

MOCK TEST PAPER – 2
FINAL (NEW) COURSE: GROUP – I
PAPER – 2: STRATEGIC FINANCIAL MANAGEMENT (NEW COURSE)
SUGGESTED ANSWERS/HINTS

1. (a)

Shares	No. of shares (lakhs) (1)	Market Price of Per Share (2)	(1) × (2) (Rs. lakhs)	% to total (w)	β (x)	wx
A Ltd.	3.00	500.00	1500.00	0.30	1.40	0.42
B Ltd.	4.00	750.00	3000.00	0.60	1.20	0.72
C Ltd.	2.00	250.00	<u>500.00</u>	<u>0.10</u>	1.60	<u>0.16</u>
			<u>5000.00</u>	1.00		<u>1.30</u>

(i) Portfolio beta 1.30

(ii) Required Beta 0.91

Let the proportion of risk free securities for target beta $0.91 = p$

$$0.91 = 0 \times p + 1.30 (1 - p)$$

$$p = 0.30 \text{ i.e. } 30\%$$

Shares to be disposed off to reduce beta ($5000 \times 30\%$) Rs. 1,500 lakh and Risk Free securities to be acquired.

(iii) Number of shares of each company to be disposed off

Shares	% to total (w)	Proportionate Amount (Rs. lakhs)	Market Price Per Share	No. of Shares (Lakh)
A Ltd.	0.30	450.00	500.00	0.90
B Ltd.	0.60	900.00	750.00	1.20
C Ltd.	0.10	150.00	250.00	0.60

(iv) Number of Nifty Contract to be sold

$$\frac{(1.30 - 0.91) \times 5000 \text{ lakh}}{8,125 \times 200} = 120 \text{ contracts}$$

(v) 2% rises in Nifty is accompanied by $2\% \times 1.30$ i.e. 2.6% rise for portfolio of shares

	Rs. Lakh
Current Value of Portfolio of Shares	5000
Value of Portfolio after rise	5130
Mark-to-Market Margin paid ($8125 \times 0.020 \times \text{Rs. } 200 \times 120$)	39
Value of the portfolio after rise of Nifty	5091
% change in value of portfolio $(5091 - 5000) / 5000$	1.82%
% rise in the value of Nifty	2%
Beta	0.91

(b) P.V. of dividend stream and sales proceeds

Year	Divd. /Sale	PVF (12%)	PV (Rs.)
1	Rs. 20/-	0.893	17.86
2	Rs. 20/-	0.797	15.94
3	Rs. 20/-	0.712	14.24
4	Rs. 24/-	0.636	15.26
5	Rs. 24/-	0.567	13.61
6	Rs. 24/-	0.507	12.17
7	Rs. 24/-	0.452	10.85
7	Rs. 1026/- (Rs. 900 x 1.2 x 0.95)	0.452	<u>463.75</u>
			Rs. 563.68
	Less : Cost of Share (Rs. 500 x 1.05)		<u>Rs. 525.00</u>
	Net gain		<u>Rs. 38.68</u>

Since Mr. A is gaining Rs. 38.68 per share, he should buy the share.

Maximum price Mr. A should be ready to pay is Rs. 563.68 which will include incidental expenses.
So the maximum price should be Rs. 563.68 x 100/105 = Rs. 536.84

- (c) The concept of sustainable growth can be helpful for planning healthy corporate growth. This concept forces managers to consider the financial consequences of sales increases and to set sales growth goals that are consistent with the operating and financial policies of the firm. Often, a conflict can arise if growth objectives are not consistent with the value of the organization's sustainable growth. Question concerning right distribution of resources may take a difficult shape if we take into consideration the rightness not for the current stakeholders but for the future stakeholders also. To take an illustration, let us refer to fuel industry where resources are limited in quantity and a judicious use of resources is needed to cater to the need of the future customers along with the need of the present customers. One may have noticed the save fuel campaign, a demarketing campaign that deviates from the usual approach of sales growth strategy and preaches for conservation of fuel for their use across generation. This is an example of stable growth strategy adopted by the oil industry as a whole under resource constraints and the long run objective of survival over years. Incremental growth strategy, profit strategy and pause strategy are other variants of stable growth strategy.

Sustainable growth is important to enterprise long-term development. Too fast or too slow growth will go against enterprise growth and development, so financial should play important role in enterprise development, adopt suitable financial policy initiative to make sure enterprise growth speed close to sustainable growth ratio and have sustainable healthy development.

The sustainable growth rate (SGR), concept by Robert C. Higgins, of a firm is the maximum rate of growth in sales that can be achieved, given the firm's profitability, asset utilization, and desired dividend payout and debt (financial leverage) ratios. The sustainable growth rate is a measure of how much a firm can grow without borrowing more money. After the firm has passed this rate, it must borrow funds from another source to facilitate growth. Variables typically include the net profit margin on new and existing revenues; the asset turnover ratio, which is the ratio of sales revenues to total assets; the assets to beginning of period equity ratio; and the retention rate, which is defined as the fraction of earnings retained in the business.

$$\text{SGR} = \text{ROE} \times (1 - \text{Dividend payment ratio})$$

Sustainable growth models assume that the business wants to: 1) maintain a target capital structure without issuing new equity; 2) maintain a target dividend payment ratio; and 3) increase

sales as rapidly as market conditions allow. Since the asset to beginning of period equity ratio is constant and the firm's only source of new equity is retained earnings, sales and assets cannot grow any faster than the retained earnings plus the additional debt that the retained earnings can support. The sustainable growth rate is consistent with the observed evidence that most corporations are reluctant to issue new equity. If, however, the firm is willing to issue additional equity, there is in principle no financial constraint on its growth rate.

2. (a) No. of the Future Contract to be obtained to get a complete hedge

$$= \frac{10000 \times ₹22 \times 1.5 - 5000 \times ₹40 \times 2}{₹1000}$$

$$= \frac{₹3,30,000 - ₹4,00,000}{₹1000} = 70 \text{ contracts}$$

Thus, by purchasing 70 Nifty future contracts to be long to obtain a complete hedge.

Cash Outlay

$$= 10000 \times \text{Rs. } 22 - 5000 \times \text{Rs. } 40 + 70 \times \text{Rs. } 1,000$$

$$= \text{Rs. } 2,20,000 - \text{Rs. } 2,00,000 + \text{Rs. } 70,000 = \text{Rs. } 90,000$$

Cash Inflow at Close Out

$$= 10000 \times \text{Rs. } 22 \times 0.98 - 5000 \times \text{Rs. } 40 \times 1.03 + 70 \times \text{Rs. } 1,000 \times 0.985$$

$$= \text{Rs. } 2,15,600 - \text{Rs. } 2,06,000 + \text{Rs. } 68,950 = \text{Rs. } 78,550$$

Gain/ Loss

$$= \text{Rs. } 78,550 - \text{Rs. } 90,000 = - \text{Rs. } 11,450 \text{ (Loss)}$$

- (b) (i) Calculation of Market price:

$$TM = \frac{\text{Coupon interest} + \left(\frac{\text{Discount or premium}}{\text{Years left}} \right)}{\frac{\text{Face Value} + \text{Market value}}{2}}$$

Discount or premium – YTM is more than coupon rate, market price is less than Face Value i.e. at discount.

Let x be the market price

$$0.15 = \frac{110 + \left\{ \frac{(1,000 - x)}{6} \right\}}{\frac{1,000 + x}{2}}$$

$$x = \text{Rs. } 834.48$$

Alternatively, it can also be calculated using Tabular Method.

- (ii) Duration

Year	Cash flow	P.V. @ 15%		Proportion of bond value	Proportion of bond value x time (years)
1	110	.870	95.70	0.113	0.113
2	110	.756	83.16	0.098	0.196
3	110	.658	72.38	0.085	0.255
4	110	.572	62.92	0.074	0.296

5	110	.497	54.67	0.064	0.320
6	1110	.432	<u>479.52</u>	<u>0.565</u>	<u>3.39</u>
			<u>848.35</u>	<u>1.000</u>	<u>4.570</u>

Duration of the Bond is 4.570 years

(iii) **Volatility**

$$\text{Volatility of the bond} = \frac{\text{Duration}}{(1 + \text{yields})} = \frac{4.570}{1.15} = 3.974$$

(iv) The expected market price if increase in required yield is by 100 basis points.

$$= \text{Rs. } 834.48 \times 1.00 (3.974/100) = \text{Rs. } 33.162$$

Hence expected market price is Rs. 834.48 – Rs. 33.162 = Rs. 801.318

Alternatively, this can also be calculated as follows:

$$\text{Rs. } 848.35 \times 100 (3.794/100) = 33.71$$

$$\text{Hence, expected market price is } 848.48 - 33.71 = 814.77$$

Thus, the market price will decrease.

(v) The expected market price if decrease in required yield is by 75 basis points.

$$= \text{Rs. } 834.48 \times 0.75 (3.974/100) = \text{Rs. } 24.87$$

$$\text{Hence expected market price is Rs. } 834.48 + \text{Rs. } 24.87 = \text{Rs. } 859.35$$

Alternatively, this can also be calculated as follows:

$$848.35 \times 0.75 (3.974/100) = 25.29$$

$$\text{Hence, expected market price} = 848.35 - 25.29 = \text{Rs. } 823.06$$

Thus, the market price will increase.

(c) Some of the techniques used for economic analysis are:

(i) **Anticipatory Surveys:** They help investors to form an opinion about the future state of the economy. It incorporates expert opinion on construction activities, expenditure on plant and machinery, levels of inventory – all having a definite bearing on economic activities. Also future spending habits of consumers are taken into account.

(ii) **Barometer/Indicator Approach:** Various indicators are used to find out how the economy shall perform in the future. The indicators have been classified as under:

- (1) *Leading Indicators:* They lead the economic activity in terms of their outcome. They relate to the time series data of the variables that reach high/low points in advance of economic activity.
- (2) *Roughly Coincidental Indicators:* They reach their peaks and troughs at approximately the same in the economy.
- (3) *Lagging Indicators:* They are time series data of variables that lag behind in their consequences vis-a-vis the economy. They reach their turning points after the economy has reached its own already.

All these approaches suggest direction of change in the aggregate economic activity but nothing about its magnitude.

(iii) **Economic Model Building Approach:** In this approach, a precise and clear relationship between dependent and independent variables is determined. GNP model building or sectoral analysis is used in practice through the use of national accounting framework.

3. (a) **Company A:**

Year	Return % (Ra)	Market return % (Rm)	Deviation R(a)	Deviation Rm	D Ra × DRm	Rm ²
1	13.0	12.0	1.57	1.33	2.09	1.77
2	11.5	11.0	0.07	0.33	0.02	0.11
3	<u>9.8</u>	<u>9.0</u>	-1.63	-1.67	<u>2.72</u>	<u>2.79</u>
	<u>34.3</u>	<u>32.0</u>			<u>4.83</u>	<u>4.67</u>

Average Ra = 11.43

Average Rm = 10.67

$$\text{Covariance} = \frac{\sum (R_m - \bar{R}_m)(R_a - \bar{R}_a)}{N}$$

$$\text{Covariance} = \frac{4.83}{3} = 1.61$$

$$\text{Variance } (\sigma_m^2) = \frac{\sum (R_m - \bar{R}_m)^2}{N}$$

$$= \frac{4.67}{3} = 1.557$$

$$\beta = \frac{1.61}{1.557} = 1.03$$

Company B:

Year	Return % (Rb)	Market return % (Rm)	Deviation R(b)	Deviation Rm	D Rb × D Rm	Rm ²
1	11.0	12.0	0.67	1.33	0.89	1.77
2	10.5	11.0	0.17	0.33	0.06	0.11
3	<u>9.5</u>	<u>9.0</u>	-0.83	-1.67	<u>1.39</u>	<u>2.79</u>
	<u>31.0</u>	<u>32.0</u>			<u>2.34</u>	<u>4.67</u>

Average Rb = 10.33

Average Rm = 10.67

$$\text{Covariance} = \frac{\sum (R_m - \bar{R}_m)(R_b - \bar{R}_b)}{N}$$

$$\text{Covariance} = \frac{2.34}{3} = 0.78$$

$$\text{Variance } (\sigma_m^2) = \frac{\sum (R_m - \bar{R}_m)^2}{N}$$

$$= \frac{4.67}{3} = 1.557$$

$$\beta = \frac{0.78}{1.557} = 0.50$$

(b)

<i>Projected Balance Sheet</i>				
	Year 1	Year 2	Year 3	Year 4
Fixed Assets (40% of Sales)	9,600	11,520	13,824	13,824
Current Assets (20% of Sales)	4,800	5,760	6,912	6,912
Total Assets	14,400	17,280	20,736	20,736
Equity	14,400	17,280	20,736	20,736

Projected Cash Flows:-

	Year 1	Year 2	Year 3	Year 4
Sales	24,000	28,800	34,560	34,560
PBT (10% of sale)	2,400	2,880	3,456	3,456
PAT (70%)	1,680	2,016	2,419.20	2,419.20
Depreciation	800	960	1,152	1,382
Addition to Fixed Assets	2,400	2,880	3,456	1,382
Increase in Current Assets	800	960	1,152	-
Operating cash flow (FCFF)	(720)	(864)	(1,036.80)	2,419.20

Projected Cash Flows:-

Present value of Projected Cash Flows:-

<i>Cash Flows</i>	<i>PVF at 15%</i>	<i>PV</i>
-720	0.870	-626.40
-864	0.756	-653.18
-1,036.80	0.658	-682.21
		-1,961.79

Residual Value - 2419.20/0.15 = 16,128

Present value of Residual value = 16128/(1.15)³
= 16128/1.521 = 10603.55

Total shareholders' value = 10,603.55 – 1,961.79 = 8,641.76

Pre strategy value = 1,400 / 0.15 = 9,333.33

∴ Value of strategy = 8,641.76 – 9,333.33 = – 691.57

Conclusion: The strategy is not financially viable

(c) Direct Plans in Mutual Funds

Asset management companies (AMC) have been permitted to make direct investments in mutual fund schemes even before 2011. But, there were no separate plans for these investments. These investments were made in distributor plan itself and were tracked with single NAV - one of the distributor plans. Therefore, an investor was forced to buy mutual funds based on the NAV of the

distributor plans. However, things changed with introduction of direct plans by SEBI on January 1, 2013.

Mutual fund direct plans are those plan where Asset Management Companies or mutual fund Houses do not charge distributor expenses, trail fees and transaction charges. NAV of the direct plan are generally higher in comparison to a regular plan. Studies have shown that the 'Direct Plans' have performed better than the 'Regular Plans' for almost all the mutual fund schemes.

4. (a) Calculation of Income available for Distribution

	Units (Lakh)	Per Unit (Rs.)	Total (Rs. In lakh)
Income from April	300	0.0765	22.9500
Add: Dividend equalization collected on issue	6	0.0765	0.4590
	306	0.0765	23.4090
Add: Income from May		0.1125	34.4250
	306	0.1890	57.8340
Less: Dividend equalization paid on repurchase	3	0.1890	(0.5670)
	303	0.1890	57.2670
Add: Income from June		0.1500	45.4500
	303	0.3390	102.7170
Less: Dividend Paid		0.2373	(71.9019)
	303	0.1017	30.8151

Calculation of Issue Price at the end of April

	Rs.
Opening NAV	18.750
Add: Entry Load 2% of Rs. 18.750	(0.375)
	19.125
Add: Dividend Equalization paid on Issue Price	0.0765
	19.2015

Calculation of Repurchase Price at the end of May

	Rs.
Opening NAV	18.750
Less: Exit Load 2% of Rs. 18.750	(0.375)
	18.375
Add: Dividend Equalization paid on Issue Price	0.1890
	18.564

Closing NAV

		Rs. (Lakh)
Opening Net Asset Value (Rs. 18.75 × 300)		5625.0000
Portfolio Value Appreciation		425.4700
Issue of Fresh Units (6 × 19.2015)		115.2090

Income Received (22.950 + 34.425 + 45.450)		102.8250
		6268.504
Less: Units repurchased (3 × 18.564)	-55.692	
Income Distributed	-71.9019	(-127.5939)
Closing Net Asset Value		6140.9101
Closing Units (300 + 6 – 3) lakh		303 lakh
∴ Closing NAV as on 30 th June		Rs. 20.2670

- (b) (i) Under the given circumstances, the USD is expected to quote at a premium in India as the interest rate is higher in India.

(ii) **Calculation of the forward rate:**

$$\frac{1+R_h}{1+R_f} = \frac{F_1}{E_0}$$

Where: R_h is home currency interest rate, R_f is foreign currency interest rate, F_1 is end of the period forward rate, and E_0 is the spot rate.

$$\text{Therefore } \frac{1+(0.09/2)}{1+(0.02/2)} = \frac{1 + (0.09/2)}{1 + (0.02/2)} = \frac{F_1}{64.50}$$

$$\frac{1 + 0.045}{1 + 0.01} = \frac{F_1}{64.50}$$

$$\text{or } \frac{1.045}{1.01} \times 64.50 = F_1$$

$$\text{or } \frac{67.4025}{1.01} = F_1$$

$$\text{or } F_1 = \text{Rs.}66.74$$

(iii) **Rate of premium:**

$$\frac{66.74 - 64.50}{64.50} \times \frac{12}{6} \times 100 = 6.94\%$$

- (c) On the basis of different maturity characteristics, the securitized instruments can be divided into following three categories:

- (i) **Pass Through Certificates (PTCs):** As the title suggests originator (seller of eh assets) transfers the entire receipt of cash in form of interest or principal repayment from the assets sold. Thus, these securities represent direct claim of the investors on all the assets that has been securitized through SPV.

Since all cash flows are transferred the investors carry proportional beneficial interest in the asset held in the trust by SPV.

It should be noted that since it is a direct route any prepayment of principal is also proportionately distributed among the securities holders. Further, due to these characteristics on completion of securitization by the final payment of assets, all the securities are terminated simultaneously.

Skewness of cash flows occurs in early stage if principals are repaid before the scheduled time.

- (ii) **Pay Through Security (PTS):** As mentioned earlier, since, in PTCs all cash flows are passed to the performance of the securitized assets. To overcome this limitation and limitation to single mature there is another structure i.e. PTS.

In contrast to PTC in PTS, SPV debt securities backed by the assets and hence it can restructure different tranches from varying maturities of receivables.

In other words, this structure permits desynchronization of servicing of securities issued from cash flow generating from the asset. Further, this structure also permits the SPV to reinvest surplus funds for short term as per their requirement.

Since, in Pass Through, all cash flow immediately in PTS in case of early retirement of receivables plus cash can be used for short term yield. This structure also provides the freedom to issue several debt tranches with varying maturities.

- (iii) **Stripped Securities:** Stripped Securities are created by dividing the cash flows associated with underlying securities into two or more new securities. Those two securities are as follows:

- (1) Interest Only (IO) Securities
- (2) Principle Only (PO) Securities

As each investor receives a combination of principal and interest, it can be stripped into two portions of Interest and Principle. Accordingly, the holder of IO securities receives only interest while PO security holder receives only principal. Being highly volatile in nature these securities are less preferred by investors.

In case yield to maturity in market rises, PO price tends to fall as borrower prefers to postpone the payment on cheaper loans. Whereas if interest rate in market falls, the borrower tends to repay the loans as they prefer to borrow fresh at lower rate of interest.

In contrast, value of IO's securities increases when interest rate goes up in the market as more interest is calculated on borrowings.

However, when interest rate due to prepayments of principals, IO's tends to fall.

Thus, from the above, it is clear that it is mainly perception of investors that determines the prices of IOs and POs.

OR

Let us discuss briefly the steps in securitization mechanism:

- (1) **Creation of Pool of Assets:** The process of securitization begins with creation of pool of assets by segregation of assets backed by similar type of mortgages in terms of interest rate, risk, maturity and concentration units.
- (2) **Transfer to SPV:** One assets have been pooled, they are transferred to Special Purpose Vehicle (SPV) especially created for this purpose.
- (3) **Sale of Securitized Papers:** SPV designs the instruments based on nature of interest, risk, tenure etc. based on pool of assets. These instruments can be Pass Through Security or Pay Through Certificates, (discussed later).
- (4) **Administration of assets:** The administration of assets is subcontracted back to originator which collects principal and interest from underlying assets and transfer it to SPV, which works as a conduit.
- (5) **Recourse to Originator:** Performance of securitized papers depends on the performance of underlying assets and unless specified in case of default they go back to originator from SPV.
- (6) **Repayment of funds:** SPV will repay the funds in form of interest and principal that arises from the assets pooled.

- (7) **Credit Rating to Instruments:** Sometime before the sale of securitized instruments credit rating can be done to assess the risk of the issuer.

5. (a) In the given case, the exchange rates are indirect. These can be converted into direct rates as follows:

Spot rate

$$\text{GBP} = \frac{1}{\text{USD } 1.5617} \quad \text{to} \quad \frac{1}{\text{USD } 1.5673}$$

$$\text{USD} = \text{GBP } 0.64033 \quad - \quad \text{GBP } 0.63804$$

6 months' forward rate

$$\text{GBP} = \frac{1}{\text{USD } 1.5455} \quad \text{to} \quad \frac{1}{\text{USD } 1.5609}$$

$$\text{USD} = \text{GBP } 0.64704 \quad - \quad \text{GBP } 0.64066$$

Payoff in 3 alternatives

i. Forward Cover

Amount payable	USD 3,64,897
Forward rate	GBP 0.64704
Payable in GBP	GBP 2,36,103

ii. Money market Cover

Amount payable	USD 3,64,897
PV @ 4.5% for 6 months i.e. $\frac{1}{1.0225} = 0.9779951$	USD 3,56,867
Spot rate purchase	GBP 0.64033
Borrow GBP (USD 3,56,867 x 0.64033)	GBP 2,28,512
Interest for 6 months @ 7 %	7,998
Payable after 6 months	<u>GBP 2,36,510</u>

iii. Currency options

Amount payable	USD 3,64,897
Unit in Options contract	GBP 12,500
Value in USD at strike rate of 1.70 (GBP 12,500 x 1.70)	USD 21,250
Number of contracts USD 3,64,897 / USD 21,250	17.17
Exposure covered USD 21,250 x 17	USD 3,61,250
Exposure to be covered by Forward (USD 3,64,897 – USD 3,61,250)	USD 3,647
Options premium 17 x GBP 12,500 x 0.096	USD 20,400
Premium in GBP (USD 20,400 x 0.64033)	GBP 13,063
Total payment in currency option	
Payment under option (17 x 12,500)	GBP 2,12,500
Premium payable	GBP 13,063
Payment for forward cover (USD 3,647 x 0.64704)	<u>GBP 2,360</u>
	<u>GBP 2,27,923</u>

Thus total payment in:

(i)	Forward Cover	2,36,103 GBP
(ii)	Money Market	2,36,510 GBP
(iii)	Currency Option	2,27,923 GBP

The company should take currency option for hedging the risk.

Note: Even interest on Option Premium can also be considered in the above solution.

(b) (i) Return of a US Investor

$$= \frac{\text{Ending Price} - \text{Initial Price}}{\text{Initial Price}} \times 100$$

$$= \frac{1919 - 2028}{2028} \times 100 = -5.37\%$$

(ii) Return of Mr. X

Initial Investment (Rs.)	1.58 Crore
Applicable Exchange Rate on 1.1.20x1	Rs. 62.25
Equivalent US\$	US\$ 2,53,815.26
Purchase Price of Standard & Poor Index	2028
No. of Standard & Poor Indices Purchased	125.16
Ending Price of Standard & Poor Index	1919
Proceeds realised in US\$ on sale of Standard & Poor Index	US\$ 2,40,182.04
Applicable Exchange Rate on 1.1.20x2	Rs. 67.25
Proceeds realised in INR on sale of Standard & Poor Index	Rs. 1,61,52,242
Rate of Return ($\frac{16152242 - 15800000}{15800000} \times 100$)	2.23%

(iii) Rate of Return had the amount been invested in India

Initial Investment (Rs.)	1.58 Crore
Purchase Price of Indian Index	7395
No. of Indian Indices Purchased	2136.58
Let Ending Price of Indian Index	X
Then to be indifferent with return in International Market	$\frac{2136.58 \times X - 1.58}{1.58} \times 100 = 2.23$
Price of Indian Index to be indifferent	7559.90 say 7560

(c) Bootstrapping as a mode of financing for start ups

An individual is said to be boot strapping when he or she attempts to found and build a company from personal finances or from the operating revenues of the new company.

A common mistake made by most founders is that they make unnecessary expenses towards marketing, offices and equipment they cannot really afford. So, it is true that more money at the inception of a business leads to complacency and wasteful expenditure. On the other hand, investment by startups from their own savings leads to cautious approach. It curbs wasteful expenditures and enable the promoter to be on their toes all the time.

Here are some of the methods in which a startup firm can bootstrap:

- (a) *Trade Credit*: When a person is starting his business, suppliers are reluctant to give trade credit. They will insist on payment of their goods supplied either by cash or by credit card. However, a way out in this situation is to prepare a well-crafted financial plan. The next step is to pay a visit to the supplier's office. If the business organization is small, the owner can be directly contacted. On the other hand, if it is a big firm, the Chief Financial Officer can be contacted and convinced about the financial plan.

Communication skills are important here. The financial plan has to be shown. The owner or the financial officer has to be explained about the business and the need to get the first order on credit in order to launch the venture. The owner or financial officer may give half the order on credit and balance on delivery. The trick here is to get the goods shipped and sell them before paying to them. One can also borrow to pay for the good sold. But there is interest cost also. So trade credit is one of the most important ways to reduce the amount of working capital one needs. This is especially true in retail operations.

When you visit your supplier to set up your order during your startup period, ask to speak directly to the owner of the business if it's a small company. If it's a larger business, ask to speak to the chief financial officer or any other person who approves credit. Introduce yourself. Show the officer the financial plan that you have prepared. Tell the owner or financial officer about your business, and explain that you need to get your first orders on credit in order to launch your venture.

The owner or financial officer may give half the order on credit, with the balance due upon delivery. Of course, the trick here is to get the goods shipped, and sell them before one has to pay for them. One could borrow money to pay for the inventory, but you have to pay interest on that money. So trade credit is one of the most important ways to reduce the amount of working capital one needs. This is especially true in retail operations.

- (b) *Factoring*: This is a financing method where accounts receivable of a business organization is sold to a commercial finance company to raise capital. The factor then got hold of the accounts receivable of a business organization and assumes the task of collecting the receivables as well as doing what would've been the paperwork. Factoring can be performed on a non-notification basis. It means customers may not be told that their accounts have been sold.

However, there are merits and demerits to factoring. The process of factoring may actually reduce costs for a business organization. It can actually reduce costs associated with maintaining accounts receivable such as bookkeeping, collections and credit verifications. If comparison can be made between these costs and fee payable to the factor, in many cases it has been observed that it even proved fruitful to utilize this financing method.

In addition to reducing internal costs of a business, factoring also frees up money that would otherwise be tied to receivables. This is especially true for businesses that sell to other businesses or to government; there are often long delays in payment that this would offset. This money can be used to generate profit through other avenues of the company. Factoring can be a very useful tool for raising money and keeping cash flowing.

- (c) *Leasing*: Another popular method of bootstrapping is to take the equipment on lease rather than purchasing it. It will reduce the capital cost and also help lessee (person who take the asset on lease) to claim tax exemption. So, it is better to take a photocopy machine, an automobile or a van on lease to avoid paying out lump sum money which is not at all feasible for a startup organization.

Further, if you are able to shop around and get the best kind of leasing arrangement when you're starting up a new business, it's much better to lease. It's better, for example, to lease a photocopier, rather than pay \$3,000 for it; or lease your automobile or van to avoid paying out \$8,000 or more.

There are advantages for both the startup businessman using the property or equipment (i.e. the *lessee*) and the owner of that property or equipment (i.e. the *lessor*.) The lessor enjoys tax benefits in the form of depreciation on the fixed asset leased and may gain from capital appreciation on the property, as well as making a profit from the lease. The lessee benefits by making smaller payments retain the ability to walk away from the equipment at the end of the lease term. The lessee may also claim tax benefit in the form of lease rentals paid by him.

6. (a) Conversion Price = Rs. 50 x 17 = Rs. 850

Intrinsic Value = Rs. 850

Accordingly the yield (r) on the bond shall be :

$$\text{Rs. 850} = \text{Rs. 100 PVAF } (r, 10) + \text{Rs. 1000 PVF } (r, 10)$$

Let us discount the cash flows by 11%

$$850 = 100 \text{ PVAF } (11\%, 10) + 1000 \text{ PVF } (11\%, 10)$$

$$850 = 100 \times 5.890 + 1000 \times 0.352$$

$$= 91$$

Now let us discount the cash flows by 13%

$$850 = 100 \text{ PVAF } (13\%, 10) + 1000 \text{ PVF } (13\%, 10)$$

$$850 = 100 \times 5.426 + 1000 \times 0.295$$

$$= -12.40$$

Accordingly, IRR

$$11\% + \frac{90.90}{90.90 - (-12.40)} \times (13\% - 11\%)$$

$$11\% + \frac{90.90}{103.30} \times (13\% - 11\%)$$

$$= 12.76\%$$

The spread from comparable bond = 12.76% - 11.80% = 0.96%

- (b)

Calculation of return on portfolio for 2009-10	(Calculation in Rs. / share)		
	M	N	
Dividend received during the year	10	3	
Capital gain/loss by 31.03.10			
Market value by 31.03.10	220	290	
Cost of investment	200	300	
Gain/loss	20	(-)10	
Yield	30	(-)7	
Cost	200	300	
% return	15%	(-)2.33%	
Weight in the portfolio	57	43	
Weighted average return			7.55%
Calculation of estimated return for 2010-11			

Expected dividend	20	3.5	18.02%
Capital gain by 31.03.11			
$(220 \times 0.2) + (250 \times 0.5) + (280 \times 0.3) - 220 = (253 - 220)$	33	-	
$(290 \times 0.2) + (310 \times 0.5) + (330 \times 0.3) - 290 = (312 - 290)$	-	22	
Yield	53	25.5	
*Market Value 01.04.10	220	290	
% return	24.09%	8.79%	
*Weight in portfolio (1,000x220): (500x290)	60.3	39.7	
Weighted average (Expected) return			18.02%
(*The market value on 31.03.10 is used as the base for calculating yield for 10-11)			

Calculation of Standard Deviation

M Ltd.

Exp. market value	Exp. gain	Exp. div.	Exp. Yield (1)	Prob. Factor (2)	(1) X (2)	Dev. $(P_M - \bar{P}_M)$	Square of dev. (3)	(2) X (3)
220	0	20	20	0.2	4	-33	1089	217.80
250	30	20	50	0.5	25	-3	9	4.50
280	60	20	80	0.3	24	27	729	218.70
					53			$\sigma^2_M = 441.00$

Standard Deviation (σ_M)

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N Ltd.

Exp. market value	Exp. gain	Exp. div.	Exp. Yield (1)	Prob. Factor (2)	(1) X (2)	Dev. $(P_N - \bar{P}_N)$	Square of dev. (3)	(2) X (3)
290	0	3.5	3.5	0.2	0.7	-22	484	96.80
310	20	3.5	23.5	0.5	11.75	-2	4	2.00
330	40	3.5	43.5	0.3	13.05	18	324	97.20
					25.5			$\sigma^2_N = 196.00$

Standard Deviation (σ_N)

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Share of company M Ltd. is more risky as the S.D. is more than company N Ltd.

- (c) A '**Reverse Stock Split**' is a process whereby a company decreases the number of shares outstanding by combining current shares into fewer or lesser number of shares. For example, in a 5 : 1 reverse split, a company would take back 5 shares and will replace them with one share.

Although, reverse stock split does not result in change in Market value or Market Capitalization of the company but it results in increase in price per share.

Considering above mentioned ratio, if company has 100 million shares outstanding having Market Capitalisation of Rs. 500 crore before split up, the number of shares would be equal to 20 million after the reverse split up and market price per share shall increase from Rs. 50 to Rs. 250.

Reasons for Reverse Split Up

Although Reverse Split up is not so popular especially in India but company carries out reverse split up due to following reasons:

- (i) **Avoiding delisting from stock exchange:** Sometimes as per the stock exchange regulations if the price of shares of a company goes below a certain limit it can be delisted. To avoid such delisting company may resort to reverse stock split up.
- (ii) **Avoiding removal from constituents of Index:** If company's share is one of the constituents of the market index then to avoid their removal of scrip from this list due to persistent fall in the prices of share, the company may take reverse split up route.
- (iii) **To avoid the tag of "Penny Stock":** If the price of shares of a company goes below a limit it may be called "Penny Stock". In order to improve the image of the company and avoiding this stage, the company may go for Reverse Stock Split.
- (iv) **To attract Institutional Investors and Mutual Funds:** It might be possible that institutional investors may be shying away from acquiring low value shares and hence to attract these investors the company may adopt the route of Reverse Stock Split up to increase the price per share.