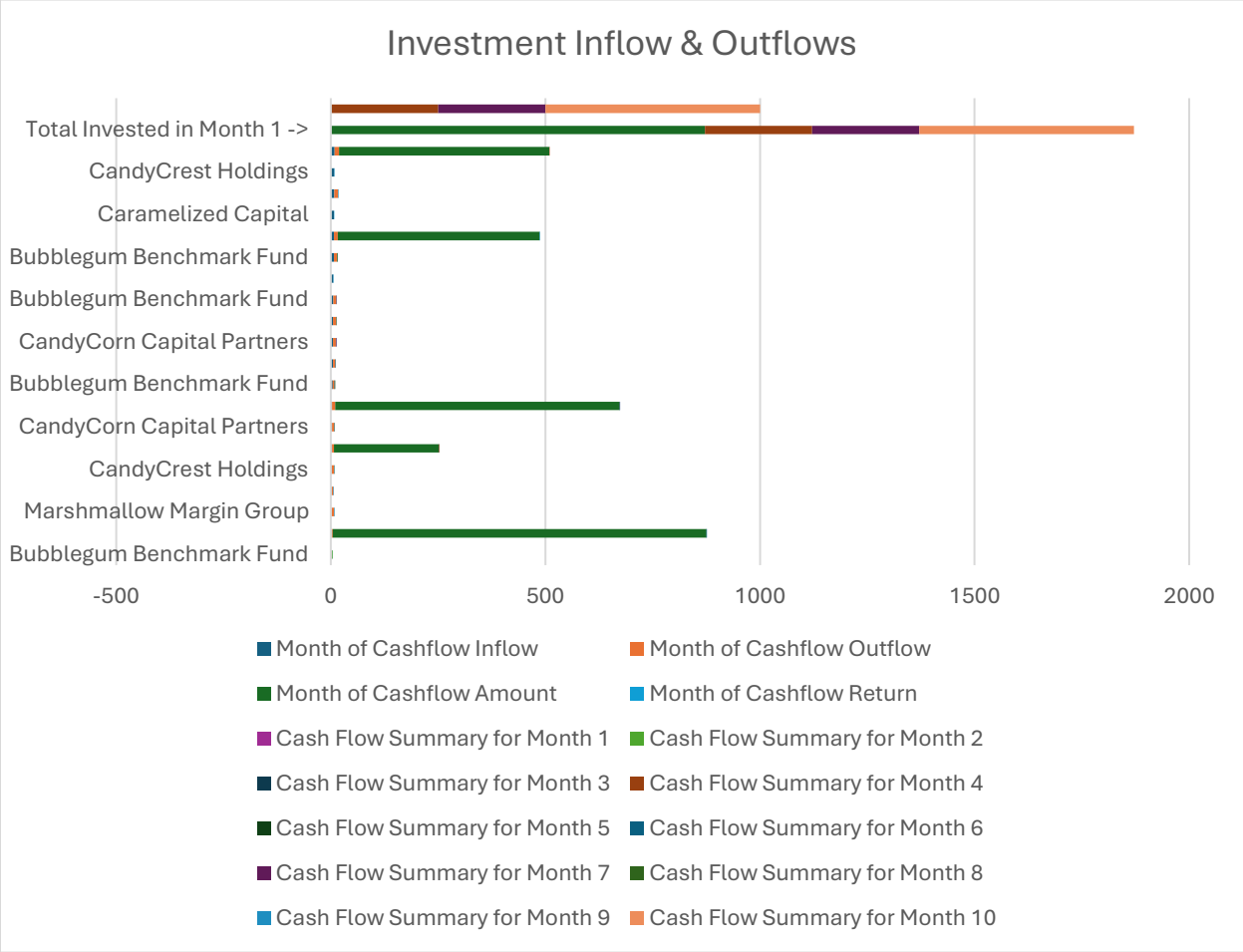
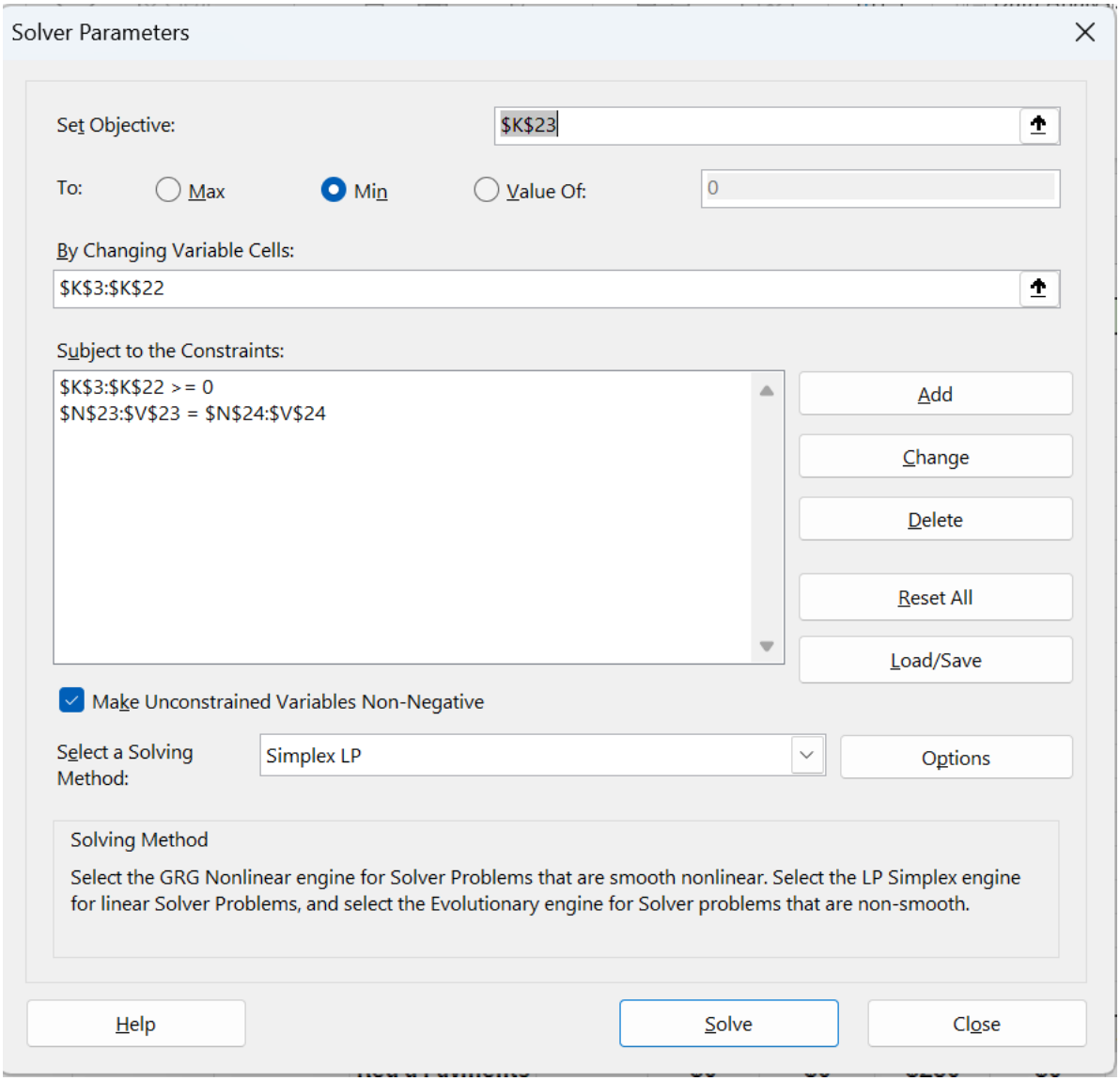
Module 04 – Multiperiod Modeling

Exploratory Data Analysis



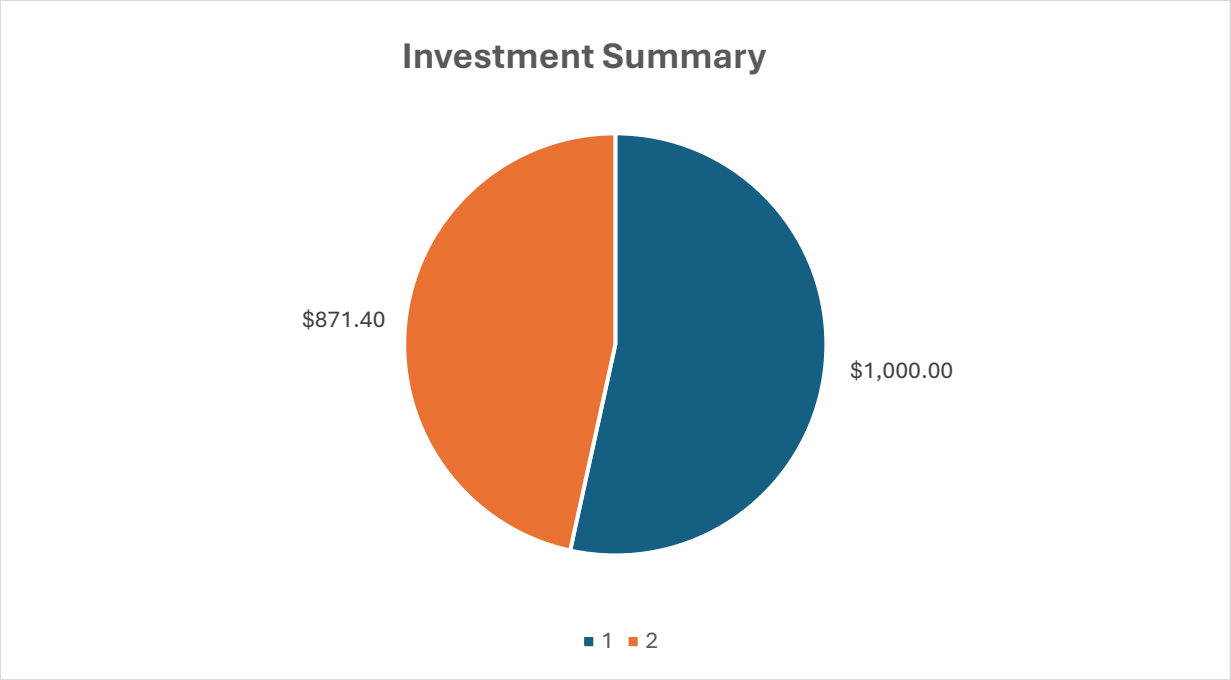
Model Formulation



Model Optimized for Least Cost out of Pocket

	Month of Cashflow				Cash Flow Summary for Month									
Investment	Inflow	Outflow	Amount	Return	1	2	3	4	5	6	7	8	9	10
Bubblegum Benchmark Fund	1	2	$ -	2.0%	-1	1.0199								
CandyCorn Capital Partners	1	3	$ 871.40	4.2%	-1	<--->	1.0421							
Marshmallow Margin Group	1	6	$ -	10.9%	-1	<--->	<--->	<--->	<--->	1.1093				
Bubblegum Benchmark Fund	2	3	$ -	2.0%		-1	1.0199							
CandyCrest Holdings	2	5	$ -	6.4%		-1	<--->	<--->	1.0644					
Bubblegum Benchmark Fund	3	4	$ 245.12	2.0%			-1	1.0199						
CandyCorn Capital Partners	3	5	$ -	4.2%			-1	<--->	1.0421					
Caramelized Capital	3	7	$ 662.96	8.7%			-1	<--->	<--->	<--->	1.0867			
Bubblegum Benchmark Fund	4	5	$ -	2.0%				-1	1.0199					
Bubblegum Benchmark Fund	5	6	$ -	2.0%					-1	1.0199				
CandyCorn Capital Partners	5	7	$ -	4.2%					-1	<--->	1.0421			
CandyCrest Holdings	5	8	$ -	6.4%					-1	<--->	<--->	1.0644		
Bubblegum Benchmark Fund	6	7	$ -	2.0%						-1	1.0199			
Marshmallow Margin Group	6	-	$ -	10.9%						-1	<--->	<--->	<--->	<--->
Bubblegum Benchmark Fund	7	8	$ -	2.0%							-1	1.0199		
CandyCorn Capital Partners	7	9	$ 470.44	4.2%							-1	<--->	1.0421	
Caramelized Capital	7	-	$ -	8.7%							-1	<--->	<--->	<--->
Bubblegum Benchmark Fund	8	9	$ -	2.0%								-1	1.0199	
CandyCrest Holdings	8	-	$ -	6.4%								-1	<--->	<--->
Bubblegum Benchmark Fund	9	10	$ 490.24	2.0%									-1	1.0199
Total Invested in Month 1 ->			$ 871.40	Surplus Funds	$ -	$ -	$ 250.00	$ -	$ -	$ 250.00	$ -	$ -	$ -	$ 500.00
				Req'd Payments	$0	$0	$250	$0	$0	$250	$0	$0	$0	$500

The following table displays that $1B would be spent normally every 10 months according to the cash flow data. These payments would be reflected in increments of $250M in months 4 and 7 as well as $500M in month 10. However, the model recommends that if the inflow and outflow patterns are followed in a way that optimizes return and reduces costs to $871.4M over the course of 10 months saving the operating system $128.6M in the process.



Model with Stipulation

	Month of Cashflow				Cash Flow Summary for Month									
Investment	Inflow	Outflow	Amount	Return	1	2	3	4	5	6	7	8	9	10
Bubblegum Benchmark Fund	1	2	$ -	2.0%	-1	1.0199								
CandyCorn Capital Partners	1	3	$ (0.00)	4.2%	-1	<--->	1.0421							
Marshmallow Margin Group	1	6	$ -	10.9%	-1	<--->	<--->	<--->	<--->	1.1093				
Bubblegum Benchmark Fund	2	3	$ -	2.0%		-1	1.0199							
CandyCrest Holdings	2	5	$ -	6.4%		-1	<--->	<--->	1.0644					
Bubblegum Benchmark Fund	3	4	$ -	2.0%			-1	1.0199						
CandyCorn Capital Partners	3	5	$ -	4.2%			-1	<--->	1.0421					
Caramelized Capital	3	7	$ -	8.7%			-1	<--->	<--->	<--->	1.0867			
Bubblegum Benchmark Fund	4	5	$ -	2.0%				-1	1.0199					
Bubblegum Benchmark Fund	5	6	$ -	2.0%					-1	1.0199				
CandyCorn Capital Partners	5	7	$ -	4.2%					-1	<--->	1.0421			
CandyCrest Holdings	5	8	$ -	6.4%					-1	<--->	<--->	1.0644		
Bubblegum Benchmark Fund	6	7	$ -	2.0%						-1	1.0199			
Marshmallow Margin Group	6	-	$ -	10.9%						-1	<--->	<--->	<--->	<--->
Bubblegum Benchmark Fund	7	8	$ -	2.0%							-1	1.0199		
CandyCorn Capital Partners	7	9	$470.44	4.2%							-1	<--->	1.0421	
Caramelized Capital	7	-	$ -	8.7%							-1	<--->	<--->	<--->
Bubblegum Benchmark Fund	8	9	$ -	2.0%								-1	1.0199	
CandyCrest Holdings	8	-	$ -	6.4%								-1	<--->	<--->
Bubblegum Benchmark Fund	9	10	$490.24	2.0%									-1	1.0199
Total Invested in Month 1 ->			$ (0.00)	Surplus Funds	$ -	$ (0.00)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$1,000.00
				Req'd Payments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,000

The following revamped model concludes that if all payments are made in month 10 (totaling $1B) the total amount invested in Month 1 would be $0.00 to optimize a minimized cost production model. This is not optimal as only $470.44M and $490.24M are

only later accounted for in the amounts tab. As a result, the previous model would produce more optimal solutions, given the stretched-out payment data.