

SPECIAL TYPES OF LINEAR PROGRAMMING PROBLEMS

MOTAD / Target MOTAD

**Investment Portfolio Problem**

\$100,000 of investment capital is available to invest in futures, stocks, and savings. Percent rates of return for each of the three investment options is given below over the past ten years.

	<u>Investment Options</u>			Savings (%)
	Futures (%)	Stocks (%)		
year 1	25.0	6.0		3.4
year 2	-12.0	7.0		3.1
year 3	10.0	9.0		3.8
year 4	15.0	-1.0		4.0
year 5	8.0	9.0		3.6
year 6	-25.0	5.0		3.4
year 7	-3.0	5.0		4.1
year 8	13.0	-2.0		3.8
year 9	20.0	5.0		4.5
year 10	15.0	7.0		3.7
mean	6.6	5.0		3.7
std. dev.	14.7	3.5		0.4
C.V.	222%	71%		10%

Formulate and solve the standard LP, MOTAD, and Target MOTAD versions of this problem. For the Target MOTAD model, use a target income of \$5,000.