16. Three equity fund managers have performance records summarized in the following table:

	Mean Annual Return (%)	Standard Deviation of Return (%)
Manager 1	14.38	10.53
Manager 2	9.25	6.35
Manager 3	13.10	8.23

    Given a risk-free rate of return of 2.60%, which manager performed best based on the Sharpe ratio?
    A. Manager 1
    B. Manager 2
    C. Manager 3
    D. More information needed.

17. Portfolio managers who are maximizing risk-adjusted returns will seek to invest more in securities with:
    A. lower values of Jensen's alpha.
    B. values of Jensen's alpha equal to 0.
    C. higher values of Jensen's alpha.
    D. More information needed.

18. Which of the following events is *most likely* an example of non-systematic risk?
    A. A decline in interest rates.
    B. The resignation of chief executive officer.
    C. An increase in the value of the US dollar.
    D. A global recession.

Financing Decisions

1. If two companies have identical unit sales volume and operating risk, they are most likely to also have identical:
   A. sales risk.
   B. business risk.
   C. sensitivity of operating earnings to changes in the number of units produced and sold.
   D. Foreign exchange risk.

2. Degree of operating leverage is best described as a measure of the sensitivity of:
   A. net earnings to changes in sales.
   B. fixed operating costs to changes in variable costs.
   C. operating earnings to changes in the number of units produced and sold.
   D. cost of goods to changes to operating expenses excluding general and administrative.

3. The Fulcrum Company produces decorative swivel platforms for home televisions. If Fulcrum produces 40 million units, it estimates that it can sell them for RM100 each. Variable production costs are RM65 per unit and fixed production costs are RM1.05 billion. Which of the following statements is *most accurate*?
   Holding all else constant, the Fulcrum Company would:
   A. generate positive operating income if unit sales were 25 million.
   B. have less operating leverage if fixed production costs were 10 percent greater than RM1.05 billion.
   C. generate 20 percent more operating income if unit sales were 5 percent greater than 40 million.
   D. generate 10 percent less depreciation expenses if unit sales were 5 percent less than 40 million.

4. The business risk of a particular company is most accurately measured by the company's:
   A. debt-to-equity ratio.
   B. efficiency in using assets to generate sales.
   C. operating leverage and level of uncertainty about demand, output prices, and competition.
   D. liquidity ratio

5. Consider two companies that operate in the same line of business and have the same degree of operating leverage: the Basic Company and the Grundlegend Company. The Basic Company and the Grundlegend Company have, respectively, no debt and 50 percent debt in their capital structure. Which of the following statements is most accurate? Compared to the Basic Company, the Grundlegend Company has:
   A. a lower sensitivity of net income to changes in unit sales.
   B. the same sensitivity of operating income to changes in unit sales.

C. the same sensitivity of net income to changes in operating income.
D. A higher sensitivity of operating expenses to changes in capital.

Capital Structure

1. If investors have homogeneous expectations, the market is efficient, and there are no taxes, no transactions costs, and no bankruptcy costs, the Modigliani and Miller Proposition I states that:

   A. bankruptcy risk rises with more leverage.
   B. managers cannot change the value of the company by using more or less debt.
   C. managers cannot increase the value of the company by employing tax saving strategies.
   D. Managers can increase the value of the company by utilizing tax strategies.

2. According to Modigliani and Miller's Proposition II without taxes:

   A. the capital structure decision has no effect on the cost of equity.
   B. investment and the capital structure decisions are interdependent.
   C. the cost of equity increases as the use of debt in the capital structure increases.
   D. the cost of debt increases the lower the debt to equity ratio.

3. Suppose the weighted average cost of capital of the Gadget Company is 10 percent. If Gadget has a capital structure of 50 percent debt and 50 percent equity, a before-tax cost of debt of 5 percent, and a marginal tax rate of 20 percent, then its cost of equity capital is *closest* to:

   A. 12%.
   B. 14%.
   C. 16%.
   D. 20%

4. The current weighted average cost of capital (WACC) for Van der Welde is 10 percent. The company announced a debt offering that raises the WACC to 13 percent. The *most likely* conclusion is that for Van der Welde:

   A. the company's prospects are improving.
   B. equity financing is cheaper than debt financing.
   C. the company's debt/equity ratio has moved beyond the optimal range.
   D. the company's efficiency is decreasing.

5. According to the pecking order theory:

   A. new debt is preferable to new equity.
   B. new debt is preferable to internally generated funds.
   C. new equity is always preferable to other sources of capital.

D. use of preferred shares is preferred.

The following information relates to Questions 6–11

Lindsay is an equity analyst responsible for covering five companies in the Consumer Staples industry. She believes that the domestic and global economies will grow slightly below average over the next two years. Lindsayis also concerned about the possibility of a mild recession taking hold. She has been asked to review the companies that she covers, and she has collected information about them, presented in Exhibit 1. Lindsay has estimated that earnings before interest and taxes (EBIT) will remain constant for all five companies for the foreseeable future..The marginal corporate tax rate is 30% for all five companies.

Exhibit 1. Selected Company Financial Data

	Aquarius	**Bema**	**Garth**	**Holte**	**Vega**
EBIT (RM)	600,000	600,000	400,000	400,000	400,000
Debt-to-equity ratio (market value)	0.6	0	0	0.71	0.62
Debt (market value) (RM)	2,000,000	0	0	2,000,000	2,000,000
S&P debt rating	A+	n.a.	n.a.	A–	A
Weighted average cost of capital	—	10%	10%	—	—

Based on conversations with management of the five companies, as well as on her own independent research and analysis, Lindsaynotes the following:

Aquarius:

- has lower bonding costs than does Bema.
- has a higher percentage of tangible assets to total assets than does Bema.
- has a higher degree of operating leverage than does Bema.

Garth:

- invests significantly less in research and development than does Holte.
- has a more highly developed corporate governance system than does Holte.
- has more business risk than does Holte.

In addition, Lindsay has reached various conclusions regarding announcements by Bema, Garth, and Vega:

a) Announcement

Bema has announced that it will issue debt and use the proceeds to repurchase shares. As a result of this debt-financed share repurchase program, Bema indicates that its debt/equity ratio will increase to 0.6 and its before-tax cost of debt will be 6%.

b) Conclusion

As a result of the announced program, Bema's total market value should decrease relative to Aquarius's.

c) Announcement

Garth has announced that it plans to abandon the prior policy of all-equity financing by the issuance of RM1 million in debt in order to buy back an equivalent amount of equity. Garth's before-tax cost of debt is 6%.

d) Conclusion

This change in capital structure is reasonable, but Garth should take care subsequently to maintain a lower D/E ratio than Holte.

e) Announcement

Vega has announced that it intends to raise capital next year, but is unsure of the appropriate method of raising capital.

f) Conclusion

Lindsay has concluded that Vega should apply the pecking order theory to determine the appropriate method of raising capital.

6. Based on the Modigliani and Miller (MM) propositions with corporate taxes, Aquarius's WACC is *closest* to:

A. 3.38%.
B. 7.87%.
C. 11.25%.
D. 13.56%

7. Based on MM propositions with corporate taxes, what is Bema's weighted average cost of capital after the completion of its announced debt-financed share repurchase program?

A. 6.52%.
B. 7.83%.

C. 8.88%.
D. 9.47%

8. Based on Exhibit 1 and Lindsay's notes, which of the following is least consistent with Lindsay's conclusion regarding Bema's announcement?

   A. Bema's bonding costs will be higher than Aquarius's.
   B. Bema will have a lower degree of operating leverage than does Aquarius.
   C. Bema will have a lower percentage of tangible assets to total assets than does Aquarius.
   D. Bema is more likely to have a higher payables as compared to Aquarius.

9. Based on the MM propositions with corporate taxes, Garth's cost of equity after the debt issuance is closest to:

   A. 10.00%.
   B. 10.85%.
   C. 11.33%.
   D. 12.45%

10. Based on Exhibit 1 and Lindsay's notes, which of the following is most consistent with Lindsay's conclusion regarding Garth's announcement?

    A. Garth has more business risk than does Holte.
    B. Garth invests significantly less in research and development than does Holte.
    C. Garth has a more highly developed corporate governance system than does Holte.
    D. Garth is more likely to hold a higher cash balance than does Holte.

11. Based on Lindsay's conclusion regarding determining the appropriate method of raising capital, Vega should raise capital in the following order:

    A. debt, internal financing, equity.
    B. equity, debt, internal financing.
    C. internal financing, debt, equity.
    D. debt,equity,internal financing

Fixed Income Securities

1. A 10-year bond was issued four years ago. The bond is denominated in US dollars, offers a coupon rate of 10% with interest paid semi-annually, and is currently priced at 102% of par. The bond's:
   A) tenor is six years.
   B) nominal rate is 5%.
   C) redemption value is 102% of the par value.
   D) Yield to maturity is same as the coupon rate.

2. A sovereign bond has a maturity of 15 years. The bond is best described as a:
   A) perpetual bond.
   B) pure discount bond.
   C) capital market security.
   D) zero coupon bond

3. A company has issued a floating-rate note with a coupon rate equal to the three-month MRR + 65 bps. Interest payments are made quarterly on 31 March, 30 June, 30 September, and 31 December. On 31 March and 30 June, the three-month MRR is 1.55% and 1.35%, respectively. The coupon rate for the interest payment made on 30 June is:
   A) 2.00%.
   B) 2.10%.
   C) 2.20%.
   D) 2.30%

4. A portfolio manager is considering the purchase of a bond with a 5.5% coupon rate that pays interest annually and matures in three years. If the required rate of return on the bond is 5%, the price of the bond per 100 of par value is closest to:
   A) 98.65.
   B) 101.36.
   C) 106.43.
   D) 107.95

5. A bond with two years remaining until maturity offers a 3% coupon rate with interest paid annually. At a market discount rate of 4%, the price of this bond per 100 of par value is closest to:
   A) 95.34.
   B) 98.00.
   C) 98.11.
   D) 99.52

6. An investor who owns a bond with a 9% coupon rate that pays interest semiannually and matures in three years is considering its sale. If the required rate of return on the bond is 11%, the price of the bond per 100 of par value is closest to:
   A) 95.00.
   B) 95.11.
   C) 105.15.
   D) 107.20

7. A bond offers an annual coupon rate of 4%, with interest paid semiannually. The bond matures in two years. At a market discount rate of 6%, the price of this bond per 100 of par value is closest to:
   A) 93.07.
   B) 96.28.
   C) 96.33.
   D) 97.55

8. A bond offers an annual coupon rate of 5%, with interest paid semiannually. The bond matures in seven years. At a market discount rate of 3%, the price of this bond per 100 of par value is closest to:
   A) 106.60.
   B) 112.54.
   C) 143.90.
   D) 155.50

9. A zero-coupon bond matures in 15 years. At a market discount rate of 4.5% per year and assuming annual compounding, the price of the bond per 100 of par value is closest to:
   A) 51.30.
   B) 51.67.
   C) 71.62.
   D) 75.22

10. Suppose a bond's price is expected to increase by 5% if its market discount rate decreases by 100 bps. If the bond's market discount rate increases by 100 bps, the bond price is most likely to change by:
   A) 5%.
   B) less than 5%.
   C) more than 5%.
   D) No change.

11. A "buy-and-hold" investor purchases a fixed-rate bond at a discount and holds the security until it matures. Which of the following sources of return is least likely to contribute to the investor's total return over the investment horizon, assuming all payments are made as scheduled?
   A) Capital gain

B) Principal payment
C) Reinvestment of coupon payments
D) Interest rate return

12. Which of the following sources of return is most likely exposed to interest rate risk for an investor of a fixed-rate bond who holds the bond until maturity?
A) Capital gain or loss
B) Redemption of principal
C) Reinvestment of coupon payments
D) Interest rate return

13. An investor purchases a bond at a price above par value. Two years later, the investor sells the bond. The resulting capital gain or loss is measured by comparing the price at which the bond is sold to the:
A) carrying value.
B) original purchase price.
C) original purchase price value plus the amortized amount of the premium.
D) comparable peer group.

14. An investor buys a 6% annual payment bond with three years to maturity. The bond has a yield-to-maturity of 8% and is currently priced at 94.845806 per 100 of par. The bond's Macaulay duration is closest to:
A) 2.62.
B) 2.78.
C) 2.83.
D) 2.98.

15. A bond portfolio consists of the following three fixed-rate bonds. Assume annual coupon payments and no accrued interest on the bonds. Prices are per 100 of par value.

Bond	Maturity	Market Value	Price	Coupon	Yield-to-Maturity	Modified Duration
A	6 years	170,000	85.0000	2.00%	4.95%	5.42
B	10 years	120,000	80.0000	2.40%	4.99%	8.44
C	15 years	100,000	100.0000	5.00%	5.00%	10.38

The bond portfolio's modified duration is closest to:

A) 7.62.
B) 8.08.
C) 8.20.
D) 9.31.

Dividend Policy

1. The payment of a 10% stock dividend by a company will result in an increase in that company's:

   A. current ratio.
   B. financial leverage.
   C. contributed capital.
   D. sales turnover.

2. All other things being equal, the payment of an internally financed cash dividend is most likely to result in:

   A. a lower current ratio.
   B. a higher current ratio.
   C. the same current ratio.
   D. More information is needed.

3. The Apex Sdn Bhd has a target capital structure of 40% debt and 60% equity. Its capital budget for next year is estimated to be RM40 million. Estimated net income is RM30 million. If Apex follows a residual dividend policy, its dividend is expected to be:
   A. RM6 million.
   B. RM12 million.
   C. RM18 million.
   D. RM23 million.

4. Beta Corporation is a manufacturer of inflatable furniture. Which of the following scenarios best reflects a stable dividend policy for Beta?
   A. Maintaining a constant dividend payout ratio of 40–50%.
   B. Maintaining the dividend at RM1.00 a share for several years given no change in Beta's long-term prospects.
   C. Increasing the dividend 5% a year over several years to reflect the two years in which Beta recognized mark-to-market gains on derivative positions.
   D. Distributing payout to shareholders by way of repurchasing shares at a premium to market.

5. If a company's objective is to support its stock price in the event of a market downturn, it would be advised to authorize:
   A. an open market share repurchase plan to be executed over the next five years.
   B. a tender offer share repurchase at a fixed price effective in 30 days.
   C. a Dutch auction tender offer effective in 30 days.
   D. a French repurchase program over 30 days.

Valuation

Tutorial

1. Adjusting Net Income to Find FCFF and FCFE

The balance sheet, income statement, and statement of cash flows for the ABC Corporation are shown in the below exhibit. Note that the statement of cash flows follows a convention according to which the positive numbers of $400 million and $85 million for "cash used for investing activities" and "cash used for financing activities," respectively, indicate outflows and thus amounts to be subtracted.

Analysts will also encounter a convention in which the value "(400)" for "cash provided by (used for) investing activities" would be used to indicate a subtraction of $400.

Financial Statements for ABC Corporation (in Millions, Except for Per-Share Data)

	Year Ended 31 December	
Balance Sheet	**2019**	**2020**
Assets		
Current assets		
Cash and equivalents	$190	$200
Accounts receivable	560	600
Inventory	410	440
Total current assets	1,160	1,240
Gross fixed assets	2,200	2,600
Accumulated depreciation	(900)	(1,200)
Net fixed assets	1,300	1,400
Total assets	$2,460	$2,640
Liabilities and shareholders' equity		
Current liabilities		
Accounts payable	$285	$300
Notes payable	200	250
Accrued taxes and expenses	140	150
Total current liabilities	625	700
Long-term debt	865	890
Common stock	100	100
Additional paid-in capital	200	200
Retained earnings	670	750
Total shareholders' equity	970	1,050
Total liabilities and shareholders' equity	$2,460	$2,640

Statement of Income Year Ended 31 December	2020
Total revenues	$3,000
Operating costs and expenses	2,200
EBITDA	800
Depreciation	300
Operating income (EBIT)	500
Interest expense	100
Income before tax	400
Taxes (at 40%)	160
Net income	$ 240

Statement of Income Year Ended 31 December	2020
Dividends	*$ 160*
Change in retained earnings (calculated as net income minus dividends)	*$ 80*
Earnings per share (EPS)	$0.48
Dividends per share	$0.32

Statement of Cash Flows Year Ended 31 December	2020
Operating activities	
Net income	$240
Adjustments	
Depreciation	300
Changes in working capital	
Accounts receivable	(40)
Inventories	(30)
Accounts payable	15
Accrued taxes and expenses	10
Cash provided by operating activities	$495
Investing activities	
Purchases of fixed assets	400
Cash used for investing activities	$400
Financing activities	
Notes payable	(50)
Long-term financing issuances	(25)
Common stock dividends	160
Cash used for financing activities	$85
Cash and equivalents increase (decrease)	10
Cash and equivalents at beginning of year	190
Cash and equivalents at end of year	$200
Supplemental cash flow disclosures	
Interest paid	$100
Income taxes paid	$160

Note that the ABC Corporation had net income of $240 million in 2020. Calculate each of the following:

1. Calculate FCFF starting with the net income figure.
2. Calculate FCFE starting from the FCFF calculated in Part 1.
3. Calculate FCFE starting with the net income figure.

Multiple Choice Questions

1. In asset-based valuation models, the intrinsic value of a common share of stock is based on the:
   A) estimated market value of the company's assets.
   B) estimated market value of the company's assets plus liabilities.
   C) estimated market value of the company's assets minus liabilities.
   D) estimated market value of the company's liabilities.

2. Which of the following is most likely used in a present value model?
   A) Enterprise value.
   B) Price to free cash flow.
   C) Free cash flow to equity.
   D) Revenue.

3. Book value is least likely to be considered when using:
   A) a multiplier model.
   B) an asset-based valuation model.
   C) a present value model.
   D) none of the above

4. An analyst is attempting to calculate the intrinsic value of a company and has gathered the following company data: EBITDA, total market value, and market value of cash and short-term investments, liabilities, and preferred shares. The analyst is least likely to use:
   A) a multiplier model.
   B) a discounted cash flow model.
   C) an asset-based valuation model.
   D) none of the above.

5. An analyst who bases the calculation of intrinsic value on dividend-paying capacity rather than expected dividends will most likely use the:
   A) dividend discount model.
   B) free cash flow to equity model.
   C) cash flow from operations model.
   D) dividend payout model

6. A Malaysian life insurance company has an issue of 4.80 percent, RM25 par value, perpetual, non-convertible, non-callable preferred shares outstanding. The required rate of return on similar issues is 4.49 percent. The intrinsic value of a preferred share is closest to:
   A) RM25.00.
   B) RM26.75.
   C) RM28.50.
   D) RM29.60

7. Two analysts estimating the value of a non-convertible, non-callable, perpetual preferred stock with a constant dividend arrive at different estimated values. The most likely reason for the difference is that the analysts used different:
   A) time horizons.
   B) required rates of return.
   C) estimated dividend growth rates.
   D) estimation methods

8. The Beasley Corporation has just paid a dividend of RM1.75 per share. If the required rate of return is 12.3 percent per year and dividends are expected to grow indefinitely at a constant rate of 9.2 percent per year, the intrinsic value of Beasley Corporation stock is closest to:
   A) RM15.54.
   B) RM56.45.
   C) RM61.65.
   D) RM63.77.

9. An investor is considering the purchase of a common stock with a RM2.00 annual dividend. The dividend is expected to grow at a rate of 4 percent annually. If the investor's required rate of return is 7 percent, the intrinsic value of the stock is closest to:
   A) RM50.00.
   B) RM66.67.
   C) RM69.33.
   D) RM72.45

10. An analyst gathers or estimates the following information about a stock:

Current price per share	RM22.56
Current annual dividend per share	RM1.60
Annual dividend growth rate for Years 1–4	9.00%
Annual dividend growth rate for Years 5+	4.00%
Required rate of return	12%

Based on a dividend discount model, the stock is most likely:

   A) undervalued.
   B) fairly valued.
   C) overvalued.
   D) need more information.

11. An analyst is attempting to value shares of the Dominion Company. The company has just paid a dividend of RM0.58 per share. Dividends are expected to grow by 20 percent next year and 15 percent the year after that. From the third year onward, dividends are expected to grow at 5.6 percent per year indefinitely. If the required rate of return is 8.3 percent, the intrinsic value of the stock is closest to:
    A) RM26.00.
    B) RM27.00.
    C) RM28.00.
    D) RM29.00

12. Kumpulan Hideki Berhad has just paid a dividend of RM450 per share. Annual dividends are expected to grow at the rate of 4 percent per year over the next four years. At the end of four years, shares of Hideki Corporation are expected to sell for RM9000. If the required rate of return is 12 percent, the intrinsic value of a share of Hideki Corporation is closest to:
    A) RM5,850.
    B) RM7,220.
    C) RM7,670.
    D) RM7,790.

13. The Gordon growth model can be used to value dividend-paying companies that are:
    A) expected to grow very fast.
    B) in a mature phase of growth.
    C) very sensitive to the business cycle.
    D) experiencing declining growth.

14. The best model to use when valuing a young dividend-paying company that is just entering the growth phase is most likely the:
    A) Gordon growth model.
    B) two-stage dividend discount model.
    C) three-stage dividend discount model.
    D) asset based valuation model.

15. An analyst has gathered the following information for the Oudin Corporation:

Expected earnings per share = RM5.70
Expected dividends per share = RM2.70
Dividends are expected to grow at 2.75 percent per year indefinitely

The required rate of return is 8.35 percent

Based on the information provided, the price/earnings multiple for Oudin is closest to:

    A) 5.7.
    B) 8.5.

C) 9.4.
D) 10.5.

Options

1. The buyer of an option has a contingent claim in the sense that the option creates:
   A. a right.
   B. an obligation.
   C. a linear payoff with respect to gains and losses of the underlying.
   D. a bond that is redeemed for principal at maturity.

For questions 2–5, consider a call option selling for RM4 in which the exercise price is RM50

2. Determine the value at expiration and the profit for a buyer if the price of the underlying at expiration is RM55.
   A. RM5
   B. RM1
   C. –RM1
   D. –RM3

3. Determine the value at expiration and the profit for a buyer if the price of the underlying at expiration is RM48.
   A. –RM4
   B. RM0
   C. RM2
   D. RM5

4. Determine the value at expiration and the profit for a seller if the price of the underling at expiration is RM49.
   A. RM4
   B. RM0
   C. –RM1
   D. –RM3

5. Determine the value at expiration and the profit for a seller if the price of the underling at expiration is RM52.
   A. –RM2
   B. RM5
   C. RM2
   D. RM10

For questions 6–8, consider the following scenario

Suppose you believe that the price of a particular underlying, currently selling at RM99, is going to decrease substantially in the next six months. You decide to purchase a put option expiring in six months on this underlying. The put option has an exercise price of RM95 and sells for RM5.

6. Determine the profit for you if the price of the underlying six months from now is RM100.
   A. RM0
   B. RM5
   C. –RM5
   D. –RM10

7. Determine the profit for you if the price of the underlying six months from now is RM95.
   A. RM0
   B. RM5
   C. –RM5
   D. –RM10

8. Determine the profit for you if the price of the underlying six months from now is RM85.
   A. RM10
   B. RM5
   C. RM0
   D. –RM5

9. Based on put-call parity, a trader who combines a long asset, a long put, and a short call will create a synthetic:
   A. long bond.
   B. fiduciary call.
   C. protective put.
   D. forward premium

10. Which of the following transactions is the equivalent of a synthetic long call position?
    A. Long asset, long put, short call
    B. Long asset, long put, short bond
    C. Short asset, long call, long bond
    D. Short asset, short call, short bond

11. Under put–call–forward parity, which of the following transactions is risk free?
    A. Short call, long put, long forward contract, long risk-free bond
    B. Long call, short put, long forward contract, short risk-free bond
    C. Long call, long put, short forward contract, short risk-free bond
    D. Short call, long put, short forward contract, short risk-free bond

Options Strategies

12. Over the past few months, Nina Brahim and Kevin Pereira have followed news reports on a proposed merger between XDF and one of its competitors. A government antitrust committee is currently reviewing the potential merger. Pereira expects the share price to move sharply upward or downward depending on whether the committee decides to approve or reject the merger next week. Pereira asks Nina to recommend an option trade that might allow them to benefit from a signicant move in the XDF share price regardless of the direction of the move.

    The option trade that Nina should recommend relating to the government committee's decision is a:
    A. collar.
    B. bull spread.
    C. long straddle.
    D. Covered call.

The following information relates to Questions 13–14

Stanley Kumar Singh, is the risk manager at SKS Asset Management. He works with individual clients to manage their investment portfolios. One client, Sherman Hopewell, is worried about how short- term market fluctuations over the next three months might impact his equity position in Walnut Corporation. Although Hopewell is concerned about short- term downside price movements, he wants to remain invested in Walnut shares because he remains positive about its long- term performance.

Hopewell has asked Singh to recommend an option strategy that will keep him invested in Walnut shares while protecting against a short- term price decline.

Another client, Nigel French, is a trader who does not currently own shares of Walnut Corporation. French has told Singh that he believes that Walnut shares will experience a large move in price after the upcoming quarterly earnings release in two weeks. French also tells Singh, however, that he is unsure which direction the stock will move. French asks Singh to recommend an option strategy that would allow him to profit should the share price move in either direction.

13. The option strategy Singh is most likely to recommend to Hopewell is a:
    A. collar.
    B. covered call.
    C. protective put.
    D. Condor

14. The option strategy that Singh is most likely to recommend to French is a:
    A. straddle.
    B. bull spread.
    C. collar.

D. bear spread

Futures

1. Which of the following statements best describes the payoff from a forward contract?
   A. The buyer has more to gain going long than the seller has to lose going short.
   B. The buyer profits if the price of the underlying at expiration exceeds the forward price.
   C. The gains from owning the underlying versus owning the forward contract are equivalent.
   D. The buyer has to pay a premium to the exchange in order to take delivery of the physical asset.

2. A futures contract is best described as a contract that is:
   A. standardized.
   B. subject to credit risk.
   C. marked to market throughout the trading day.
   D. bespoke.

3. Which of the following statements explains a characteristic of futures price limits? Price limits:
   A. help the clearinghouse manage its credit exposure.
   B. can typically be expanded intra-day by willing traders.
   C. establish a band around the final trade of the previous day.
   D. do not exist for futures.

4. Which of the following factors is shared by forwards and futures contracts?
   A. Timing of profits
   B. Flexible settlement arrangements
   C. Nearly equivalent profits by expiration
   D. Is listed on standardized exchanges

Futures strategies

5. A US bond portfolio manager wants to hedge a long position in a 10-year Treasury bond against a potential rise in domestic interest rates. He would most likely:
   A. sell fixed-income (bond) futures.
   B. enter a receive-fixed 10-year interest rate swap.
   C. sell a strip of 90-day Eurodollar futures contracts.
   D. None of the above.

6. The CIO of a Canadian private equity company wants to lock in the interest on a three-month “bridge” loan his firm will take out in six months to complete an LBO deal. He sells the relevant interest rate futures contracts at 98.05. In six-months’ time, he initiates the loan at 2.70% and unwinds the hedge at 97.30. The effective interest rate on the loan is:
   A. 0.75%.

B. 1.95%.
C. 2.70%.
D. 3.90%

7. Nizam Ariff is the portfolio manager for the Chehalis Fund (the Fund), which holds equities and bonds in its portfolio. Nizam focuses on tactical portfolio strategies and uses derivatives to implement his strategies. Nizam has a positive short-term outlook for equities relative to bonds and decides to temporarily increase the beta of the portfolio's equity allocation from 0.9 to 1.2. He will use three-month equity index futures contracts to adjust the beta. Exhibit 1 displays selected data for the Fund's current equity allocation and the relevant futures contract.

Exhibit 1

Current value of the Funds's equity allocation	RM168,300,000
Current Portfolio beta	0.9
Target Portfolio beta	1.2
Index futures contract value	RM45,000
Beta of futures contract	1.0

Determine the appropriate number of equity index futures contracts that Nizam should use to achieve the target portfolio beta. Identify whether the equity index futures contracts should be bought or sold.

	No of futures	Buy/Sell
A.	1,122	Buy
B.	1,122	Sell
C.	1,453	Buy
D.	1,453	Sell

Swaps

1. An interest rate swap is a derivative contract in which:
   A. two parties agree to exchange a series of cash flows.
   B. the credit seller provides protection to the credit buyer.
   C. the buyer has the right to purchase the underlying from the seller.
   D. A premium is paid in order to guarantee no counterparty risks.

2. A swap is:
   A. more like a forward than a futures contract.
   B. subject to simultaneous default by both parties.
   C. based on an exchange of two series of fixed cash flows.
   D. the right but not the obligation to transact with the counterparty.

3. The notional principal of a swap is:
   A. not exchanged in the case of an interest rate swap.
   B. a fixed amount whenever it is matched with a loan.
   C. equal to the amount owed by one swap party to the other.
   D. larger at maturity.

Swaps Strategies

4. A Malaysian bond portfolio manager wants to increase the modified duration of his RM30 million portfolio from 3 to 5. She would most likely enter a receive-fixed interest rate swap that has principal notional of RM20 million and:
   A. a modified duration of 2.
   B. a modified duration of 3.
   C. a modified duration of 4.
   D. a modified duration of 6.

5. A Malaysian institutional investor in search of yield decides to buy Italian government bonds for her portfolio but wants to hedge against the risk of exchange rate fluctuations. She enters a cross-currency basis swap, with the same payment dates as the bonds, where at inception she delivers US dollars in exchange for euros for use in purchasing the Italian bonds. The notional principals on the swap are most likely exchanged:
   A. at inception only.
   B. at maturity only.
   C. both at inception and at maturity
   D. None of the above.

Corporate Restructuring and Mergers and Acquisitions

1. Which factor might affect the choice between cash or share consideration for acquisitions?
   A. Shareholding structure of the acquirer
   B. Cash flow of acquiree company
   C. Profit of the acquiree company
   D. Composition of the Board of Directors

2. Which of the following statements is TRUE in relation to a spin-off?
   A. Spun-off companies normally have the same management team as the parent company
   B. Spin-offs provides the parent company with positive cash flows
   C. Spin-offs is the same as equity carve-out
   D. Spun-off companies have the same shareholders as their parent companies

3. Which one of the following statements DOES NOT describe an MBO?
   A. An MBO is a form of LBO
   B. The vendor of an MBO is the management
   C. One of the reasons for an MBO is the parent company needs cash
   D. MBO and LBO undergo the same process

Structured Products

1. Structured investment products are tailored, or packaged, to meet certain financial goals of investors. Which of the following are motivations for investing in structured products?
   I. Yield enhancement
   II. Portfolio diversification
   III. Seeking principal protection
   IV. Hedging against volatility of currencies

   A. I,II and III only
   B. I,III and IV only
   C. II,III and IV only
   D. All of the above

2. One of the principle attractions of structured products is the ability to customize a variety of features into one instrument. Which of the following statements are CORRECT?

   I. Structured products are investment vehicles that are linked to the performance of a basket of underlying references, such as equities, debts, commodities, indices, currencies, or any combination thereof.
   II. Structured products are created mainly to meet the financial needs of individual investors.
   lll. Structured products may have a range of possible payouts.
   IV. Structured products with principal protection expose investors to the risk of the issuer.

   A. I and III only
   B. I,II and III only
   C. I,III and IV only
   D. None of the above

3. All of the following statements relating to structured products with principal protection are RELEVANT except:

   A. There may be additional cost to the investor for securing the protection.
   B. For investors of a protected product, there is still risk on principal repayment.
   C. For a protected product, the strength of the protection is dependen upon the financial strength of the underlying reference.
   D. The protection is subject to the financial strength of the issuer.

4. Which of the following describes the payout structure of a range accrual structured product?
   A. Payouts that are predetermined by the performance of more than one underlying reference.

B. Payouts that are fixed after the underlying reference price exceeds the strike price.
C. Payouts for situations where the price of the underlying reference stays within a certain range.
D. Payouts upon the occurrence of certain predetermined events.

5. Structured products may include a provision that allows for the issuer to retire all or part of issue before maturity. Investors of such structured products are said to be exposed to risk known as:

A. Market risk
B. Call risk
C. Credit risk
D. Mismatch risk