

Victoria chemicals plc b merseyside and rotterdam projects



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The A ' case, a go / no-go project evaluation regarding improvements to a polypropylene production plant. The B ' case, checked the same project, but from a higher level, where the executive is an either / or investment decision between two mutually exclusive projects. The goal of the two cases is to expose students to a broad range of capital budgeting ... Read more » These two cases to consider the investment decisions of managers of large chemical companies are made in January 2001.

The A ' case, a go / no-go project evaluation regarding improvements to a polypropylene production plant. The B ' case, checked the same project, but from a higher level, where the executive is an either / or investment decision between two mutually exclusive projects. The goal of the two cases is to expose students to a broad range of capital budgeting issues, which include, among other things, the identification of relevant cash flows, the critical assessment of a capital-investment rating system, the classic " cross-over" problem in the project agree rankings based on the net present value (NPV) and internal rate of return (IRR).

His is an analysis of the two discounted cash flows that will be used in summarizing the financial impact that this capital improvement to the polypropylene line will have on the Rotterdam business volume. The difference in the cash flow is brought by the adjustment of the cannibalization effect that is experienced when erosion is done at the Rotterdam business to aid in improving the polypropylene line. The investment cost as attached to the memo is 12 million sterling pounds. The analysis on the net present value of both the situations will be carried out to determine the impact of carrying out the erosion.

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The case presented here reflects two scenarios (Belli, Anderson, Barnum, Dixon and Tan, 2001). The first scenario involves the inclusion of the negative impact that is brought about by the transfer of funds to improve the Merseyside project. The second scenario reflects the zero effect that is brought by the transfer of funds to the Merseyside project. Basing the argument on the results, the net present value of the project when erosion at Rotterdam occurs was less compared to the contrary. The internal rate of return when there is no charge for erosion is higher compared to full erosion.

The internal rate of return and the net present value are used to measure and compare the value of the investments and projects done in terms of the profitability (Belli et al, 2001). The net present value comprises of the accumulated sum of all the present values in a given period of time. It measures the value of an investment. The acceptance of an investment when using the net present value for analysis is made on the bases of net present value. If the net present value is equal to or greater than zero, then the investment is termed profitable and is accepted .

If the net present value is less that zero however, the investment is rejected. In the instance where the both projects have resulted into net present values greater than zero, the investment with a greater net present value is accepted (Belli et al, 2001). The internal rate of return measures the yield an investment projects (Wong, 2009). It is described as the discount rate that equals the net present value of an investment to zero. Putting all other factors into consideration, the investment that has a higher internal rate of return is found to be more attractive compared to the one with less internal rate of return.

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Putting this into consideration, the net present value and internal rate of return were found to be higher when there was no inclusion or adjustment for erosion. This hence results in a decision involving declining or rejecting the erosion being made. According to the final revised discounted cash flow presented, the projected incremental profit has increased from the years 2013 to 2017. This is the case where no adjustments of the erosions have been made. The two cases also depict that the profits are greater where there in no erosion has compared where the erosion has been adjusted.

The effect brought by erosion includes the cannibalization effect which will impact the firm negatively. The net present value has been adjusted based on the same discount rate of 10 percent. Given the years 2013 to 2017, the NPV when there is full erosion is as follows: Initial investment is 12 million pounds. The projected cash flows for the period include 2.72, 2.81, 2.87, 2.93 and 3.01 million respectively. The net present value is -1.18 million sterling pounds. IRR is calculated as the future value of an investment divided by the present value adjusted by the number of years.

The internal rate of return is 12.5 percent. The net present value when there is no charge for erosion for the periods 2013 to 2017 is as follows: The discount rate is 10 percent. The projected cash flows for the period are 3.81, 3.93, 4.03, 4.13 and 4.24 respectively. The net present value is 0.54 million sterling pounds. The IRR is 14 percent. The results show that the net present value of the investment when there is no charge for erosion is positive as compared to when there is charge for full erosion.

The implications here are that the present values of all the cash flow for the five year period, discounted at 10 percent has exceeded the cost the investment incurred. This for instance means that the investment will add value if no erosion of the Rotterdam was done. The results also prove that incase full erosion was done; the effect the investment would have on the existing investments would be negative. This is proven by the deduction made by the cannibalization effect that reduced the operating profits as projected. The negative results of the net present value have also proven that.

The internal rate of return for the cash flows that included the erosion was found to be less compare to the cash flows that did not include the cannibalization effect brought about by erosion (Wong, 2009). With respect to the future operations of the company, if the erosion is carried out, the firm will experience lower cash flows than when no erosion is done. This will also not be adding value to the firm as predicted by the ne present value. This decision will be made based on the assumptions that were made during the projection of the cash flows.

The tax rate was presumed to be 30 percent, the inflation rate was presumed to be 3. 0 percent, the price per ton of the out put from the Rotterdam was presumed to be 675 sterling pounds. The annual output was also presumed to be 250000 metric tons, the discount rate that was used in calculation of the net present value was presumed to be 10 percent. There was no salvage value. The overhead and the engineering costs were assumed to be irrelevant. The gross margin before deducting the

depreciation was assumed to be 12.50 percent, the energy savings for the period were assumed to be 0.

The cost of goods was assumed to be 3.0 percent (Wong, 2009). From the analysis above therefore, the effects of the cannibalization that is brought by the erosion reduce the operating profit of the project. Rotterdam project business volume before the erosion yields an incremental profitability that is much higher than when it is eroded. The introduction of a new product would therefore lower the projects revenue. There is a constant loss of the Rotterdam output of 17500 sterling pounds and varying amounts of revenue lost spread throughout the period.

The effect of Rotterdam project is also shown in the loss of the work in progress that is deducted from the estimated incremental work in progress inventory (Belli et al, 2001). In conclusion, the improvement of the Merseyside project through using capital acquired from the Rotterdam project will pose a serious challenge to the firm in terms of the profitability in the long term as depicted by declining incremental profits. The decision to erode Rotterdam project would lower the profits but not result to losses.