Module 04 – Multiperiod Modeling

Exploratory Data Analysis

*In this section, you should perform some data analysis on the data provided to you. Please format your findings in a visually pleasing way and please be sure to include these cuts:*

* *Make a nicely formatted table with the needed data on each investment*

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*

Objective Function – Total amount invested in month one ($J$19)

Constraints – Amount >= 0

Surplus Funds = Required Payments

Decision Variable – Amount invested

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 your optimized final model (formatted nicely, of course)*
* *A text explanation of what your model is recommending*
* *Add some sort of visualization. Some ideas:*
  + *A pie chart or stacked bar chart to compare money out of pocket vs end amount*
  + *A line chart to show either current amount or cumulative amount invested in each investment*
  + *Any other solution you may have*

Model with Stipulation

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

The model recommends scheduling investments and withdrawals over a period of 10 months while ensuring you have enough cash on hand to meet the required outflow while still earning returns. The total amount invested in month 1 should be $885.63.A screenshot of a spreadsheet

AI-generated content may be incorrect.