

# [Capital structure theories](https://assignbuster.com/capital-structure-theories/)

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The following scenario relates to Q46-50.

A meeting was conducted by the board of directors of Brocade Co to discuss the balance of equity & debt financing. The following statements were made by the directors:

* Director A: We should keep our weighted average cost of capital at the lowest by keeping the optimum balance of gearing.
* Director B: The Company is placed in a perfect market & no need to consider the balance of equity & debt.
* Director C: We shouldfinancethe whole operations using only debt sources of finance to gain tax reliefs.
* Director D: We should choose debt or equity sources of financing only if retained profits are insufficient or unavailable.

Q46. Which director seems to support Pecking order theory? (MCQ)

* Director A
* Director B
* Director C
* Director D   
  (2 marks)

Q47. Director A's statement is applying which theory? (MCQ)

* Traditional Theory
* M; M Theory 1958
* Pecking Order Theory
* M; M Theory 1963 tax   
  (2 marks)

Q48. Which of the following directors seems to have a risk of tax exhaustion? (MCQ)

* Director A
* Director B
* Director C
* Director D   
  (2 marks)

Q49. Which of the following director thinks to offset the increased cost of equity with benefit gained on debt? (MCQ)

* Director A
* Director B
* Director C
* Director D   
  (2 marks)

Q50. Which of the following statements is incorrect? (MCQ)

* Equity financing is costly as compared to loans
* A bank is at low risk as they are secured by mortgages
* Cost of capital is decreased if the market value of the company rises
* The company receives no tax benefits   
  (2 marks)

WACC (BASIC) ; RISK ADJUSTED WACC

The following scenario relates to Q51-55.

Fasces' Co is a listed company. It is wholly financed using equity & its shares are bought by financial intermediaries. Recently, a finance director was replaced as the previous director was relocated to another country. The new director wants to apply capital asset pricing model to assess risk & include stock market reactions. The finance director has done some research which is as follows:

The Risk-free return 3% per annum   
The Return of government securities 12% per annum   
Hearses Co (Competitor) 0. 8 Equity Beta

Q51. Calculate the return on equity of Hearses Co? (MCQ)

* 3%
* 9. 6%
* 10. 2%
* 32%   
  (2 marks)

Q52. The annual return on equity is assumed to be 22%. Calculate the equity beta of Fasces' Co? (MCQ)

* 2. 1%
* 3. 7%
* 17. 6%
* 22%   
  (2 marks)

Q53. Which of the following statements are true? (MRQ)

* The beta of Fasces' Co is indicating an unsystematic risk
* Fasces' Co will like to obtain a return greater than the government securities
* The return obtained will be determined using unsystematic risk
* If Fasces' Co share price increases, then equity beta will also increase   
  (2 marks)

Q54. Fasces' Co paid an interim dividend of 35c/share. The share price increase by 20% to $5. 4/share. What is the total shareholder return (to the nearest %)? (FIB)   
596901651000%   
(2 marks)

Q55. Fasces' Co is a garment business. Which of the following circumstances will the company use its own WACC? (MCQ)

* Buying its competitor's business
* Buying a shoe manufacturer
* Buying a retailer shop
* Buying a supermarket   
  (2 marks)

The following scenario relates to Q56-60.

Gruber Co is stock exchange listed company has issued 100 million shares in the market. The current share price is $2. 65/share. Gruber Co also issued bonds having a book value of $60 million. The current market price is $104/$100 bonds. The cost of debt for the company is 9% with paying a corporation tax of 30%. The dividends have been paid as follows:   
Year 2010 2011 2012 2013 2014   
DPS ($) 0. 19 0. 2 0. 25 0. 3 0. 32

Q56. Calculate the cost of equity of Gruber Co? (MCQ)

* 13. 9%
* 15. 4%
* 27. 6%
* 29. 1%   
  (2 marks)

Q57. Calculate the WACC? (MCQ)

* 9%
* 11%
* 17. 9%
* 24%   
  (2 marks)

Q58. The company is issuing bonds worth $40 million at par. These would pay an interest before tax of 8% ; will be redeemed at 5 % premium after ten years. Calculate the cost of debt? (MCQ)

* 5%
* 6. 17%
* 10. 45%
* 11%   
  (2 marks)

Q59. The market value of equity is $250 ; the cost is 13%. The cost of debt is 9% ; the market value is $50. Calculate the WACC including the information of Q58? (MCQ)

* 8. 2%
* 10. 9%
* 11. 6%
* 12. 3%   
  (2 marks)

Q60. Which of the following factors would likely affect the market value of a bond? (MRQ)

* The frequency of interest payments
* The redemption value of the bond
* The time duration of repayment
* The amount of interest repayable   
  (2 marks)

The following scenario relates to Q61-65.

Nastic Co has in issue ten million ordinary shares each having a current market value of $7. 5. The company has 7% bonds at par value. The bonds are redeemable in seven years at par. The bonds are currently trading at $112/bond. The total nominal value sits at $14, 000, 000. Nastic Co equity beta is 0. 7. The risk-free rate is 5% per annum ; average return in the market is 13% per annum.

Nastic Co wants to diversify his business opportunities ; are thinking to invest in the same industry. A potential company has been seen bidding for Bracey Co. Its equity to debt ratio in the market is 75% to 25%. The equity beta is 1. 6.   
Both companies are subject to pay a corporation tax of 20%

Q61. Calculate the cost of debt? (MCQ)

* 3. 29%
* 4. 27%
* 9. 1%
* 10. 3%   
  (2 marks)

Q62. Cost of the equity of 11% is assumed. What will be the weighted cost of capital? (MCQ)

* 3. 8%
* 5. 21%
* 8. 24%
* 9. 7%   
  (2 marks)

Q63. Calculate the risk-adjusted beta? (MCQ)

* 1. 2 Beta
* 1. 37 Beta
* 1. 74 Beta
* 2. 1 Beta   
  (2 marks)

Q64. Calculate the risk-adjusted cost of equity? (FIB)

* 596901968500%   
  (2 marks)

Q65. Which of the following is not a disadvantage of CAPM? (MCQ)

* Differentiation in capital gains ; dividends are ignored
* The return of the market is incorporated
* It assumes that all shareholders are diversified
* Beta factors might be inaccurate   
  (2 marks)

ANSWERS

* Q46. D
* Q47. A
* Q48. C
* Q49. B
* Q50. D

The company receives a tax benefit on their interest payments.

Q51. C

* Use CAPM formulae
* Ke = 3 + (12 – 3) 0. 8 = 10. 2%

Q52. A

* Use CAPM formulae
* Ke = 3 + (12 – 3) X = 22
* X = 2. 1%

Q53.

* The beta of Fasces' Co is indicating an unsystematic risk (False)
* Fasces' Co will like to obtain a return greater than the government securities (True)
* The return obtained will be determined using unsystematic risk (False)
* If Fasces' Co share price increases, then equity beta will also increase (True)
* The equity beta measures the changes in the return of share price. The return will be determined by using systematic risk as unsystematic risk is diversifiable.

Q54. 28%

* Total shareholder return = [(5. 4 – 4. 5) + 0. 35] ÷ 4. 5 = 0. 2777   
  0. 2777 × 100 = 27. 7%

Q55. A

* An investing company can use its own WACC only when its business risk & financial risk remains same. In the case of buying its competitor, its business risk & financial risk will remain same. All other option will change the business risk and will have to use risk-adjusted WACC.

Q56. C

* g = [(0. 32 ÷ 0. 19) 1 ÷ (5-1) – 1] × 100 = 13. 9%
* D1 = (0. 32 × (1 + 13. 9%) = 0. 364
* Ke = [(0. 364 ÷ 2. 65) + 13. 9%] × 100 = 27. 6%

Q57. D

* ($m) ($m)
* Equity 100 × 2. 65 265 × 27. 6% 73. 14
* Debt (60 ÷ 100) × 104 62. 4 ×9% 5. 616
* Total 327. 4 78. 756
* WACC = (78. 756 ÷ 327. 4) × 100 = 24%

Q58. B

* Year Cash flow ($) DF (5%) Present value ($) DF (10%) Present Value ($)
* MV/Bond 0 (100) 1 (100) 1 (100)
* Interest 1-10 5. 6 7. 72 43. 23 6. 14 34. 38
* Redeem 10 105 0. 614 64. 47 0. 386 40. 53
* NPV 7. 7 (25. 09)
* Redemption= 100 × 105% = 105
* IRR = 5 + [7. 7 ÷ (7. 7 – (-25. 09)] × (10 - 5) = 6. 17%

Q59. C

* ($m) ($m)
* Equity 250 250 × 13% 32. 5
* Debt 50 50 × 9% 4. 5
* Debt (Bonds) (40 ÷ 100) × 100 40 × 6. 17% 2. 468
* Total 340 39. 468
* WACC = (39. 468 ÷ 340) × 100 = 11. 6%

Q60. All options are correct.

Q61. A

* Year Cash flow ($) DF (5%) Present value ($) DF (10%) Present Value ($)
* MV/Bond 0 (112) 1 (112) 1 (112)
* Interest 1-7 5. 6 5. 786 32. 4 4. 868 27. 3
* Redeem 7 100 0. 711 71. 1 0. 513 51. 3
* NPV (8. 5) (33. 4)
* IRR = 5 + [-8. 5 ÷ (-8. 5 – (-33. 4)] × (10 - 5) = 3. 29%

Q62. D

* ($m) ($m)
* Equity 10 × 7. 5 75 × 11% 8. 25
* Debt (14 ÷ 100) × 112 15. 68 ×3. 29% 0. 516
* Total 90. 68 8. 766
* WACC = (8. 766 ÷ 90. 68) × 100 = 9. 7%

Q63. C

* Ba = [75 ÷ (75 + 15. 68 × {1-20%})] × 1. 6 = 1. 37   
  1. 37 = [75 ÷ (75 + 25 × {1-20%})] × BeBe = 1. 74

Q64. 18. 92%

* Ke = 5 + (13-5) × (1. 74) = 18. 92%

Q65. B