

Financial management

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number: & Discounted Cash flows Analysis Net present value (NPV) - $p \sum_{t=1}^n \frac{c_t}{(1+i)^t}$ at
 i is the discount rate p
 t is the planning horizon

Internal rate of return (IRR) -

p

The value of r such that $\sum_{t=1}^n \frac{c_t}{(1+r)^t} = 0$

$t=1$

Payback period -

Number of periods until NPV becomes (and remains) positive

(Booth 2007).

$NPV = a_0 + \frac{a_1}{(1+i)} + \frac{a_2}{(1+i)^2} + \frac{a_3}{(1+i)^3}$

a = net cash flow

i = discounting rate

Initial Expenditure of the Project- GBP 12M

Current output 250 000 multiply by price to get the financial cash flow

$250\,000 \times 675 = 168,750,000$

Net cash flows = cash flows - costs

Costs pre-tax = 3.5% of initial financial outlay = 420 000

Cost of inventory = GBP 2M

NPV = 10.57 - This is a positive NPV and thus it shows the project is viable

IRR = 24.3 - The IRR is 24.3% this shows the project is profitable since it is more than the discounting rate which is 10%

With the incremental changes Gregstock needs to modify his DCF due to the following reasons;

From the year 2010 there was an incremental cost of 2GBP

An incremental cost (or incremental revenue) is the additional cost (or

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revenue) that results from increasing the output of a system by one (or more) units. Incremental cost is often associated with decisions that involve a limited change in output or activity level (Booth 2007).

The incremental cost will have a negative effect on the cash flows and thus the net present value will decrease. The cost of the tanker cars should also be included in the project since Victoria chemicals owns tanker cars even though it gives a negative NPV this will be balanced through cannibalisation of the projects and the negative value will be collected to positive by the positive value of Gregstock project.

Also, Gregstock should consider accounting for inflation as advised by the treasury staff since the discounting rate for this project is 10% , 3% inflation rate should be included this will reduce the rate of return to 7%. Therefore Grestock should revise his discounted cash flows since the proposed DCF has not accounted for it inflation.

The positive NPV can easily sustain the negative value EPC and therefore it should be included to the project as Tewwit suggested since it's a vital investment in the company and without it the company has to make some layoffs.

Reference

Booth, Laurence, 2007, "Capital cash flow, APV & valuation", European financial management, Vol. 13, No. 1, pp 29-48