

Financial analysis for technology managers

Technology



is parts or whole of the system financial functions can be predicted based on the realistic feature and assumptions. This inference is the basis of decision making in technology financial management. The sensitivity analysis will allow for project parameters values to be hypothesized while making considerations for uncertainties. Later, the whole sensitivity model following the sensitivity analysis can be revised by inclusion of other aggregate approaches such as scenario analysis modelling. The difference is mainly in past experience and future expectations.

What is Sensitivity Analysis? Sensitivity analysis is the determination of the factors that require better mapping in technology management following a consideration of risks and uncertainty in financing. (Saisana, Saltelli and Tarantola, 2005, p. 1-17.)Sensitivity analyses come in many forms such as statistical data, expert opinion, aggregate factors, and model indicators. In their study, Choudhari and Breierova, (1996) held that a sensitivity analysis is applied in the model change management by varying parameters.

They also noted that a sensitivity analysis is a confidence booster in risks and uncertainty projections. Sensitivity analyses come in handy when the technology managers want to gauge some accuracy marks that will guarantee reliability and validity of project management. Sensitivity analyses also form an important step in the discriminant decision making by reason development and justification. Hence when the technology project yields some level of confidence, there can be a wise conclusion of accuracy, reliability and validity and will guarantee project success. (Choudhari and Breierova, 1996, p. -67)

Sensitivity analyses are applied in the understanding of the technology process input mixes. From this process, a sensitivity analysis will commence from an analysis of the constant models followed by the variable models. During this process, the model will explore various outcomes and settle for one that has least financial risks and uncertainties. (Choudhari and Breierova, 1996, p. 8) The final phases of the sensitivity analyses can be done by use of spread sheet sensitivity analyses which are important in the technology strategic management and planning.

This tool is electronic and is based on concepts and dispersions that occur between the technology project process. Specifically, the sensitivity analysis comes in handy in the 'what if?' analysis that today's technology managers are keen to explore. (Spread Sheet Sensitivity Analysis, 1998) How does scenario analysis differ from sensitivity analysis? In the course of project management, the sensitivity will define some basic rules of operations. This has implications that one or more parameters can be varied at a time or together based on decision in past experience.

This is the case in sensitivity analysis. However in the scenario analysis, the parameter variation is based on sound intuition as we project to the future. This has implications that the technology manager must be able to soundly estimate the future financial consequences from a scenario basis. (Siddiqui & Marnay, 2006). Thus the scenario analysis engages stochastic models in the projections of the projects management. The scenario model closes the gap that exists between the past and future without while avoiding surprising uncertainties or scenarios.

This has implications that the scenario analysis is more insightful as compared to the sensitivity analysis. Unlike the sensitivity analysis, the scenario analysis has deeper forecast of the technology project when optimization options are at stake. The other difference between sensitivity analysis and scenario analysis is that the former allows for study of coefficient in change process by step by step parameter model hence remedial action can be taken.

This signifies a more linear understanding of the sensitivity model as compared to the scenario analysis which is stochastic in model. (Siddiqui & Marnay, 2006). Similarly, the fact that the sensitivity model allows for manipulation of one or few parameters at a time is an indication that it is mostly short term based as compared to the scenario analysis which is long term based. Ultimately, the scenario analysis has the complex advantage of allowing the multiple simultaneous alterations of parameter models without jeopardizing technology project functions.

Conclusion: The major difference during this process is that the scenario analysis allows for a more proactive shift of parameters especially when these are correlated. (Siddiqui & Marnay, 2006). Additionally, the scenario analysis is much more acceptable to real world situations as compared to the sensitivity analysis. Scenario analysis is equally able to compare and contrast between many options that are likely to occur in the future from an alternative story perspective. (Schwartz, 1991).