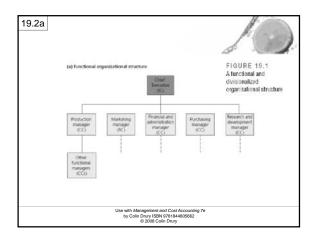
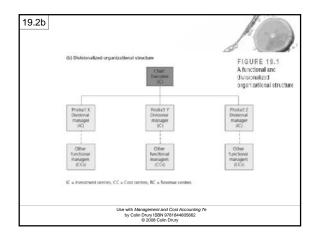


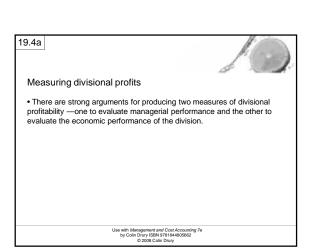
19.1 Functional and divisionalized organization structures In a functional structure only the organization as a whole is an investment centre (IC) and below this level a functional structure applies throughout. A functional structure is where all activities of a similar type are placed under the

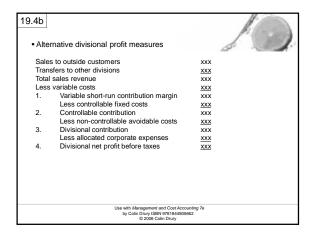
- control of a departmental head.
- In a divisionalized structure the organization is divided into separate investment or profit centres (PC 's) and a functional structure applies below this level.
- Diagram on sheet 19.2 indicates that:
 - In a functional structure all centres below the chief executive or corporate level are cost centres (CC 's) or revenue centres.
 - In a divisionalized structure divisions tend to be either IC 's or PC 's but within each division there are multiple cost and revenue centres.
- · Divisionalized structures generally lead to a decentralization of the decisionmaking process whereas managers in a functional structure will tend to have less independence.











Controllable contribution is the most appropriate measure of a divisional manager 's performance (should be measured relative to budget performance). Divisional contribution and divisional net profits before tax are appropriate measures of economic performance: Divisional contribution = Incremental short-term contribution Net profit before taxes = Estimate of longer-term contribution

• Empirical evidence indicates that divisional net profit is widely used to

evaluate both divisional and managerial performance.

Measuring divisional profitability

• Ideally focus should be on relative measures (profitability) rather than absolute measures of profit.

• Relative profitability measures:

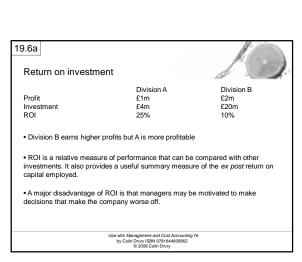
1. Return on investment (ROI)

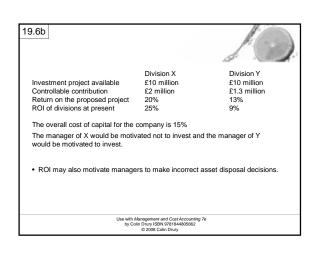
2. Residual income (RI)

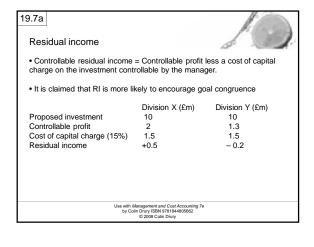
3. Economic value added (EVA TM)

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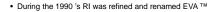
19.7b



- The manager of division X is motivated to invest and the manager of division Y is motivated not to invest.
- RI also enables different cost of capital percentages to be applied to different investments that have different levels of risk.
- If RI is used it should be compared with budgeted/target levels which reflect the size of the divisional investment.
- Empirical evidence indicates that RI is not widely used.

19.8a





- EVA ™ = Conventional divisional profit based on GAAP
 - ± Accounting adjustments
 - Cost of capital charge on divisional assets
- Conventional divisional profit based on principles outlined for measuring divisional managerial and/or economic profits.
- Adjustments intended to convert historic accounting profit to an approximation of economic profit.
- Adjustments typically include capitalization of discretionary expenses.

19.8b

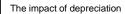


Assets to be included in the investment base

- \bullet Assets to be included must be specified for ROI, RI and EVA $^{\text{TM}}$
- To measure the managerial performance only controllable assets should be included in the investment base.
- To measure economic performance all assets, and possibly an allocation of some corporate assets, should be included.

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19.9a





	1	2	3	4	5
	£	£	£	£	£
Net cash flow	350 000	350 000	350 000	350 000	350 000
Depreciation	200 000	200 000	200 000	200 000	200 000
Profit Cost of capital	150 000	150 000	150 000	150 000	150 000
(10% of WDV)	100 000	80 000	60 000	40 000	20 000
RI/EVA Opening WDV	50 000	70 000	90 000	110 000	130 000
of the asset	1 000 000	800 000	600 000	400 000	200 000
ROI	15%	18.75%	25%	37.5%	75%

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19.9b





- 2. If original cost is used to compute ROI and RI

 - ROI = 15% p.a.for years 1 5 RI/EVA = £50 000 p.a.for years 1 5
 - May motivate managers to replace existing assets with new assets that have negative NPVs.
- 3. If WDV is used to compute ROI and RI/EVA

 - Both RI/EVA and ROI increase steadily over five years.
 Managers can attain higher performance measures by retaining old assets (i.e.not motivated to replace).
- 4. To overcome the above problems assets should be valued at their economic cost (or replacement cost as an approximation).

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19.10a

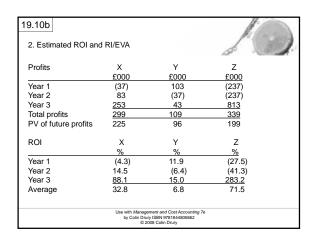


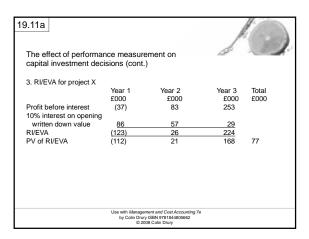
The effect of performance measurement on capital investment decisions

1. NPV calculations for three mutually exclusive projects:

	Х	Y	_
	£000	£000	£000
Machine cost initial outlay (time zero)	861	861	861
Estimated net cash flow (year 1)	250	390	50
Estimated net cash flow (year 2)	370	250	50
Estimated net cash flow (year 3) Estimated net present value	540	330	1100
at 10% cost of capital	77	(52)	52
Ranking on the basis of NPV	1	3	2

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The effect of performance measurement on capital investment decisions (cont.)

4. There is no guarantee that the short-run RI/EVA measure will be consistent with the long-term measure.

X Y Z
RI/EVA (year 1) -£123 17 -£323

5. To ensure that the short-term performance measure is consistent with NPV decision model the literature suggests that alternative depreciation models should be used based on accrual accounting or actual cash flows should be compared with the budgeted cash flows (see Learning Note 19.1).

Addressing the dysfunctional consequences of short-term financial performance measures

• Financial performance measures can encourage managers to become short-term oriented and seek to boost short-term profits at the expense of long-term profits.

• Approaches for reducing the short-term orientation:

1. Divisional performance evaluated on the basis of economic income (PV of future cash flows).

2. Adopt EVATM incorporating many accounting adjustments.

3. Lengthen the measurement period.

4. Do not rely excessively on financial measures and incorporate non-financial measures that measure those factors that are critical to the long-term success of the organization.

(i.e. adopt a Balanced Scorecard Approach)