VIRTUAL COACHING CLASSES
ORGANISED BY BOS (ACADEMIC), ICAI

FINAL LEVEL

PAPER 5 – STRATEGIC COST MANAGEMENT AND PERFORMANCE EVALUATION

DATE 4th and 7th Dec 2020

FACULTY - PANKAJ KAPOOR

Students are firmly advised to keep print-out (keeping one side blank for notes, key points, and solutions) of these lecture notes handy while attending class.

Session – 4th Dec 2020 (Friday) & 7th Dec 2020 (Monday)

Coverage – Chapter 8 – Performance Measurement and Evaluation

Disclaimer – Views expressed in this document are of individual faculty, not necessary of the institute.

Note - If my friends willing to solve Nov 2020 examination questions [Q2 (for 20M) and Q5a (for 10M)] asked from chapter 4 (which we studied together through VCC) along with me in class then we will first solve those question. Both the questions from lecture notes discussed.

From Chapter 8 two questions, Q1 (for 20M - NFPS) and Q3 (for 20M - EVA) was asked in Nov 2020 exam – we will solve those as well one in next class and other in 5th class from this class.

Friends, in order to manage the performance; it is essential to measure the performance first and then evaluation of the same. So in chapter 8, we will learn about different tools used to measure and evaluate the performance for both for profit and not-for profit organisation apart from improving performance.

Note 1 - Performance Management System may be seen as four-stage solution to take any organisation towards sustainability

1. Determine the organisational structure and also ensure that the structure must be appropriate and best fit (See note 2)
2. Evaluate the degree of delegation of control and also identify the responsibility centres (See note 3 & 4)
3. Establish the performance measures (both financial and non-financial) and target for each measure (See note 5 onwards)
4. Review (appraise) the performance and take corrective actions to manage it. (See note 8 onwards)

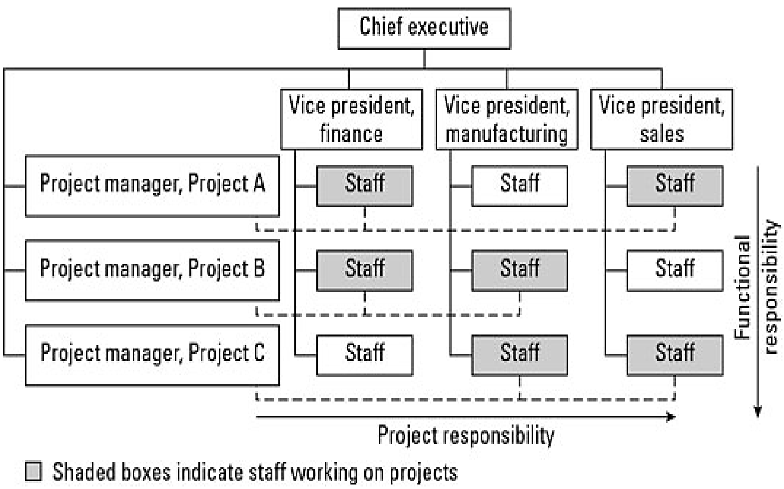
Note 2 (on page 8.3 of SM & few additions) - Organisational structure outlines the roles of individuals in the organisation and decide the way in which authority and responsibility is allocated among them and how they are coordinating with each other to attain organisational objectives.

2.1 Entrepreneurial - In an entrepreneurial structure; the management & control revolves around owner only, hence such an entrepreneur owner act in a dual capacity; both as owner and manager.

2.2 Functional - A functional organizational structure forms when a business departmentalizes, according to the business functions such as production & operations, marketing, and finance.

2.3 Divisional - An organization with a divisional organizational structure has various divisions operating autonomously. But in divisional structure too, some functional departments (HR and Accounts) are working horizontally throughout the organisation (known as corporate function or shared/support services).

2.4 Matrix - In a matrix structure, cross-functional teams are formed to reap the dual benefits of decentralisation and co-ordination. The cross-functional team contain staff from different functions and who are responsible to achieve a specific target unitedly. The shaded staff required to report to their functional lead and to project lead/manager both. Conflict of interest is expected, but availability of cross-functional skills is a key advantage.



Note 3 **(on page 8.2 of SM)** **- Responsibility accounting** is the collecting, summarizing, and reporting of information wherein individual manager is held responsible for cost, profit, revenue or investment centre; which is under his or her control. The idea behind responsibility accounting is that, performance of each manager should be judged based upon only the items under his or her control.

Responsibility accounting is apt for organisations, where top management has delegated the decision making authority. Clear and defined delegation of authority is essential for effective responsibility accounting.

Note 4 **(on page 8.4 of SM & minor addition)** **- Responsibility Centres** is a specific unit of an organisation, assigned to a manager; who is held responsible for its operation and resources. Responsibility Centres can be categorizes into cost, profit, revenue or investment centres

4.1 Cost or Expense Centres are responsibility centres where the manager '**has control over the costs'** (other than those of capital nature) owning to function, for which he is responsible. For example the paint department of automobile firm.

4.2 Revenue Centres are the responsibility centres where the manager has **'control over the generation of revenue from operation'** with no responsibility for costs. To illustrate, booking counter of any Airline Company is revenue centre.

4.3 Profit Centres are the responsibility centres where the manager of such a centre or division has '**control on both revenue and costs'** (other than those, which are of capital nature) earned out of and incurred on assets assigned to the division respectively. To illustrate, the facility of canteen can be considered as the profit centre.

4.4 Investment Centres are the responsibility centres where the manager has responsibility for not just the revenues and costs relating to the centre, but also the assets that cause these costs and generate these revenues and the investment decisions relating to disposal and acquisition of assets.

Investment centre can be referred to as **strategic business units** (SBUs). Mind it each division is not SBU. For being SBU capabilities to work independently and in isolation are essential.

Practical Insight on SBU

ITC Limited is a diversified group dealing in 13 business ranging from FMCG (Comprises 7 business - Cigarettes & Cigars, Foods, Personal Care, Education & Stationery, Lifestyle Retailing, Safety Matches, and Agarbattis & Dhoop), Hotels, Paperboards & Specialty Papers, Packaging, Agri-Business, Information Technology, and ITC Brand world

ITC has 11 divisions but has only four designated SBUs, these are Personal Care Products, Education and Stationery Products, Packaging & Printing, and Matches & Agarbattis. (Source - https://www.itcportal.com/)

Note 5 - Divisional Performance Measures (on page 8.5 of SM and prospective case base issue (mentioned on page 8.10)

Performance management system plays a key role in developing and deploying the strategy, but it has a prerequisite and that is; measure the existing performance. If organisation is divisionalised then performance also needs to be measured at the division level for each division.

Performance measures or indicators can be classified as

- Financial Measures
  - Return on Investment (ROI)
  - Residual Income (RI)
  - Economic Value Added (EVA)
- Non Financial Measures & tools are
  - Balanced Scorecard
  - The Performance Pyramid
  - Building Block Model
  - The Performance Prism
  - Triple Bottom Line (TBL)

Tools mentioned under the Non-financial measures category also include financial indicators or prospective to a certain extent (as part of the wider picture)

Are financial measures sufficient or not in isolation?

Note 6 (on page 8.4 of SM) - A **good performance measure** should

- Provide the reasonable incentive to the divisional manager to make decisions which are in the best interests of the overall company (goal congruence).
- Only include factors for which the divisional manager can be held accountable.
- Recognise the long-term objectives as well as the short-term objectives of the organisation.

Note 7 - David Otley, Jane Broadbent, and Anthony Berry suggest the pros and cons of the use of performance measures

The **benefits** (on page 8.26 of SM) are;

Develops agreed measures of activity.

Define and clarifies the objectives of the organization.

Helps in the setting targets for managers.

Greater understanding of the process.

Facilitate comparison between divisions.

Promotes accountability to stakeholders.

The **major problems** (on page 8.27 of SM) are;

Tunnel Vision → Undue focus on one particular measure which results in loss of observation acuity on other measures.

Sub-optimization → Focus on one sub-set of measures which is to the detriment to others measure at the overall level.

Myopia → Focusing too much on short-term measures and neglecting the long-term measures

Ossification → Restringing to change the out-dated performance measures, which are currently in practice.

Irrelevance → Relaying upon the use of irrelevant measure/s, to attain the desired indicators.

Distortion → Deliberately distorting the measures to be in an advantageous position

Misrepresentation → The use of creative reporting to showcase the performance is acceptable, whereas in actual it is not.

Misinterpreting → Failure to assign the appropriate and deserving interpretation either with the intention to deceive or due to inability to decode the complexity involved in information and environment in which such information needs to be interpreted.

Note 8 - Financial Performance Measures

In order to be a sustainable business, the essentials are profitability, survival, and growth. Since the financial performance measures/indicators, can be considered as best indicators of profitability and easy indicators of growth and survival (solvency and liquidity); hence must be part of performance measurement metrics. These are;

8.1 Return on Investment (ROI) (on page 8.5 and 8.6 of SM)

DuPont, an American company during the 1920s become the first to recognise the need to consider the level of investment along with the income generated through such investment; while appraising the performance of the investment centre.

ROI simply measures the return as rate on the assets invested.

☞ **Evaluating divisional managers based upon ROI may lead to sub-optimisation (or lack of goal congruence).**

	Division α	Division β
Investment in proposed project	₹20 lacs	₹20 lacs
Estimated controllable contribution	₹2.0 lacs	₹1.4 lacs
ROI of the proposed project		
Presently the ROI of Divisions	13%	5%
Overall Cost of Capital to company	8%	

☞ No doubt ROI is easy to calculate as all the requisite information is readily available (if accounts are prepared at divisional level) but research shows poor correlation between ROI and shareholder's wealth and can be distorted by accounting policies.

8.2 Residual Income (RI) (on page 8.6 and 8.7 of SM)

To overcome the limitation caused by ROI (sub-optimisation or lack of goal congruence), the residual income approach can be used for the purpose of evaluating the performance of divisional managers.

Residual income is excess of controllable contribution over a predetermined organisation-wide minimum hurdle rate (cost of capital charge) on the investment controllable by the divisional manager. So higher the residual income means better the investment centre.

	Division α (in ₹ lacs)	Division β (in ₹ lacs)
Proposed investment	₹20.00	₹20.00
Expected controllable contribution	₹2.00	₹1.40
Cost of Capital (@ 8%)		
Residual Income		

☞ Being an absolute measure, the residual income is not capable to be used as a tool for making the comparison between the divisional performances of different sizes. It is obvious, that a large division is more likely to earn a larger residual income than a small division. (See the question below)

Question – SM Page 8.7, RTP M18 Q13

The following data pertain to two divisions. W_1 and W_2, of a large Shipping Company.

	W_1 (₹)	**W_2 (₹)**
Return	1,20,00,000	31,20,000
Investment	9,60,00,000	1,56,00,000

Cost of Capital at 10%

You are required to **interpret** the conflicting results based on financial performance measures ROI and RI

Note - This question shows that RI is subject to **size effect** but ROI is not.
RI is not a good way to compare divisions that differ greatly in size.

Workings

	W_1	**W_2**	**Remark**
ROI			
RI			

Exam Question – N19 Q3

AKG Limited has three autonomous divisions. The divisions are evaluated on the basis of ROI, with year-end bonuses given to divisional managers who have the highest ROI. Operating results of Division II for the last year are given below:

Sales	2,10,00,000
Less: Variable Expenses	1,26,00,000
Contribution margin	84,00,000
Less: Fixed Expenses	67,20,000
Net Operating Income	16,80,000
Divisional Operating Assets	52,50,000

The company's overall ROI for the last year was 18% (considering all divisions). Division II has an opportunity to add a new product line that would require an investment of ₹30,00,000. Other details of the new product line are as follows:

Sales	₹90,00, 000 per annum
Variable Expenses	65% of sales
Fixed Expenses	₹25,20,000 per annum
Life cycle of the product line	5 years

a. Calculate last year's ROI of division II

b. Discuss whether the manager of Division II would accept or reject the new product line, if he takes his decision based solely on divisional ROI.

c. Advise how residual income approach can be used as an alternative financial measure for evaluation of managerial performance in the best interest of the company.

Question – SM Page 8.42, RTP N18 Q5

BYD Alloy Ltd. first opened its door in 1990 for business and now it is a major supplier of metals supporting over a dozen different industries and employs experts to support each industry. These include Wood & Panel Products Manufacturing, Hearth Products, Site Furnishings, Commercial and Residential Construction etc. It has grown through devotion to its customers, dedication to customer service and commitment to quality products. The company has two divisions: Division 'Y' and Division 'D'. Each division work as an investment centre separately. Salary of each divisional manager is ₹7,20,000 per annum with the addition of an annual performance related bonus based on divisional return on investment (ROI). A minimum ROI of 12% p.a. is expected to be achieved by each divisional manager. If a manager only achieves the 12% target, he will not be rewarded a bonus. However, for every whole 1% point above 12% which the division achieves for the year, a bonus equal to 3% of annual salary will be paid subject to a maximum bonus of 20% of annual salary. The figures belonging to the year ended 31 March 2020 are given below:

	Division 'Y' (₹000)	**Division 'D' (₹000)**
Revenue	29,000	17,400
Profit	5,290	3,940
Less: Head Office Cost	(2,530)	(1,368)
Net Profit	2,760	2,572
Non- Current Assets	19,520	29,960
Cash, Inventory, and Trade Receivable	4,960	6,520
Trade Payable	5,920	2,800
Manager Responsible	HAI	FAI

During the financial year 2019-20, FAI manager of Division 'D' invested ₹13.6 million in new equipment including an advanced cutting machine, which will increase productivity by 10% per annum. HAI, manager of Division 'Y', has made no investment during the year, even its computer system needs updation. Division 'Y''s manager has already delayed payments of its suppliers due to limited cash & bank balance although the cash balance at Division 'Y' is still better than that of Division 'D'.

Required

a. For each division, compute, ROI for the year ending 31 March 2020. Justify the figures used in your calculation.

b. Compute bonus of each manager for the year ended 31 March 2020.

c. Discuss whether ROI provides justifiable basis for computing the bonuses of managers and the problems arising from its use at BYD for the year ended 31 March 2020.

The major shortcoming of relying upon accounting profit includes;

a. While calculating the accounting profit, the cost of equity capital is ignored; unlike the cost of debt. A company can generate wealth, only when it earns the return in excess of the return required by providers of capital; which includes both equity and debt.

b. Accounting profits can be distorted by choice of accounting policies, hence cash flow or NOPAT (Net operating profit after taxes) is more relevant to the wealth of shareholder rather than accounting profit.

c. Accounting Profit is short term measure, it ignores the longer prospective from the preview of organisation as whole.

An alternate to accounting profit is economic profit and EVA is a measure of economic profit.

8.3 - Economic Value Added (EVA) (on page 8.7 to 8.9 of SM, Additional notes to enumerate steps and bring clarity)

Joel Stern and Bennett Stewart the founders of New-York based consulting firm 'Stern Stewart & Company' during the 1990s promoted the EVA. EVA is a performance measurement system. EVA can be calculated as

EVA = NOPAT – (WACC × Capital)

Whereas

NOPAT stands for net operating profit after taxes, this can be computed either by adjusting non-cash expenditure, interest (net of taxes), depreciation (economic vs. accounting), and operating lease rental to controllable PAT or by deducting taxes from operating profit.

WACC stands for a weighted average cost of capital which can be computed by assigning weight to each category of capital. It is basically the opportunity cost of Invested Capital.

Capital here depicts the opening adjusted capital employed in assets of division. Since EVA is a measure of economic profit rather than accounting profit hence certain costs which are needed to be capitalised rather than expensed out in the statement of P&L need to be adjusted. As per Stern Stewart, it took almost a year to reap benefits from additional employed capital.

☞ **Note (Caution)** - WACC shall be computed using weight as per the market value of each class of capital. Capital employed shall also be computed at the market value bases, but it may difficult to fetch market value of each asset class hence book value can be used as a proxy. But mind it using book value cause problem owning to the inherent limitation of accounting, because the book value of assets is impacted by accounting decisions made over time such as how to depreciate assets.

Adjustment to PAT to compute NOPAT

What all need to add back and why

1. **Accounting depreciation**, because EVA deals with economic profit, not accounting profit. Hence accounting depreciation needs to be deducted and economic depreciation of corresponding period need to be reduced.
2. **Non-cash expenses** - because NOPAT is measured in terms of cash flow
3. **Interest Paid** – because EVA is not for the owners only, it is for fund providers; which includes debenture holders or lenders. Mind it interest need to be added back net of taxes, means if tax is at 30%, then consider 70% of interest payments i.e. Interest (1-taxes)
4. **Goodwill amortisation** – because amortisation is no cash and more-over any payments in respect of goodwill can be viewed as value addition to enterprise.
5. **Development and advertising costs** – Instead of considering these as recurring expenditure these shall be capitalised and then amortised (because these are investments for the future - has an effect on capital employed as well)
6. **Operating leases rental**

What all need to deduct and why

1. **Economic depreciation** – As mentioned above EVA is measure using economic profit rather than accounting profit, hence against the addition of accounting depreciation, economic depreciation is now deducted.
2. **Any impairment in the value of goodwill** – As mentioned earlier goodwill need to capitalised and the amount of amortisation of goodwill added back to PAT, hence now impairment in same (if any) need to be deducted.
3. **Amortisation of development and advertising costs** – Since added back above to capitalised, hence amortisation need to deducted against the same.

Here it comes, NOPAT

Question – SM Page 8.8

The following information is available for the division X of Xu ltd:

Net operating profit before interest and taxes	₹7,500
Invested capital	₹12,500
WACC	8%
Tax Rate	30%

Calculate EVA

Question – SM Page 8.8

XYZ Ltd. provides you with the following financial information as at 31st March 2020.

Share Capital	₹ 981.46 lakhs
Reserves and Surplus	₹ 1,313.62 lakhs
Long Term Debt	₹ 144.44 lakhs
Trade Payables	₹20.38 lakhs

Additional information provided is as follows:

(i) Profit before interest and tax is ₹ 2,202.84 lakhs
(ii) Interest paid is ₹ 13.48 lakhs.
(iii) Tax rate is 30%
(iv) Cost of equity is 12.42%
(v) Cost of debt is 6.53%

You are required to **calculate** Economic Value Added of XYZ Ltd.

EVA will increase if any of the following initiative either individually or in any combination applied;

a. Operating profits can be made to grow without employing more capital, i.e. **greater efficiency**.
b. Additional capital's invested in projects that return more than the cost of obtaining new capital, i.e. **profitable growth**.
c. Capital shall be divested from those projects that do not cover the cost of capital, i.e. **liquidate unproductive capital.**

EVA too has certain **limitations,** important among them are;

EVA is also, an absolute measure hence not free from short-comings like comparison between performances of enterprises of different size, and

Largely based upon historical data.

HUL computes EVA and report the same in the annual report, below mentioned table is extracted from HUL's Annual Report for the year 2019-20.

HUL consider 7.02% as pre-tax rate of the cost of debt and 9.11% as the cost of equity to compute WACC Cost of equity is computed using Capital Asset Pricing Model (SML) pronounced by William Sharpe in 1963 considering risk-free return equivalent to yield on long term Government Bonds (taken at 6.14% for 2019-20), Market risk premium (taken at 4.47%), and Beta variant for the Company (taken at 0.664)

(₹ crores)

		IGAAP					IND AS				
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Cost of Capital Employed (COCE)											
1	Average Debt	2	0	0	0	0	0	0	0	0	0
2	Average Equity	3,118	3,462	4,018	3,715	4,338	5,664	5,831	6,181	6,667	7,226
3	Average Capital Employed : (1)+(2)	**3,120**	**3,462**	**4,018**	**3,715**	**4,338**	**5,664**	**5,831**	**6,181**	**6,667**	**7,226**
4	Cost of Debt, post-tax %	5.36	6.20	6.02	6.36	5.56	5.43	4.90	5.21	5.77	5.25
5	Cost of Equity %	12.93	10.10	10.07	11.62	10.91	11.98	12.85	14.19	11.84	9.11
6	Weighted Average Cost of Capital % (WACC)	12.92	10.10	10.07	11.62	10.91	11.98	12.85	14.19	11.84	9.11
7	COCE : (3) x (6)	**403**	**350**	**405**	**432**	**474**	**679**	**749**	**877**	**789**	**658**
Economic Value Added (EVA)											
8	Profit after tax, before exceptional items	2,153	2,599	3,314	3,555	3,843	4,116	4,247	5,135	6,080	6,743
9	Add : Interest, after taxes	0	1	17	24	11	0	0	0	0	0
10	Net Operating Profits After Taxes (NOPAT)	2,153	2,600	3,331	3,579	3,854	4,117	4,247	5,135	6,080	6,743
11	COCE, as per (7) above	403	350	405	432	474	679	749	877	789	658
12	EVA : (10)-(11)	**1,750**	**2,250**	**2,926**	**3,147**	**3,380**	**3,438**	**3,498**	**4,258**	**5,291**	**6,085**

Source – HUL Annual Report 2019-20

Question – SM Page 8.43

X Greetings is a Korean company based in Seoul committed to supplying the highest quality stationery, greeting cards, gifts, and children's products, which are sourced from all over the world. Company also distributes Sunday Paper – Korean made eco-friendly stationery designed and manufactured in Seoul. X's home currency is the KRW. It is also listed on the KRX for last 20 years and its current share price is KRW 23.25.

You are a Management Accountant of the X Greetings and directors have asked you to study X on value-based management which is a different approach to the performance management. The directors have heard about this method considering it a way of focusing on shareholder's interests and in the present economic scenario, they think it to be useful for the growth of X.

Conventionally earnings per share (EPS) and share price were being used to assess performance. The proposed changes are important and the directors require you to have the implications of the new analysis and also want to convince the major investors for the future benefits.

Financial data for X Greetings

Particular	**2019-20**	**2018-19**
	KRW in million	KRW in million
Profit after interest and tax	55.55	65.38
Interest	15.60	8.00
Opening capital employed	273.58	198.40
Closing capital employed	329.13	273.58
	Debt to Equity	Debt to Equity
Capital structure	40:60	40:60
	%	%
Costs of capital		
Equity	14.20	11.50
Debt (pre-tax rate)	8.00	6.00
Tax rate	30	30
Stock market information:		
Average number of shares in issue	3.2 million	3.2 million
Stock market all-share index	1,985	2,561
Retailing sector index	1,155	1,408
X Greetings (share price)	KRW 22.50	KRW 24.40

You are required to **assess** the performance of X Greetings using Economic Value Added and **analyse** the result relative to those of earnings per share (EPS) and share price. Assumptions, if any, should be clearly stated.

Exam Question – N20 Q3, SM Page 8.44, RTP N19 Q6

Water Utilities Services (WUS) is established with an aim for supply and distribution of water in Mumbai as well as supply of water to the various local authorities for distribution to villages and other small cities adjacent to Mumbai. This involved planning, operating, treating, maintaining, and distributing water resources in the country's urban centres and other areas mandated by Maharashtra Government. Its mission is "To provide sustainable water in a cost effective and environmentally friendly manner to the economy".

The government ensures that WUS does not take advantage of its monopoly position in the regional area by increasing prices. The government controls majority of services through its water regulatory body which determines an acceptable margin level (ROCE) and ensures that the pricing of WUS within these areas does not break this level. The remaining work i.e. a water bottle operation (WBO) is not regulated by government and WUS charges a market rate for water supply in bottle. The regulator compute return on capital employed (ROCE) of WUS based on its own valuation of the capital assets which are used in operation and the profit from those services.

Acceptable level of ROCE set by the regulator is 7.00%. If WUS breach this level, then the company would be penalized. WUS board is trying to improve the performance for the benefit of the shareholders. In order to communicate the objective of maximizing shareholders' wealth, the directors have decided to consider economic value added (EVA) as the key performance indicator.

Compute EVA of WUS based on the following information for the year ending 31 March 2020:

Particulars	**Water Distribution Operation (WDO)**	**Water Bottle Operation (WBO)**	**Total**
	₹ in Crore	**₹ in Crore**	**₹ in Crore**
Revenue	555.00	186.00	741.00
Less: Operating Cost	460.00	119.00	579.00
Operating Profit	95.00	67.00	162.00
Less: Finance Charges			46.00
Profit Before Tax			116.00
Less: Tax at 30%			34.80
Profit After Tax			81.20
Capital Employed		**2019-20**	**2018-19**
		₹ in Crore	**₹ in Crore**
Audited Accounts		1,616.20	1,495.00
Determined by the Regulator (for WDO Only)		1,558.00	1,422.00

Notes

1. Operating Costs includes

Particular	**2019-20**	**2018-19**
	₹ in Crore	**₹ in Crore**
Depreciation	118	114
Provision for doubtful debts	4	1
Research and Development	24	–
Other non-cash items	14	12

2. Economic depreciation is ₹166 Crore in 2019-20. Whereas during FY 2018-19, the economic and accounting depreciation were assumed to be the same.

3. Current year tax paid is ₹18 Crore and deferred tax provisions of ₹16.80 Crore has been adjusted. There was no deferred tax balance before 2019-20. The provision for doubtful debts was ₹9 Crore in the 2019-20 balance sheet.

4. Research and development has been non-capitalized. It belongs to a new project that will be developed over five years and is expected to be of long-term benefit to the company. 2019-20 is the first year of this project.

5. Cost of equity is 14% and cost of debt (pre-tax) is 6%

6. Debt and Equity is in ratio of 55% and 45% respectively

Required

Evaluate the financial performance of WUS using EVA & **Advice** how same can be enhanced.

Assess whether WUS comply with its acceptable ROCE level

Advise on how to improve profitability.

Question – SM Page 8.45

Beta Control (BC) is a global leader in manufacturing of commercial building control systems with over 250 distributors and many thousands of installations in more than 50 countries. Control systems involve air conditioning systems, facility management, energy and water management, access control and security controls etc. At BC, manufacturing is done at a number of factory sites where some products are easy and largely produced and have a long life while other products are intricate and have a short life due to changing technologies. BC's mission statement is 'to keep you ahead through control systems that improve productivity and save energy'.

A Newly appointed chief executive officer (CEO) is anxious about declining share price of BC in the last two years. She identified that the business has grown through acquisition and senior management have focused on making corporate deals but not on making control systems. She announced that the BC's focus must be on optimization and up-gradation of its value generation rather than just getting bigger through acquisitions.

Assuming yourself as a performance management expert of BC, the CEO has asked you to aid her in her improvement programme. Firstly, she wants your views on the use of EVA as the key performance metric at BC. You are given the current EVA computation (Annexure1) but there is some suspicion about whether the assistant who has done this work is sufficiently well trained about this method. So, she requires you to examine his accuracy and the assumptions forming part of the calculation.

Required

Write a report to the chief executive officer to EVALUATE the usefulness of EVA as performance measure and accuracy of the calculation done by assistant apart the assumptions taken if any.

Annexure 1

NOPAT

Particulars	**Year ended 31st March 2020**	
	₹ in Lacs (L)	**Notes**
Operating Profit	1,102.80	
Add:		
Non-Cash Expenses	30.20	
Marketing Expenditure Capitalised	46.20	7
Less:		
Tax	269.60	9
Lost Tax Relief on Interest	48.96	
Net Operating Profit After Tax (NOPAT)	860.64	

Capital Employed

Particulars	**Year ended 31st March 2020**	
	₹ in Lacs (L)	**Notes**
From the Statement of Financial Position	4,802.00	10
Add:		
Marketing Expenditure Capitalized	46.20	7
Adjusted Capital Employed	4,848.20	

WACC = (1/2 × 15%) + (1/2 × 7.8%)
= 11.40%

EVA = NOPAT – (WACC × Capital Employed)
= ₹860.64 L – ₹4,848.20 L × 11.40%
= ₹860.64 L – ₹552.69 L
= ₹307.95 L

Assumptions and Notes

1. Debt/Equity 1:1
2. Cost of Equity is 15.00%
3. Cost of Debt (pre-tax) is 7.80%
4. Tax Rate is 30.00%
5. Interest charged in the period was ₹163.20 L.
6. In current fiscal year, BC spend ₹80.00 L in Training and Development by leveraging the latest digital technologies including virtual classrooms to deliver highly relevant training to staff at the point of need.
7. Marketing Expenditure has been ₹46.20 L each year for the last two years to build the long- term brand.
8. The total R & D spending was ₹20 L during this year for in- depth study of the TCP/IP protocols. The TCP/IP based products have not been launched yet.
9. BC has paid Tax of ₹260 L while the tax charged per the accounts was ₹269.60 L.
10. Capital employed during the Period (from the statement of financial position):

Opening	₹4,564.00 L
Closing	₹4,802.00 L