

Investment Appraisal

Hawsker Feeds Case Study

The following appraisal has been prepared using the methods listed below:

- Average return on capital
- Payback period
- Discounted Cash Flow (NPV method)

Average return on Capital

Projects	Fleet of Delivery Vehicles £	Grinding Mill Modification £	Grain Dryer £
Cash Flow	245000	230000	225000
Depreciation	100000	100000	100000
Incremental Profit	145000	130000	125000
Average	29000	26000	25000
% return	29%	26%	25%
Rank	1	2	3

Payback Period

	Delivery Vehicles		Grinding Mill Modification		Grain Dryer	
	Cash Flow	Cumulative	Cash Flow	Cumulative	Cash Flow	Cumulative
Yr 1	40000	40000	35000	35000	45000	45000
2	50000	90000	55000	90000	45000	90000
3	50000	140000	45000	135000	45000	135000
4	55000	195000	45000	180000	45000	180000
5	50000	245000	50000	230000	45000	225000
	2 years + $\frac{10000 \times 12}{50000}$		2 years + $\frac{10000 \times 12}{45000}$		2 years + $\frac{10000 \times 12}{45000}$	
	= 2 years 2 months		= 2 years 3 months		= 2 years 3 months	
Rank	1		2		2	

Discounted Cash Flow (NPV Method)

15%	NPV Factor	Delivery Vehicles		Grinding Mill Modification		Grain Dryer	
		Cash Flow	NPV	Cash Flow	NPV	Cash Flow	NPV
Yr 0	1.00	(100000)	(100000)	(100000)	(100000)	(100000)	(100000)
1	0.870	40000	34800	35000	30450	45000	39150
2	0.756	50000	37800	55000	41580	45000	34020
3	0.658	50000	32900	45000	29610	45000	29610
4	0.572	55000	31460	45000	25740	45000	25740
5	0.497	50000	<u>24850</u>	50000	<u>24850</u>	45000	<u>22365</u>
		NPV	<u>£61810</u>		<u>£52230</u>		<u>£50885</u>
	Rank		1		2		3

The Delivery Vehicles investment will be subjected to a rate of 25%

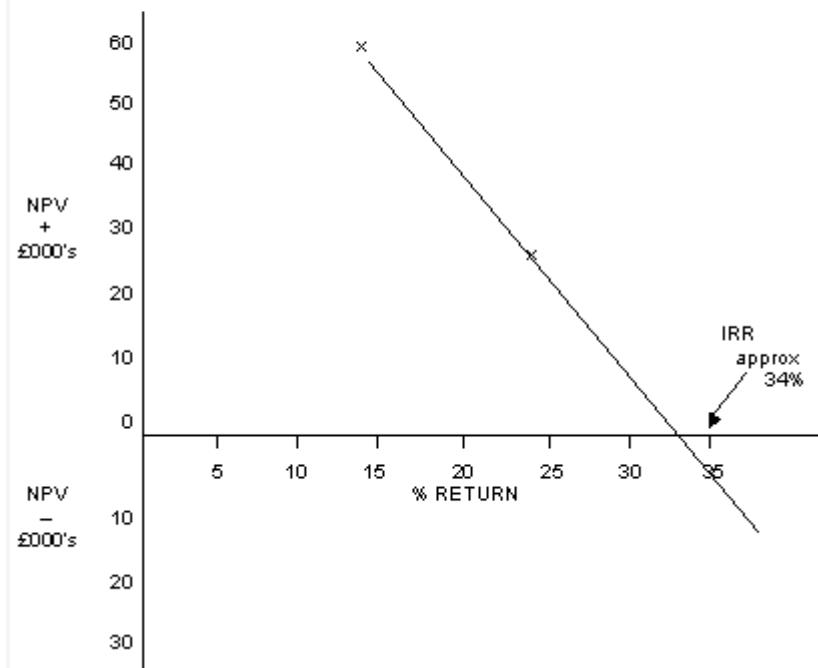
	NPV Factor	Cash Flow	NPV
25%			
Yr 0	1.00	(100000)	(100000)
1	0.800	40000	32000
2	0.640	50000	32000
3	0.512	50000	25600
4	0.410	55000	22550
5	0.327	50000	<u>16350</u>
		NPV	28500

Internal Rate of Return

$$\text{Lower Rate \%} + \left(\frac{\text{NPV at Lower Rate}}{\text{Range of NPV}} \times \text{Range of Rates} \right)$$

$$15\% + \left(\frac{61810}{33310} \times 10 \right)$$

$$= 33.6\%$$



The Delivery Vehicle investment will yield a DCF return on capital of 34% which is well in excess of the 15% benchmark set by management.