Module 04 – Multiperiod Modeling

Model Formulation

*Write the formulation of the model into here prior to implementing it in your Excel model. Be explicit with the definition of the decision variables, objective function, and constraints*

Constraints: surplus funds = req’d payments

Amount >=0

Objective function being the total invested in Month 1

Decision variables being: the amount

Model Optimized for Least Cost out of Pocket

*Implement your formulation into Excel and be sure to make it neat. This section should include:*

A screenshot of a spreadsheet

AI-generated content may be incorrect.

* This model is suggesting that with our model we are able to save you $119.41.
* The pie chart below is showing the could have and the out of pocket spent from the above model

Model with Stipulation

*Please copy the tab of your original model before continuing with the next part to avoid messing up your original solution.*

*Try one of these 2 scenarios:*

* *If we remove the midterm payments and instead pay the entirety at the end of the time period, does your model change at all? If so, why may there be a change?*
  + If we removed the midterm payments, the overall out of pocket decreased. The overall removal of the midterm payments was $880, after removing them and moving to an end, it decreased to $830.
* *An investor normally tries to not be oversubscribed/overexposed to one single investment. Can you add a constraint to your model to limit the amount of exposure in any single investment and describe how the model has changed?*
  + To maintain the amount of exposure in a single investment you could add in a max allocation percentage to the constraints. In the model, the risk would be spread put over the investments more and the returns would be spread across multiple investments rather than one single asset.