Module 04 – Multiperiod Modeling

Exploratory Data Analysis

Investment	Inflow	Outflow
Bonbon Balance Investments	1	2
CandyCrest Holdings	1	3
SwizzleStick Strategies	1	6
Bonbon Balance Investments	2	3
RockCandy Returns	2	5
Bonbon Balance Investments	3	4
CandyCrest Holdings	3	5
SourPatch Portfolio Group	3	7
Bonbon Balance Investments	4	5
Bonbon Balance Investments	5	6
RockCandy Returns	5	7
RockCandy Returns	5	8
Bonbon Balance Investments	6	7
Bonbon Balance Investments	7	8
CandyCrest Holdings	7	9
Bonbon Balance Investments	8	9
Bonbon Balance Investments	9	10

Model Formulation

Min: A1+B1+C1} Cash invested at the beginning of the month

Subject to:

1.02A1-1A2-1B2 = 0} Cash flow Month 2

1.0422B1+1.02A2-1C2-1A3-1B3 = 250} Cash flow Month 3

1.02C2-1C3 = 0} Cash flow Month 4

1.0645B2+1.0422A3+1.02C3-1A4-1B4-1C4 = 0} Cash flow Month 5

1.1093C1+1.02A4-1A5 = 250} Cash flow Month 6

1.0867B3+1.0645B4+1.02A5-1B5-1C5 = 0} Cash flow Month 7

1.0645C4+1.02B5-1A6 = 0} Cash flow Month 8

1.0422C5+1.02A6-1B6 = 0} Cash flow Month 9

1.02B6 = 500} Cash flow Month 10

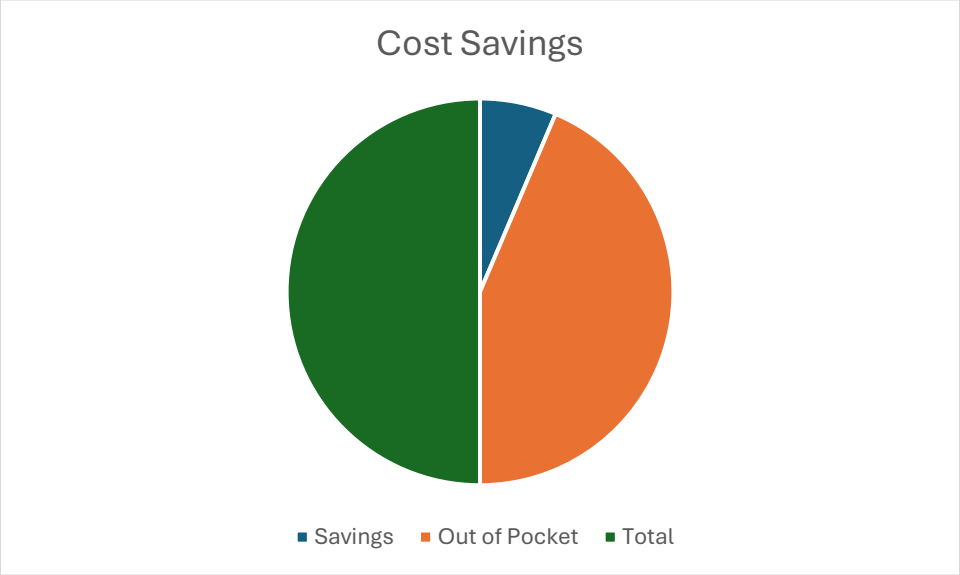
Nonnegativity:

Ai, Bi, Ci, Di>=0, for all i

Model Optimized for Least Cost out of Pocket

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

Investment	Inflow	Outflow	Amount	Return	1	2	3	4	5	6	7	8	9	10
Bonbon Balance Investments	1	2	$ -	2%	-1	1.02								
CandyCrest Holdings	1	3	$646.67	4%	-1	<--->	1.0422							
SwizzleStick Strategies	1	6	$225.37	11%	-1	<--->	<--->	<--->	<--->	1.1093				
Bonbon Balance Investments	2	3	$ -	2%		-1	1.02							
RockCandy Returns	2	5	$ -	6%		-1	<--->	<--->	1.0645					
Bonbon Balance Investments	3	4	$ -	2%			-1	1.02						
CandyCrest Holdings	3	5	$423.96	4%			-1	<--->	1.0422					
SourPatch Portfolio Group	3	7	$ -	9%			-1	<--->	<--->	<--->	1.0867			
Bonbon Balance Investments	4	5	$ -	2%				-1	1.02					
Bonbon Balance Investments	5	6	$ -	2%					-1	1.02				
RockCandy Returns	5	7	$441.85	6%					-1	<--->	1.0645			
RockCandy Returns	5	8	$ -	6%					-1	<--->	<--->	1.0645		
Bonbon Balance Investments	6	7	$ -	2%						-1	1.02			
Bonbon Balance Investments	7	8	$ -	2%							-1	1.02		
CandyCrest Holdings	7	9	$470.35	4%							-1	<--->	1.0422	
Bonbon Balance Investments	8	9	$ -	2%								-1	1.02	
Bonbon Balance Investments	9	10	$490.20	2%									-1	1.02
Total Invested in Month 1 ->			$872.04	**Surplus Funds**		**0**	**250**	**0**	**0**	**250**	**-1.705E-13**	**0**	**0**	**500**
				Req'd Payments		**$0**	**$250**	**$0**	**$0**	**$250**	**$0**	**$0**	**$0**	**$500**



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:

By developing payments until the end, you would hold onto cash longer, allowing for potential reinvestment or reduced immediate liquidity needs. However, if payments are compounded over time, the final amount due will be larger.