SUGGESTED SOLUTION

FINAL MAY 2019 EXAM

SUBJECT - SFM

Test Code – FNJ 7043

BRANCH - () (Date :)

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Answer 1:

Particulars	**Rs. crore**
Average level of Receivables = 165 crore × 65/360	29.7916
Factoring commission = 29.7916 crore × 1.95/100	0.5809
Factoring reserve = 29.7916 crore × 15/100	4.4687
Amount available for advance = Rs. 29.7916 – (0.5809 + 4.4687)	24.742
Factor will deduct his interest @ 16%:- $24.742 \times \frac{16}{100} \times \frac{65}{360}$	Rs. 0.7148
Advance to be paid = (Rs. 24.742–Rs. 0.7148)	24.0272

Annual Cost of Factoring to the Firm:	***Rs.* crore**
Factoring commission (Rs. 0.5809 crore × 360/65)	3.2173
Interest charges (Rs. 0.7148 crore × 360/65)	3.9589
Total	7.1762
Firm's Savings on taking Factoring Service:	Rs.
Cost of credit administration saved	0.1235
Cost of Bad Debts (Rs. 165 crore× 4.28/100) avoided	7.0620
Total	7.1855
Net cost to the Firm (Rs. 7.1762 – Rs. 7.1855)	-0.0093
Effective cost of factoring to the firm = $\frac{-0.0093 \times 100}{24.0272}$	-0.0387%

Answer 2:

1. Calculation of initial outlay:-

		Rs. (million)
a.	Face value	300
	Add:-Call premium	12
	Cost of calling old bonds	312
b.	Gross proceed of new issue	300
	Less: Issue costs	6
	Net proceeds of new issue	294
c.	Tax savings on call premium and unamortized cost 0.30 (12 + 9)	6.3

∴ Initial outlay = Rs. 312 million – Rs. 294 million – Rs. 6.3 million = Rs. 11.7 million

2. Calculation of net present value of refunding the bond:-

Saving in annual interest expenses	Rs. (million)
[300 x (0.12 – 0.10)]	6.00
Less:- Tax saving on interest and amortization 0.30 x [6 + (9-6)/6]	1.95
Annual net cash saving	4.05
PVIFA (7%, 6 years)	4.766
∴ Present value of net annual cash saving	Rs. 19.30 million
Less:- Initial outlay	Rs. 11.70 million
Net present value of refunding the bond	Rs. 7.60 million

Decision: The bonds should be refunded

Answer 3:

(i) The Betas of two stocks:

Beta of two stocks

Aggressive stock

Situation	**Probability**	R_A	R_M	$P \times R_A$	$P \times R_M$	$P \times (R_A - \bar{R}_A) \times (R_M - \bar{R}_M)$	$P (R_M - \bar{R}_M)^2$
1	0.5	4	7	2	3.5	81	40.5
2	0.5	40	25	20	12.5	81	40.5
				22	**16**	**162**	**81**

Beta = $\frac{\sigma AM}{\sigma M^2} = \frac{162}{81} = 2$

- Defensive stock

Situation	**Probability**	R_D	R_M	$P \times R_D$	$P \times R_M$	$P \times (R_D - \bar{R}_D \times (R_M - \bar{R}_M)$	$P(R_M - \bar{R}_M)^2$
1	0.5	9	7	4.5	3.5	20.25	40.5
2	0.5	18	25	9	12.5	20.25	40.5
				13.5	**16**	**40.5**	**81**

Beta = $\frac{\sigma DM}{\sigma M^2} = \frac{40.5}{81} = 0.5$

(ii) Expected returns of the two stocks:-

Aggressive stock – (0.5 x 4%) + (0.5 x 40%) = 22%

Defensive stock – (0.5 x 9%) + (0.5 x 18%) = 13.5%

(iii) Security Market line

$E(R) = R_f + (R_m - R_f) \times \beta$

$E(R) = 7.5 + (16 - 7.5) \times \beta$

$E(R) = 7.5 + 8.5 \times \beta$

(iv) **Alpha of the two stocks**

$\alpha = R_A - \{R_f + (R_m - R_f) \times \beta_A\}$

Aggressive stock

$\alpha = 22 - \{7.5 + 8.5 \times 2\}$

$\alpha = -2.5$

Defensive stock

$\alpha = 13.5 - \{7.5 + 8.5 \times 0.5\}$

$\alpha = 1.75$

Answer 4:

Return of the stock under APT

Factor	Actual value in %	Expected value in %	Difference	Beta	Diff. x Beta
GNP	7.70	7.70	0.00	1.20	0.00
Inflation	7.00	5.50	1.50	1.75	2.63
Interest rate	9.00	7.75	1.25	1.30	1.63
Stock index	12.00	10.00	2.00	1.70	3.40
Ind. Production	7.50	7.00	0.50	1.00	0.50
					8.16
Risk free rate in %					9.25
Return under APT					17.41

Answer 5:
(A)

Just like interest rate risk the currency risk is dependent on the Government action and economic development. Some of the parameters to identity the currency risk are as follows:

(i) **Government Action:** The Government action of any country has visual impact in its currency. For example, the UK Govt. decision to divorce from European Union i.e. Brexit brought the pound to its lowest since 1980's.

(ii) **Nominal Interest Rate:** As per interest rate parity (IRP) the currency exchange rate depends on the nominal interest of that country.

(iii) **Inflation Rate:** Purchasing power parity theory discussed in later chapters impact the value of currency.

(iv) **Natural Calamities:** Any natural calamity can have negative impact.

(v) **War, Coup, Rebellion etc.:** All these actions can have far reaching impact on currency's exchange rates.

(vi) **Change of Government:** The change of government and its attitude towards foreign investment also helps to identify the currency risk.

(B)

- 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. 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 judicial use of resources is needed to cater to the need of the future customers along with the need of the present customers. 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.
- 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.

Formula : SGR = ROE x Retention Ratio (1-Dividend Payout) WHAT

MAKES AN ORGANISATION FINANCIALLY SUSTAINABLE?

To be financially sustainable, an organisation must:

- have more than one source ofincome;
- have more than one way of generating income;
- do strategic, action and financial planning regularly;
- have adequate financial systems;
- have a good publicimage;
- be clear about its values (value clarity); and
- have financial autonomy.

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

- increase sales as rapidly as market conditions allow. If a company has an excellent growth strategy in place, but has not put the necessary infrastructure in place to execute that strategy, long-term growth is impossible. The reverse is also true.

WHAT MAKES AN ORGANISATION SUSTAINABLE?

In order to be sustainable, an organisation must:

- have a clear strategic direction;
- be able to scan its environment or context to identify opportunities for its work;
- be able to attract, manage and retain competent staff;
- have an adequate administrative and financial infrastructure;
- be able to demonstrate its effectiveness and impact in order to leverage further resources; and
- get community support for, and involvement in its work.

Mature firms often have actual growth rates that are less than the sustainable growth rate. In these cases, management's principal objective is finding productive uses for the cash flows that exist in excess of their needs. Options available to business owners and executives in such cases includes returning the money to shareholders through increased dividends or common stock repurchases, reducing the firm's debt load, or increasing possession of lower earning liquid assets. These actions serve to decrease the sustainable growth rate. Alternatively, these firms can attempt to enhance their actual growth rates through the acquisition of rapidly growing companies.

Answer 6:

(A)

The important characteristics of financial instruments are enumerated as below:

a) **Liquidity:** Financial instruments provide liquidity. These can be easily and quickly converted into cash.

b) **Marketing:** Financial instruments facilitate easy trading on the market. They have a ready market.

c) **Collateral value**: Financial instruments can be pledged for getting loans.

d) **Transferability**: Financial instruments can be transferred from one person to another.

e) **Maturity period:** The maturity period of financial instruments may be short term, medium term or long term.

f) **Transaction cost:** Financial instruments involve buying and selling cost. The buying and selling costs are called transaction costs.

g) **Risk**: Financial instruments carry risk. Equity based instruments are riskier in comparison to debt based instruments because the payment of dividend is uncertain. A company may not declare dividend in a particular year. However, payment of principle or interest is more or less certain unless the company gets insolvent.

h) **Future trading:** Financial instruments facilitate future trading so as to cover risks arising out of price fluctuations, interest rate fluctuations etc.

(B)

The Dow Theory

The Dow Theory is one of the oldest and most famous technical theories. It was originated by Charles Dow, the founder of Dow Jones Company in late nineteenth century. It is a helpful tool for determining the relative strength of the stock market. It can also be used as a barometer of business.

The Dow Theory is based upon the movements of two indices, constructed by Charles Dow, Dow Jones Industrial Average (DJIA) and Dow Jones Transportation Average (DJTA). These averages reflect the aggregate impact of all kinds of information on the market. The movements of the market are divided into three classifications, all going at the same time; the primary movement, the secondary movement, and the daily fluctuations. The primary movement is the main trend of the market, which lasts from one year to 36 months or longer. This trend is commonly called bear or bull market. The secondary movement of the market is shorter in duration than the primary movement, and is opposite in direction. It lasts from two weeks to a month or more. The daily fluctuations are the narrow movements from day-to-day. These fluctuations are not part of the Dow Theory interpretation of the stock market. However, daily movements must be carefully studied, along with primary and secondary movements, as they go to make up the longer movement in the market.

Thus, the Dow Theory's purpose is to determine where the market is and where is it going, although not how far or high. The theory, in practice, states that if the cyclical swings of the stock market averages are successively higher and the successive lows are higher, then the market trend is up and a bullish market exists. Contrarily, if the successive highs and successive lows are lower, then the direction of the market is down and a bearish market exists.

Charles Dow proposed that the primary uptrend would have three moves up, the first one being caused by accumulation of shares by the far-sighted, knowledgeable investors, the second move would be caused by the arrival of the first reports of good earnings by corporations, and the last move up would be caused by widespread report of financial well-being of corporations. The third stage would also see rampant speculation in the market. Towards the end of the third stage, the far-sighted investors, realizing that the high earnings levels may not be sustained, would start selling, starting the first move down of a downtrend, and as the non-sustainability of high earnings is confirmed, the second move down would be initiated and then the third move down would result from distress selling in the market.