Case study – Competition for investment funding

This is the solution to the case study found at the end of:

- Chapter 20 *Capital investment decisions*

(i) NPV calculations

Year	Discount factors (12%)	Realistic £000	Discounted cash flows: realistic £000	Optimistic £000	Discounted cash flows: optimistic £000
0	1	(7 800)	(7 800)	(7 800)	(7 800)
1	0.893	1 380	1 232.34	1 680	1 500.24
2	0.797	1 470	1 171.59	1 770	1 410.69
3	0.712	1 530	1 089.36	1 860	1 324.32
4	0.636	1 590	1 011.24	1 950	1 240.20
5	0.567	1 650	935.55	2 040	1 156.68
6	0.507	1 710	866.97	2 130	1 079.91
7	0.452	1 770	800.04	2 220	1 003.44
8	0.404	1 830	739.32	2 310	933.24
9	0.361	1 890	682.29	2 400	866.40
10	0.322	1 950	627.90	2 490	801.78
10 (sale of plant)	0.322	180	57.96	300	96.60

Total	1 414.56	3 613.50

Both the realistic and the optimistic projections produce a positive NPV. The realistic ratio of positive cash flows to initial investment is:

$$\frac{9\ 214.56}{7\ 800} = 1.18$$

The optimistic ratio of positive cash flows to initial investment is:

$$\frac{11\ 413.50}{7\ 800} = 1.46$$

The optimistic plan, naturally, produces a higher ratio than the realistic plan. However, would it be high enough? If Donna produces a better proposal for the plastics division it is likely to be preferred.

(ii) Approach to appraising capital projects

The company's approach to capital investment decisions is highly competitive; it places divisional managers under a lot of pressure. Ernie, the chief executive, encourages this approach on the grounds that it acts as an incentive to management teams. This argument does have some force, and indeed, the circumstances in the case demonstrate a positive strength of the approach; Doug has been goaded by fear of competition into genuinely considering ways to improve the management and operational effectiveness of his division. However, there are several weaknesses in the approach:

- It may mean that one or two divisions are starved of capital funding simply because their managers have poorer presentational skills.
- It may encourage managers to exaggerate the figures in their bids in order to be able to compete with other divisions.
- It has led to collusion between divisional managers in the past; this type of collusion may not be in the best overall interests of the company.
- Senior management should really be looking at capital funding bids with a view to assessing the extent to which they address the strategic objectives of the business. The competitive bidding system may reward the best bids, but it has resulted in the cardboard division operating inefficiently with fully depreciated machinery and demoralised local management. Surely senior management did not intend this situation to develop?

(iii) The cardboard division's bid

Doug is proposing to put forward a bid for funding based upon quite unrealistic estimates of future performance. Where local managers are placed under a great deal of pressure, they may react by exaggerating performance, both present and future. This is a step on the road towards outright fraudulent reporting; at the very least Doug's proposal might be regarded as somewhat unethical. Doug, himself, would no doubt argue that he has been forced into this position because of senior management's system of allocating capital funds. He might also argue that, in trying to secure funding for his division, he is ensuring that people keep their jobs (including himself, of course), and that 'the end justifies the means'. In Chapter 17 we examined some of the adverse effects of budgeting. Capital budgeting is not exempt from these effects, and we can see the downside illustrated in this case study. A system of competitive bidding has resulted in a senior manager in the business trying to subvert the process by projecting figures that are unrealistically optimistic. This cannot be in the best long-term interests of the company. Senior managers should be wary of instituting systems that encourage this type of behaviour.