

(3)

DFW1

PART - I

**Case Scenario - I.**

The Inter Banking Rates on 28<sup>th</sup> June, 2025 were as follows :

Spot US\$1 = ₹ 86.50/55

1 Month forward premium 5/8

On 1<sup>st</sup> May, 2025, Mr. M an exporter enters into a forward contract with DMP Bank to sell US \$ 2,50,000 on 31<sup>st</sup> July, 2025 at the rate US \$ 1 = ₹ 86.80. However, Mr. M received the amount on 28<sup>th</sup> June, 2025.

Mr. M requested the bank to take the delivery of the remittance on 30<sup>th</sup> June, 2025 i.e. before due date.

Note 1. - Consider 365 days in a year.

Note 2. - Prevailing Prime Lending Rate is 15% p.a.

From the information given above, choose the correct answer to the Question No. 1 to 3 :

1. Interest on outlay of funds shall be approximately \_\_\_\_\_.  
(A) ₹ 955 payable by Mr. M (B) ₹ 414 payable by Mr. M  
(C) ₹ 955 payable by DMP Bank (D) ₹ 414 payable by DMP Bank
2. What is the net conversion rate per US \$ realised by Mr. M ?  
(A) ₹ 86.6738 (B) ₹ 86.3662  
(C) ₹ 86.3738 (D) ₹ 86.6662
3. Swap loss is \_\_\_\_\_.  
(A) ₹ 12,500 (B) ₹ 32,500  
(C) ₹ 45,000 (D) ₹ 25,000

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+

Before due date capital search.

$S+1$

$S =$  Buy Sell

Fwd

Spot

1/5 - Sell 2.5 hrs @  
86.8  
on 31/7

Buy 2.5 hrs @  
86.8  
on 3/7

\$

28/1. Sell @ 86.8

Buy @ 86.8

Swap

Selling spot 86.50

Buy fwd 86.63

$0.15 \times 2.5 \text{ hrs}$

$= 32800$



$$\text{int. } 15\% \times \frac{31}{365} \times 2.5 \text{ hrs.} \times 0.3$$

$$= 955$$

$$\text{cf. } \text{buy @ } 86.8$$

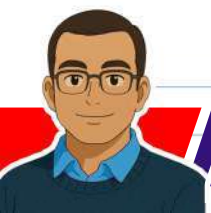
$$\text{sell @ } 86.5$$

$$\text{net } - 0.3 \text{ outflow.}$$

$$-955 - 3250 = -3355$$

$$\begin{array}{r} 86.8 \\ - 0.1338 \\ \hline 86.6662 \end{array}$$

$$\frac{-3355}{2.5 \text{ hrs.}}$$



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**Case Scenario - II :**

You are submitted the following information in respect of Mr. Z's portfolio :

| Share/Bond | Cost (₹) | Dividend / Interest (₹) | Market Price (₹) | Beta |
|------------|----------|-------------------------|------------------|------|
| A Ltd.     | 40,000   | 4,000                   | 41,000           | 0.60 |
| B Ltd.     | 50,000   | 5,000                   | 52,500           | 0.80 |
| C Ltd.     | 80,000   | 3,000                   | 1,10,000         | 0.60 |
| GOI Bonds  | 1,70,000 | 17,000                  | 1,61,500         | 0.01 |

actual

Sumo

30000

= 15.88%

↓  
R.M.

Simple Avg B = 0.5025

Average Return of the portfolio is 15.70% per annum.

**Note :** Calculate upto two decimal points.

From the information given above, choose the correct answer to the following Question No. 4 to 6 :

$$15.7 = x + (15.88 - x) \cdot 0.5025$$

4. Risk-free rate of return (as per simple average) is -

- (A) 15.42% (B) 15.52%  
(C) 15.62% (D) 15.72%

$$x = 15.52 \quad 2$$

5. Expected rate of return on shares of C Ltd. is -

- (A) 12.38% (B) 13.54%  
(C) 14.12% (D) 15.74%

$$0.6 \times [15.88 - 15.52]$$

$$+ 15.52 \quad 2$$

6. Expected return on market portfolio ( $R_m$ ) is -

- (A) 14.38% (B) 15.34%  
(C) 15.88% (D) 16.32%

**Case Scenario - III :**

Ujwal Bank Ltd. (UBL) and Suraksha Bank Ltd. (SBL) are Scheduled Banks to merge.

UBL is strong Private Sector Bank with stable capital adequacy, while SBL has negative CRAR due to heavy NPAs.

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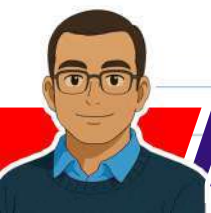
$$15.7 = x + (15.88 - x) 0.5025$$

$$15.7 = x - 0.5025x + 15.88 \times 0.5025$$

$$7.7203 = 0.4975x$$

$$x = 15.5182$$

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Data of both the Banks is as follows :

| Particulars                    | UBL   | SBL   |
|--------------------------------|-------|-------|
| Book Value per share (₹)       | 50    | 25    |
| Market Price per share (₹)     | 200   | 50    |
| CRAR%                          | 12    | (-) 2 |
| NPA%                           | 2     | 12    |
| No of shares in thousands      | 50000 | 20000 |
| Price Earning Ratio (PE Ratio) | 20    | 10    |

20%  
40%  
20%  
20%

Weights for swap ratio are Book Value per share 20%, Market Price per share 40%, CRAR (%) 20% and balance for NPA%.

From the information given above, choose the correct answer to the Question No. 7 to 9 :

7. Based on swap ratio total number of shares issued by UBL to SBL shall be \_\_\_\_\_ (in Thousands). 2

(A) 21,400 shares

(B) 24,000 shares

(C) 17,200 shares

(D) 4,000 shares

8. Post merger Earning Per Share (EPS) of UBL shall be ₹ \_\_\_\_\_ 2

(A) ₹ 11.11

(B) ₹ 12.50

(C) ₹ 8.50

(D) ₹ 10.00

9. The swap ratio based on information given shall be for 1 share of UBL \_\_\_\_\_ shares of SBL. 2

(A) 1.07

(B) 0.20

(C) 0.86

(D) 1.73

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|      |      |     |
|------|------|-----|
| Bv.  | 2:1  | 20% |
| Pr.  | 4:1  | 40% |
| CRAR | 6:-1 | 20% |
| NRA  | 6:1  | 20% |

$$20000 = \frac{20000}{4} \times 40\% = 2000$$

$$20000 = \frac{20000}{6} \times 20\% = -666$$

$$\frac{20000}{6} \times 20\% = 666$$

4000

EPS:  $\frac{200}{20} = 10$

50K

5hs

PAI

1hs

6hs

8hs

54000

$$6 \text{ hs} / 0.54 = 11.1$$

$$20000 : 4000$$

$$5 = 1 \quad 0.2$$



(6)  
DFW1

$$10 \text{ lacs} - 6 = 4 \text{ lacs}$$

**Case Scenario – IV :**

PQR Ltd. is considering two new products A and B, only one of which can be added to its production line. Product A is sure seller. It is certain that 2,00,000 units of product A with the firm's maximum capacity can be manufactured and sold each year with a contribution margin of ₹ 5 per unit.

Product B with a contribution margin of ₹ 10 per unit is potentially more profitable. However, there is uncertainty about its marketability and following sales forecast has been prepared :

| <u>Sales units of B (per annum)</u> | <u>Probability</u> |
|-------------------------------------|--------------------|
| 50,000                              | 0.25               |
| 1,00,000                            | 0.50               |
| 1,50,000                            | 0.25               |

Fixed cost per year is ₹ 6,00,000.

From the information given above, choose the correct answer to the following Question No. 10 to 12 :

10. If company select product B and sale 1,40,000 units, the profit of the company is –

- (A) ₹ 4,00,000 (B) ₹ 8,00,000  
(C) ₹ 10,00,000 (D) ₹ 12,00,000

11. If company select product B, the expected value of profit of the company is –

- (A) ₹ 2,00,000 (B) ₹ 4,00,000  
(C) ₹ 8,00,000 (D) ₹ 10,00,000

12. If Company select product A, the profit of the company is –

- (A) ₹ 2,00,000 (B) ₹ 4,00,000  
(C) ₹ 6,00,000 (D) ₹ 10,00,000

$$\begin{aligned} 5 \text{ lacs} - 6 &= -1 \times 0.25 = -25000 \\ 10 \text{ lacs} - 6 &= 4 \times 0.5 = 2 \text{ lacs} \\ 15 \text{ lacs} - 6 &= 9 \times 0.25 = 2.25 \text{ lacs} \\ \hline &6.00 \text{ lacs} \end{aligned}$$

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DFW1

Case Scenario - V :

Short Bank Ltd. need funds for a period of 7 days. To meet this financial need, on 20<sup>th</sup> September, 2025, Short Bank Ltd. entered into an agreement with Long Bank Ltd. under which, Short Bank Ltd. will sell 8% GOI Bonds @6% p.a. for ₹ 5 crores (Face Value) with initial margin 2%. Each Bond Face Value is ₹ 1,00,000.

The maturity of this 8% GOI Bond is 31<sup>st</sup> December, 2029, originally issued on 1<sup>st</sup> January, 2025. Interest payable annually. The clean price of the bond is ₹ 99,420.

Note : Assume 360 days in a year.

From the information given above, choose the correct answer to the Question No. 13 to 15 :

13. Accrued Interest and dirty price of the bond as on 20<sup>th</sup> September, 2025 will approximately be ₹ \_\_\_\_\_ and ₹ \_\_\_\_\_ respectively. 2

(A) ₹ 5,822 and ₹ 1,05,242

(B) ₹ 5,788 and ₹ 93,632

(C) ₹ 7,954 and ₹ 1,07,374

(D) ₹ 7,954 and ₹ 91,466

14. The proceeds of the 1<sup>st</sup> Leg of the transaction shall be approximately ₹ \_\_\_\_\_ and the 2<sup>nd</sup> Leg proceeds of the transaction shall be ₹ \_\_\_\_\_. 2

(A) ₹ 5,15,52,000 and ₹ 5,16,12,150

(B) ₹ 5,15,68,580 and ₹ 5,16,28,743

(C) ₹ 5,15,52,000 and ₹ 5,61,12,150

(D) ₹ 5,51,52,000 and ₹ 5,61,12,150

15. The arrangement entered by Long Bank Ltd. is \_\_\_\_\_ and that by Short Bank Ltd. is \_\_\_\_\_. 2

(A) Repo, Reverse Repo

(B) Lending, Repo

(C) Reverse Repo, Borrowing

(D) Reverse Repo, Repo

DFW1

+

$$NV = 500$$

$$M = 2\%$$

$$FV = 11ac.$$

$$\text{orig corp} = 8\%$$

$$\text{Repo rate} = 6\%$$

$$\text{Chea pn} = 99420$$

$$S.D = 20^{\text{th}} \text{ Sep}$$

$$\text{Int Amtl} =$$

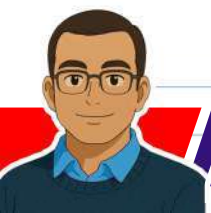
$$A.I = 11ac \times 8\% \times \frac{262}{365} = 5742$$

$$S.D = \frac{NV \times DP}{100000} \times \frac{100 - M}{100}$$

$$= 500 \times \frac{105242}{100000} \times \frac{100 - 2}{100}$$

$$= 51568.580$$

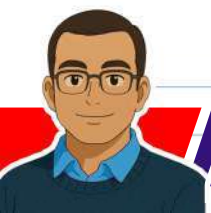
$$\text{Repo} = S.P \times \left( 1 + \text{Rep} \times \frac{\text{days}}{360} \right)$$



$$= 5156858 \left( 1 + 0.1 \times \frac{7}{36} \right)$$

$$= 5162876.3$$

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Roll No. ....

Total No. of Questions – 6

Total No. of Printed Pages – 12

Maximum Marks – 70



**GENERAL INSTRUCTIONS TO CANDIDATES**

1. The question paper comprises two parts, Part I and Part II.
2. Part I comprises Multiple Choice Questions (MCQs).
3. Part II comprises questions which require descriptive answers.
4. Ensure that you receive the question paper relating to both the parts. If you have not received both, bring it to the notice of the invigilator.
5. Answers to MCQs in Part I are to be marked on the OMR answer sheet as given on the cover page of descriptive answer book only. Answers to questions in Part II are to be written in the same descriptive answer book. Answers to MCQs, if written inside the descriptive answer book will not be evaluated.
6. OMR answer sheet given on the cover page of descriptive answer book will be in English only for all candidates, including for Hindi medium candidates.
7. **The bar coded sticker provided in the attendance register, is to be affixed only on the descriptive answer book.**
8. You will be allowed to leave the examination hall only after the conclusion of the exam. If you have completed the paper before time, remain in your seat till the conclusion of the exam.
9. Duration of the examination is 3 hours. You will be required to submit the descriptive answer book with OMR cover page to the invigilator before leaving the exam hall, after the conclusion of the exam.
10. The invigilator will give you acknowledgement on Page 2 of the admit card, upon receipt of the descriptive answer book.
11. Candidate found copying or receiving or giving any help or defying instructions of the invigilators or having / using mobile phone or smart watch or any other electronic gadget will be expelled from the examination and will also be liable for further punitive action.

**PART – II**

**70 Marks**

1. Question paper comprises 6 questions. Answer Question No. 1 which is compulsory and any 4 out of the remaining 5 questions.
2. Working notes should form part of the answer.
3. Answers to the questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate has not opted for Hindi Medium, his/her answers in Hindi will not be evaluated.

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DFW2

PART - II

- (a) M/s. Wealth Builders, an Asset Management Company (AMC), launched a dividend bonus scheme on 1<sup>st</sup> April 2019. The fund demonstrated strong performance over the years.

Key events are as follows :

- On 30<sup>th</sup> September 2021, the fund declared a bonus of 1 : 4 (one bonus unit for every four existing units held).
- On 30<sup>th</sup> September 2023, a second bonus of 2 : 5 (two bonus units for every five existing units held) was declared.

Ms. Investor made a lump-sum investment of ₹ 25 lakhs in the scheme at its inception and remained invested throughout. As of 31<sup>st</sup> March 2025, her investment has generated an average annual yield of 16.8%.

The Net Asset Value (NAV) of the scheme on various dates is provided below :

| Particulars | 30.09.2021 | 30.09.2023 | 31.03.2025 |
|-------------|------------|------------|------------|
| NAV (in ₹)  | 78         | 88         | 110        |

**Required :**

Determine the opening NAV per unit as on 1st April 2019 for Ms. Investor's holding.

("Round off all intermediate and final calculations to two decimal places.")

- (b) T Ltd., a listed company on stock exchange, currently has 84% promoter holding i.e. 126 Lakh shares. Profit after Tax is ₹ 9.60 Crores. Free Float market capitalization is ₹ 38.40 Crores. As per SEBI guidelines promoters have to restrict their holding to 75% to avoid delisting from the stock exchange. Board of Directors has decided not to delist the share but to comply with the SEBI guidelines by issuing bonus shares to minority shareholders while maintaining the same P/E Ratio.

DFW2

1(a)

lannu

1/4/19

30/9/21

1:4

bong.

30/9/23

2:5

bong.

ogrn.

25 ha

- 1/4/19.

31/3/25

yield

16.8%.

6ys.

16.8%.

avg

and

yield =

$16.8 \times 6$

= 100.8%

C.V =

25

+

$25 \times 100.8\%$

= 25 + 25.2

=

50.2 ha.

C.R.A.V 31/3/25

= 110

=>

units =

50.2 ha / 110 f.

4563.36

Pre bus

units =

$4563.36$

=

$\left(1 + \frac{21}{5}\right)$

7%

$5563.36 =$

$7\frac{21}{5}$



$$x = 45636.36 \times 5/7 = 32597.40$$

Pro bun + 30/9/21

$$= y$$

$$32597.40 = (y + \frac{y}{5})$$

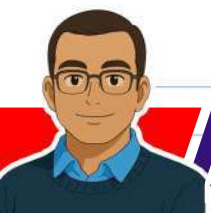
$$32597.4 = 5y/4$$

$$y = 32597.4 \times 4/5$$

$$y = 26077.92$$

$$\text{OPNAV} = 25 \text{ hrs} / 26077.92$$

$$\text{OPNAV} = 95.87$$



1(b) Promoter holding = 84%

Promoter shares 126 lakhs

Total shares  $126 / 0.84 = 150$  lakhs

FF shares = 24 lakhs

PAT = 96 cr.

EPS = 64

96 cr. / 15 cr. sh. = 64

FF Mcap = 384 cr.

FF shares = 24 lakhs

MP = 160

①

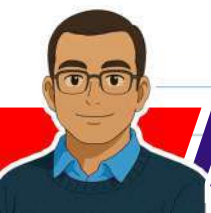
PE =  $160 / 64 = 25$

②

Let Bonus shares be  $x$  cr.

$$\text{FF} \therefore \frac{24 \text{ lakhs} + x}{150 + x} = 25\%$$

$$\Rightarrow 24 + x = 37.5 + 0.25x$$



$$0.75n = 13.5$$

$$n = 13.5 \text{ lacs} / 0.75$$

$$n = 18 \text{ lacs}$$

Bangs ratio 18 lacs for exist 24 lacs

$$rc \quad 18:24$$

$$res \quad 3:4$$

3 shrs as Bangs for a held.

(3) Post Bangs MP.

$$PAT = 9.6 \text{ cr}$$

$$shs = 1.68 \text{ cr}$$

$$EPS = 5.714$$

$$P/E = 25$$

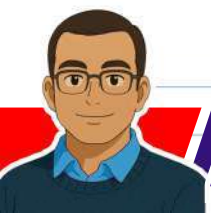
$$MP = 142.75$$

$$142.85$$

(4) Post Bangs FF Mmp =  $(24 + 18) \times 142.75$

$$= 59.955 \text{ cr}$$

$$= 60 \text{ cr}$$



(3)

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**You are required to calculate :**

- (i) P/E Ratio
- (ii) Bonus Ratio
- (iii) Market price of share after Bonus issue
- (iv) Post bonus Free Float Market Capitalization .

- (c) Ms. Priya initiated the following option strategy on Omega Industries Limited's equity shares :

**Transactions executed :**

- (1) Bought one European Call Option with the following terms :

- Premium paid : ₹ 42 per share
- Strike Price : ₹ 620
- Maturity : 3 months

- (2) Bought one European Put Option with the following terms :

- Premium paid : ₹ 8 per share
- Strike Price : ₹ 480
- Maturity : 3 months

**Additional Information :**

- Current Market Price (CMP) of Omega Industries : ₹ 550 per share
- Lot size : 150 shares per contract
- Ms. Priya holds the positions until expiration

**Required :**

- (i) Calculate the net profit/loss in the following scenarios at expiration :

- Share price remains unchanged at ₹ 550
- Share price declines to ₹ 380
- Share price appreciates to ₹ 680

- (ii) Determine the upper and lower breakeven points for this strategy.

(Note : Round off all intermediate and final calculations to four decimal places.)

DFW2

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1 (c).

|                    | BC   | BP    |
|--------------------|------|-------|
| Pn                 | -42. | -8    |
| K                  | 620  | 480   |
| T                  | 3m   | 3.    |
| <del>for</del>     |      |       |
| CNP/S              | 550  | 550   |
|                    |      | Total |
| S.P. on net        | 550  | 550   |
| Opn mngt.          | 0    | 0     |
| <del>for</del> net | -42  | -8    |
| lois               | 150  | 150   |
| Total payf.        |      | -7500 |

|                   |     |       |
|-------------------|-----|-------|
| SP                | 380 | 380   |
| OP Gross pay off. | =   | 100   |
| net pay lois      | -42 | +92   |
|                   |     | 50    |
|                   |     | 150   |
|                   |     | +7500 |



|            |     |               |
|------------|-----|---------------|
| S.P        | 680 | 680           |
| b.p.o      | 60  | -             |
| pm         | -42 | -8            |
| N.P.D      | 18  | -8            |
| 10%<br>Tot |     | 150<br>4.1500 |

(ii) B.E.p.

From paid.  $-42 - 8 = -50$

B.C payoff gus  $\Rightarrow$  spot  $= 620 + 50 = 670$

B.P pay off  $= 50$   
 $\Rightarrow$  Spot  $= 480 - 50 = 430$



(4)

**DFW2**

2. (a) XYZ Ltd. has imported goods to the extent of US\$ 8 Million. The payment terms are as under : 6

- (1) 1% discount if full amount is paid immediately, or
- (2) 60 days interest free credit. However, in case of a further delay up to 30 days, interest at the rate of 8% p.a. will be charged for additional days after 60 days. XYZ Ltd. has ₹ 25 Lakh available and for remaining it has an offer from bank for a loan upto 90 days @ 9.0% p.a.

The quotes for foreign exchange are as follows :

Spot Rate INR/ US\$ (buying) ₹ 66.98

60 days Forward Rate INR/ US\$ (buying) ₹ 67.16

90 days Forward Rate INR/ US\$ (buying) ₹ 68.03

**Advise** which one of the following options would be better for XYZ Ltd. :

- (i) Pay immediately after utilizing cash available and for balance amount take 90 days loan from bank.
- (ii) Pay the supplier on 60<sup>th</sup> day and avail bank's loan (after utilizing cash) for 30 days.
- (iii) Avail supplier's offer of 90 days credit and utilize cash available.

Further presume that the cash available with XYZ Ltd. will fetch a return of 4% p.a. in India till it is utilized.

**Note :**

- Assume year has 360 days.
- Ignore Taxation.
- Cashflows in ₹ in Crore.
- Round off all intermediate and final calculations to four decimal places.

2(a).

8M40 \$

(1)

Spot .. 66.98

$$1\% \text{ disc} = 8M40 \times 99\% \times 66.98$$

$$= Rs. 53.0482 \text{ cr}$$

Cash available 25 kg.

$$\text{balance} = 52.7982 \text{ cr}$$

loan @ 9% for 90 days.

$$52.7982 \text{ cr} \times (1 + 9\% \times \frac{90}{360})$$

net of /  
after 90 days

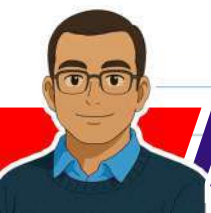
$$53.9862 \text{ cr}$$

(2)

25 kg 4% 60 days.

$$25 \times (1 + 4\% \times \frac{60}{360})$$

$$0.2516 \text{ cr}$$



$$\begin{aligned}
 60 \text{ days mkt} &= 8 \text{ Mio} \times 67.16 \\
 &\quad - 0.2516 \\
 53.7280 &- 0.2516 \\
 &= 53.4764 \text{ cr} \\
 \text{loan fr. 30 days. } @ 9\%
 \end{aligned}$$

$$53.4764 \times \left(1 + \frac{30}{360} \times 9\%\right)$$

$$53.8774 \text{ cr}$$

Best option

(3)

$$8 \text{ Mio} \left(1 + 8\% \times \frac{30}{360}\right) \times 68.03$$

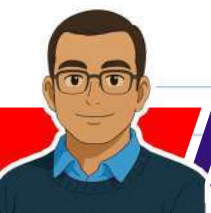
$$54.2868 \text{ cr}$$

$$\text{less cash frnt. } 0.25 \left(1 + \frac{90}{360} \times 4\%\right)$$

$$- 0.2525$$

$$54.5343 \text{ cr}$$

Option 2 is best.



(5)

DFW2

- (b) MNC Limited company's financial statements for FY 2024-25 are 4 provided :

| Income Statement    | (₹ in Cr.) |
|---------------------|------------|
| Sales revenues      | 7500       |
| Costs and expenses  | 7300       |
| Income before taxes | 200        |
| Taxes (30%)         | 60         |
| Net income          | 140        |

MNC Limited's Balance Sheet as at 31<sup>st</sup> March, 2025

| Liabilities         | (₹ in Cr.) | Assets           | (₹ in Cr.) |
|---------------------|------------|------------------|------------|
| Equity              | 2000       | Net Fixed Assets | 4000       |
| Long term Debt      | 2500       | Current Assets   | 2000       |
| Current Liabilities | 1500       |                  |            |
|                     | 6000       |                  | 6000       |

**Additional Information :**

- The company expects a 40% sales growth next financial year.
- The company will have a 25% dividend payout ratio next year.
- All costs, current assets and current liabilities are expected to increase with sales.
- Except retained earnings no new Equity is to be raised.

**Required :**

Compute External Funding Requirement through raising Long-term Debt :

- If the company is operating at 65% capacity usage for fixed assets.
- If the company is operating at 95% capacity usage for fixed assets.

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2(b)

|         |            |       |
|---------|------------|-------|
|         | 25         | 26    |
|         | ex'        |       |
| Rev     | 7500 (1.4) | 10500 |
| cash    | 7300 (1.4) | 10220 |
| Pay     | 200        | 280   |
| for 30% | 60         | 84    |
| PAT     | 140        | 196   |

max div

Ret profit

25% 49

147

Using wrap amt  
EFR =

65%

95%

NFA

NWC

NFA

NWC

400

500

400

500

existing

op cap

65%

95%

inc

40%

40%

40%

rev ap

65% x 1.4

95% x 1.4

91%

133%

incing infa

0%

200

33% =

200

has R-E

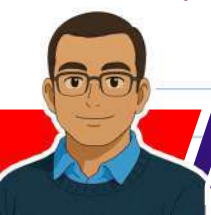
147

1320

Est's 147

53

1320 + 200 - 147 = 1373



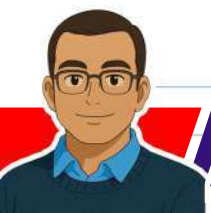
Using operating factor.

|             |      |      |
|-------------|------|------|
|             | 65%  | 75%  |
| F4. cost    | 4000 | 4000 |
| Sales =     | 7500 | 7500 |
| gross sales | 40%  | 40%  |
| op cost     | 65%  | 95%  |

+

$$\begin{aligned}
 & \frac{4000 \times 1.4}{0.65} \\
 & = 8615.38 - 4000 \\
 & \text{Add WC } 200 \\
 & \text{Net R.E } 147 \\
 & \hline
 & \text{EFR } 4668.38
 \end{aligned}$$

$$\begin{aligned}
 & \frac{4000 \times 1.4}{0.95} \\
 & = 5894.73 - 4000 \\
 & = 1894.73 \\
 & \text{Add WC inc } 200 \\
 & - R.E 147 \\
 & \hline
 & \text{EFR } 1947.73
 \end{aligned}$$



(6)

## DFW2

(c) Differentiate how real options are different from financial options on the basis of following four points:

- (i) Underlying Asset
- (ii) Pay-off
- (iii) Exercise period
- (iv) Approach

Spec. Asset

Project

Estimated from Project

<1

>1y

Price

Value

Market

Option Price

3. (a) A speculator purchases BFL Ltd. May Futures (lot of 125 shares) at 7750 and chooses to Write BFL 7790 May call option with a premium of ₹ 30 (lot of 125 shares). As on May 18, spot prices rise and so the futures price and call premium. Futures price rise to 7780. Call premium also rises to ₹ 36. Brokerage for the transaction is 0.02% for the transaction value of futures and strike price net of call premium for options.

You are required to calculate :

- (i) Profit / Loss on Futures net of transaction costs.
- (ii) Profit / Loss on options net of transaction costs.
- (iii) Overall profit from both the positions net of costs.
- (iv) Total Brokerage cost.

(b) Following are the direct quotes available in the international market :

GBP1 = EURO 1.2950/65 (Direct rate)

GBP1 = USD 1.6025/6000

EURO1 = USD 1.2375/9000

1.6025 / 1.6060

1.2375 / 1.2390

1.2950 / 1.2965  
1.6015 / 1.6020 X

You are required to :

- (i) Calculate Bid & Ask Cross Rates for Euro per Pound (Euro/Pound)
- (ii) Prove that arbitrage gains are not possible if:
  - (a) You buy Pounds against Euro under direct route and sell through cross rate route.
  - (b) You sell Pounds against Euro under direct route and buy through cross rate route.

Scay

BFI futures.

125 shs

Buy for @ 7250

BFI option

125 shs

S.C @ 7790

15/may.

Fut m

7780

30

125

3750

gm

lot

Ton gm

open - 36. cumi

+ 30

= 6

x 125

= 750

futures Brochure

$$- 7750 \times 125 \times 0.02\% = 193.75$$

$$- 7780 \times 125 \times 0.02\% = 194.50$$

388.25

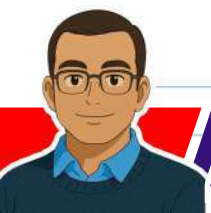
Assuming Brochure  
on both buy  
& sell

call buying.

$$125 \times (7790 - 30) \times 0.02\%$$

$$+ 125 \times (7790 - 36) \times 0.02\%$$

$$194 + 193.85 = 387.85$$



- ①  $3750 - 388.25 = 3361.75$
- ②  $-700 - 387.85 = -1137.85$
- ③  $122390$
- ④  $388.25 + 387.85 = 776.10$

3(b)

①

|          |           |   |             |
|----------|-----------|---|-------------|
| 1 GBP =  | 1.2750 £  | / | 1.2965 Euro |
| 1 GBP    | 1.6025 \$ | / | 1.6000 \$   |
| 1 Euro = | 1.2375 \$ | / | 1.2370 \$   |
|          |           |   | 1.7000 \$   |

② ③ ④

⑤ ?

⑥ ?

$$\frac{\text{Euro}}{\text{Pound}} \neq \frac{\text{Euro}}{\text{USD}} \times \frac{\text{USD}}{\text{Pound}}$$

A ①  $\frac{1}{1.2390} \times \frac{1.6025}{1}$

B ②  $\frac{1}{1.2375} \times \frac{1.6000}{1}$

A ③  $\frac{1}{1.2375} \times 1.6060$

B ④  $\frac{1}{1.2375} \times 1.6000$

⑤  $\frac{1}{1.9} \times 1.6000$



Euro  
1 £

=

1.2934

B

1.2978

A

or 1.2914  
0.8421

(2)

(a) Buy 1 £ cost = 1.2965 Euro - 0/F

Sell 1 £ cost 1.2937 Euro + 1/F

0.003 Euro - 0/F  
loss

(2)

Sell 1 £ @ 0.12

=> Buy 1.2950 rupee

Buy 1 £ & Sell Euro

Sell 1.2978 - 0/F

loss  
- 0.0028

Arbitrage loss

Both scenarios arbitrage loss  
no gain

1.2914  
0.8421  
Arbit gain



(7)

DFW2

- (c) A large Indian multinational corporation, "Global Ventures Ltd.", is planning to set up a manufacturing plant in a developing foreign country. As part of its due diligence, the board is concerned about the potential impact of Political Risk on its investment.

In the context of international operations, you are required to :

- Identify four specific actions by a host country's government that can signal the presence of Political Risk.
- Recommend practical techniques to mitigate political risk exposure in foreign operations.

4. (a)

| Name    | Status    | Principal Amount<br>(₹ in millions) | Duration of loan/<br>deposit (time) | Interest rates of<br>Borrowing / Lending | Strike Rate (PLR) (K) | Premium (%) (lump sum) (P) | If PLR rate at the end of first 6-months (Reset Period) |
|---------|-----------|-------------------------------------|-------------------------------------|------------------------------------------|-----------------------|----------------------------|---------------------------------------------------------|
| AB Ltd. | Borrower  | ₹ 5.00                              | 5 Years                             | PLR+0.5                                  | 8% p.a.               | 0.4%                       | 10% p.a.                                                |
| XY Ltd. | Depositor | ₹ 2.00                              | 3 Years                             | PLR-0.5                                  | 8% p.a.               | 0.5%                       | 6% p.a.                                                 |

You are required to :

- Elaborate the strategy to be adopted by both the companies to hedge against the risk of interest rate fluctuations.
- Premium paid/received based on the strategy to be adopted in (i) using 8% p.a. as the reference rate.
- Net Gain / loss due to hedging to both the companies.

DFW2

P.T.O.

4(a).

① Buy cap @ 8% std for 5M for 5 yrs

Buy floor @ 8% for 2M for 3 yrs.

②

$$5M \times 0.4\% = 20000$$

$$2M \times 0.5\% = 10000$$

if you pay

$$20 \times 5 = 100$$

$$10 \times 3 = 30$$

$$\frac{100}{30} = 3.33$$

③

$$① \text{ Pay } = 5M \times (10\% - 8\%) \times \frac{1}{2}$$

$$5000$$

$$\text{less pmt } 20000 = 30000$$

though  
NDPV  
contribution of  
gains/loss

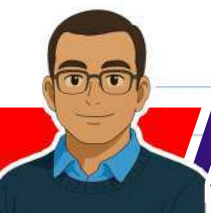
$$2M \times (8\% - 6\%) \times \frac{1}{2}$$

$$20000$$

$$\text{less } 10000$$

net gain

$$= 10000$$



(8)

DFW2

- (b) CE Ltd. has earned a net profit of ₹ 84 lakhs after tax at 30%. CE Ltd. has developed a high tech product which is in high demand. The product has been patented and has a market value of ₹ 100 Lakhs, which is not recorded in the books. The Net Worth of CE Ltd. is ₹ 200 Lakhs. Long Term Debt is ₹ 400 Lakhs. The rate on 365 days Government bond is 10% p.a.. Market portfolio generates a return of 14% p.a.. The stock of the company moves in tandem with the market.

**Required :**

- (i) Compute the operating income
  - (ii) Compute EVA
  - (iii) CE Ltd. has 7 lakh equity shares outstanding. Based on the EVA computed in (ii), how much dividend per share can CE Ltd. pay before the value of the company starts to decline ?
- (c) A technical analyst at a portfolio management firm is tracking the stock price movements of five different companies. The analyst has described the observed chart patterns as follows :

- Scenario 1 : The stock of "Dynamic IT Ltd." shows a series of uniformly rising peaks and troughs, indicating a consistent upward price movement.

- Scenario 2 : "Momentum Motors Ltd." experienced a strong upward price trend. This was followed by a brief period of consolidation, after which the original upward trend resumed with significant volume.

- Scenario 3 : "Pioneer Pharma Ltd." shows three peaks, with the middle one highest. The price then broke below the line connecting the troughs, signaling a major downturn.

DFW2

u(b)

$$PAT = 84 \text{ kg}$$

$$fu = 30\%$$

$$\Rightarrow PB7 = \frac{84}{0.7}$$

$$PB7 = 120 \text{ kg}$$

$$\begin{aligned} & \text{PAT} = 10.1 \\ & \text{NOV} \\ & \text{EBIT} \end{aligned}$$

$$\begin{aligned} & \text{NOV} \\ & \text{160 kg} \end{aligned}$$

$$Rf = 10\%$$

$$RM = 14\%$$

$$MRD = 4\%$$

$$B = 1$$

$$R_s = 10 + 4 = 14\%$$

$$112 = 14\%$$

$$K_d = ?? \quad 10\%$$

$$WACC = \frac{14\% \times 300}{700} + \frac{10\% \times 400}{700}$$

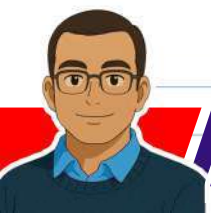
WACC

$$= 11.714\%$$

$$EVA = NOPAT - \text{Capex}$$

$$EVA = \frac{160(1-30\%) - 11.714 \times 700}{112 - 82} = 30$$

$$\text{Max Div} = 30 \text{ kg} \quad 8 \text{ kg} = 71 \text{ kg} \Rightarrow \text{DPS} = \frac{30}{7} = 4.2857$$



kd @ post Jan. - fren.

$$WACC = 14\% \times \frac{300}{700} + 10\% (1 - 30\%) \times \frac{400}{700}$$

$$= 6\% + 4\%$$

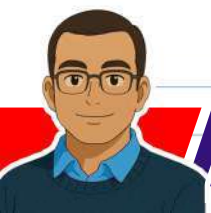
$$= 10\%$$

$$EVA = 160 (1 - 30\%) - 10\% (700)$$

$$= 112 - 70$$

$$= \underline{42}$$

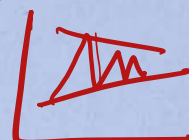
$$\text{per dividend} = \underline{42/7 = \text{Rs. 6 per share.}}$$



(9)

DFW2

wedg.



Triangle or coll.

Scenario 4 : "Global Steel Inc." shows a period of contracting range, with lower highs and higher lows. The direction of the eventual price break is currently unclear.

Scenario 5 : "Sunrise FMCG Ltd." exhibits a pattern where the price highs are consistently falling while the price lows are consistently rising, causing the trading range to narrow over time.

**Required :**

From the five scenarios described above, identify and name the specific technical price pattern being formed for any four.

5. (a) Mrs. SRS is your HNI Client and wants to invest in stock market. She has got the following information about individual securities and wants to select the securities to form an optimal portfolio from amongst these securities :

| Security | Expected Return (%) | Unsystematic Risk (%) | Beta |
|----------|---------------------|-----------------------|------|
| A        | 5                   | 25                    | 0.5  |
| B        | 25                  | 20                    | 2.5  |
| C        | 15                  | 10                    | 1.0  |
| D        | 10                  | 10                    | 1.5  |
| E        | 20                  | 18                    | 1.8  |

Market Index Variance is 25% and the Risk Free Rate of Return is 7%.

**Required :**

Based on this information help Mrs. SRS to :

- Prepare ranked table using Treynor's Ratio.
- Calculate Cut-off Point.
- Identify the securities to be included in optimal portfolio.

DFW2

P.T.O.

| S(a) | EC | Beta | R <sub>f</sub> | $\frac{ER - R_f}{B}$ | TR   | Rank |
|------|----|------|----------------|----------------------|------|------|
| A    | 5  | 0.5  | 7              | $(5-7)/0.5$          | -4   | (5)  |
| B    | 25 | 2.5  | 7              | $(25-7)/2.5$         | 7.2  | (3)  |
| C    | 15 | 1    | 7              | $(15-7)/1$           | 8    | (1)  |
| D    | 10 | 1.5  | 7              | $(10-7)/1.5$         | 2    | (4)  |
| E    | 20 | 1.8  | 7              | $(20-7)/1.8$         | 7.22 | (2)  |

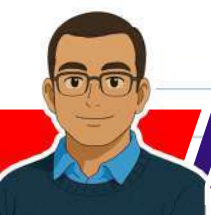
$$R_f = 7\%$$

$$MR = ?$$

$$\sigma_m^2 = 25\%$$

$$\text{Margin} = \frac{ER - R_f}{\text{Beta}}$$

$$\text{cut off mult} = \frac{\left( \sigma_m^2 \sum_{i=1}^N \frac{(R_i - R_f)^2 \times B_i}{\sigma_{e_i}^2} \right)}{1 + \sigma_m^2 \sum_{i=1}^N \frac{B_i^2}{\sigma_{e_i}^2}}$$



| Portfolio                                                                                                                                                                                                                                                                                                 | $R - R_f$     | $\sigma_c^2$ | $\frac{1 \times 2}{3}$ | $B^2$ | $B^2 / \sigma_c^2$                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|------------------------|-------|--------------------------------------------------|
| 1 C                                                                                                                                                                                                                                                                                                       | $15 - 7 = 8$  | 1            | 0.8                    | 1     | 0.1                                              |
| 2 E                                                                                                                                                                                                                                                                                                       | $20 - 7 = 13$ | 1.8          | 1.3                    | 3.24  | 0.18                                             |
| 3 B                                                                                                                                                                                                                                                                                                       | $25 - 7 = 18$ | 2.5          | 2.25                   | 6.25  | 0.3125                                           |
| 4 D                                                                                                                                                                                                                                                                                                       | $10 - 7 = 3$  | 1.5          | 0.45                   | 2.25  | 0.2250                                           |
| 5 A                                                                                                                                                                                                                                                                                                       | $5 - 7 = -2$  | 0.5          | -0.04                  | 0.25  | 0.01                                             |
| $\Sigma$<br>C: 0.8    0.1 $25 \times 0.8 / 1 + 25 \times 0.1$<br>E: 2.1    0.28 $25 \times 2.1 / 1 + 25 \times 0.28$<br>B: 4.35    0.5925 $25 \times 4.35 / 1 + 25 \times 0.5925$<br>D: 4.8    0.8175 $25 \times 4.8 / 1 + 25 \times 0.8175$<br>A: 4.76    0.8275 $25 \times 4.76 / 1 + 25 \times 0.8275$ |               |              |                        |       |                                                  |
|                                                                                                                                                                                                                                                                                                           |               |              |                        |       | $\Sigma$<br>5.71<br>6.56<br>6.88<br>5.60<br>5.49 |

cut off point 6.88

portfolio considered - C, E, B



(10)

**DFW2**

- (b) MITU Ltd. wants to expand business outside India. For the project 6 installation US funds \$ 14.775 Million are required. Company wants to raise money by issue of GDRs.

Following information is available :

- (1) 7 shares shall underly each GDR.
- (2) GDR shall be priced at 7% discount to market price.
- (3) Market Price of share is ₹ 500 (Face Value ₹ 100) per share.
- (4) Expected exchange rate is \$1 = ₹ 81.3750.
- (5) Dividend expected to be paid is 15% with growth rate 10%.
- (6) Flotation Cost of GDR is 1.5%.

**Required :**

Compute the number of GDRs to be issued and cost of the GDR to the company.

(Note : Calculate in lacs with four decimals).

6. (a) Stork Capital, a SEBI Registered Mutual Fund, launched its first New Fund 6 Offer (NFO) on June 1, 2024, with a face value of ₹ 10 per unit. The fund received subscriptions for 180 lakh units.

An underwriting agreement was in place with Griffin Securities Ltd., which agreed to underwrite the entire issue of 200 lakh units for a commission of 2.0%.

The fund's financial activities are summarized below :

- Initial investments in various capital market instruments amounted to ₹ 1,780 lakhs.
- Marketing expenses for the NFO were ₹ 25 lakhs.
- During the financial year ended March 31, 2025, the fund sold securities with a cost of ₹ 250 lakhs for ₹ 280 lakhs.
- The fund subsequently purchased new securities for ₹ 265 lakhs.
- Management expenses are regulated by SEBI and cannot exceed 0.50% of the average funds invested during the year. The actual management expenses incurred were ₹ 5.50 lakhs, of which ₹ 50,000 was outstanding at year-end.

**DFW2**

Spanu  
NOV  
2011

FR  
↓

Adm

Adm

5(b)

Money req - 14.775 mio \$

MP / sh = 500

$$\frac{14.775}{0.985} = 15 \text{ mio}$$

shs in order = 7

value of order  $7 \times 500 = 3500$

disc.

7%

order in m 3255

Exam rate

81.3750

$$3255 - 1.5\% = 3206.175$$

pm / order 40 \$

future cost

1.5%

in pm

39.4 \$

$$8206.175$$

$$81.375 = 39.4$$

order = 14.775 mio / 39.4 \$

375000

DPS = 15

$$DP \text{ m} = 15 \times 7 = 105$$

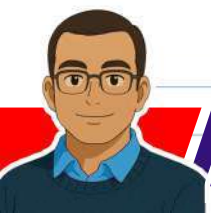
$$P_0 = \frac{D_1}{k_e - g}$$

$$k_e = \frac{D_1 + g}{P_0}$$

$$= \frac{105}{3255} + 10\% = 13.22\%$$

Agrees future

$$\frac{105}{3206.175} + 10\% = 13.27\%$$



b (a)

units FV value

~~180 kg~~ 10 1800 long

~~200 kg~~ 10 2000 kg

common 2000 kg  $\times 2 = 4000$  kg

Cash recd.

2000 kg

- Comm

- 40 kg

- Profit

- 1530

- 250

Mktg. Exp

- 25 kg

155

op cash bal

recd.

+280

na se

-265

Div. recd

+ 4.6 kg

Div. mktg.

[4.6 + 30] (80) - 22.68

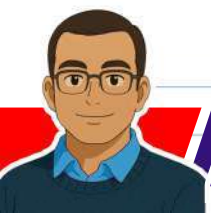
146.92

Regn. Exp.

- 5 kg

Cash bal

141.92 kg



$$\text{Avg hr} = \frac{(780) + (795)}{(2)} = 787.5$$

No. prod  
adj  
for 9 units

$$1780 - \frac{250 + 265}{2} = 1795$$

$$80.54 - 8.7375 \text{ hrs.}$$

avg on 5.5 hrs

ch rate.

NAR

$$\text{CI prod} = 2150.50$$

has add cost

$$141.92$$

has: obs emp.

$$- 0.5 \text{ hrs.}$$

add obs im

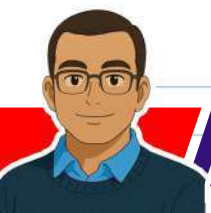
$$+ 0.4 \text{ hrs}$$

$$2292.32 \text{ hrs}$$

units:

$$200 \text{ hrs}$$

$$2292.32 / 200 = 11.4616 \text{ hr/unit}$$



(11)

**DFW2**

- Dividends earned on investments amounted to ₹ 5.0 lakhs, of which ₹ 40,000 was yet to be collected.
- The fund's policy is to distribute 80% of all realized earnings (capital gains and dividends).
- The market value of the investment portfolio as of March 31, 2025, was ₹ 2,150.50 lakhs.

**Required :**

Determine the closing per unit Net Asset Value (NAV) of the fund as on March 31, 2025. Show all necessary workings.

(Note : Round off all intermediate and final calculations to two decimal places.)

- (b) Indian manufacturer TEJ Ltd. has just completed new project. Based on capital budgeting evaluation of the project Present Value is ₹ 500 Lakhs without the abandonment option. 4

However, due to geopolitical issues and international trade war the project may be at risk and company may have to discontinue the project. It is estimated that if favourable conditions remain, Present Value of the project shall increase by 20%. Whereas, if international trade war continues due to geopolitical issues the Present Value of proposal shall reduce by 30%. In case company is not interested to continue the project it can be disposed off for ₹ 450 Lakhs to avoid future huge losses.

The risk-free rate of interest is 8%.

**Required :**

Calculate the value of abandonment option using risk neutral method.

- (c) Enumerate the role of government in thriving a sustainable environment for the start-ups in India. 4

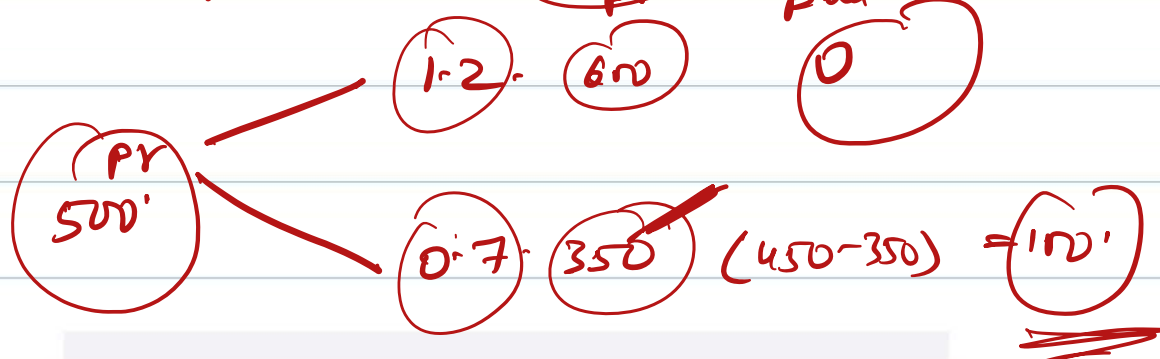
**OR**

**DFW2**

**P.T.O.**

b

PR of project = 500 lang.



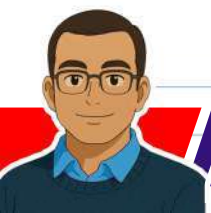
value of option  $\Rightarrow P = \frac{(1+k) - d}{u-d}$

$= \frac{1.08 - 0.7}{1.2 - 0.7} = \frac{0.38}{0.5}$

$= 761$

PR of option =  $\frac{761 \times 0 + 241 \times 100}{1.08} = 22.22$

Agency value are for 1 year



(12)

**DFW2**

(c) A Special Purpose Vehicle (SPV) has acquired a large pool of assets and intends to issue securities to investors. The structure of the deal wants to design instruments that can cater to different investor needs. They are considering three alternative structures :

- (1) A simple structure where all cash flows (principal and interest) from the assets are passed on directly to investors on a proportional basis.
- (2) A more flexible structure where the SPV can issue its own debt securities with varying maturities, allowing it to manage reinvestment of surplus funds from prepayments.
- (3) A highly specialized structure where the cash flows from the underlying assets are split into their constituent principal and interest components, which are then sold as separate securities.

As a financial advisor, explain the technical name for each of these three securitization instrument structures and describe their key characteristics.