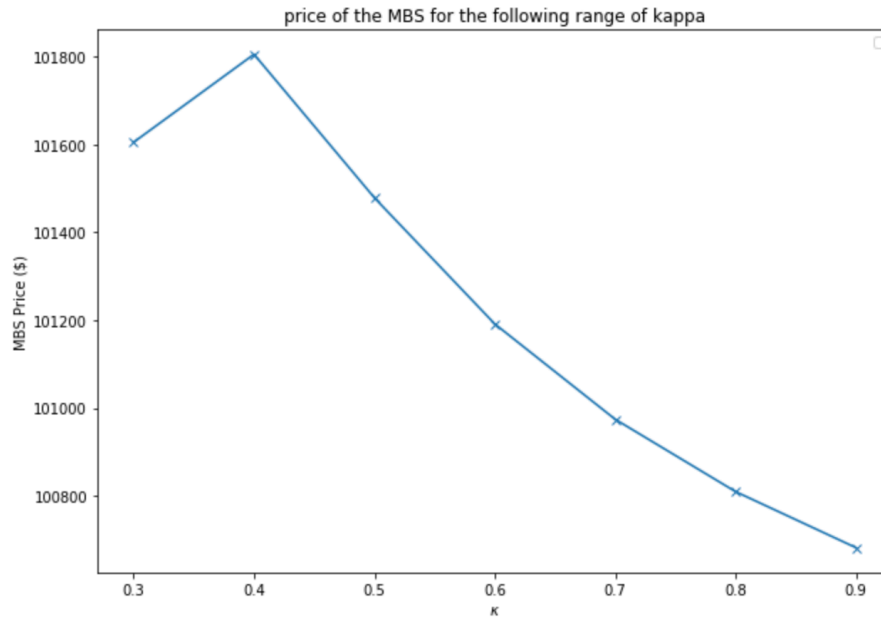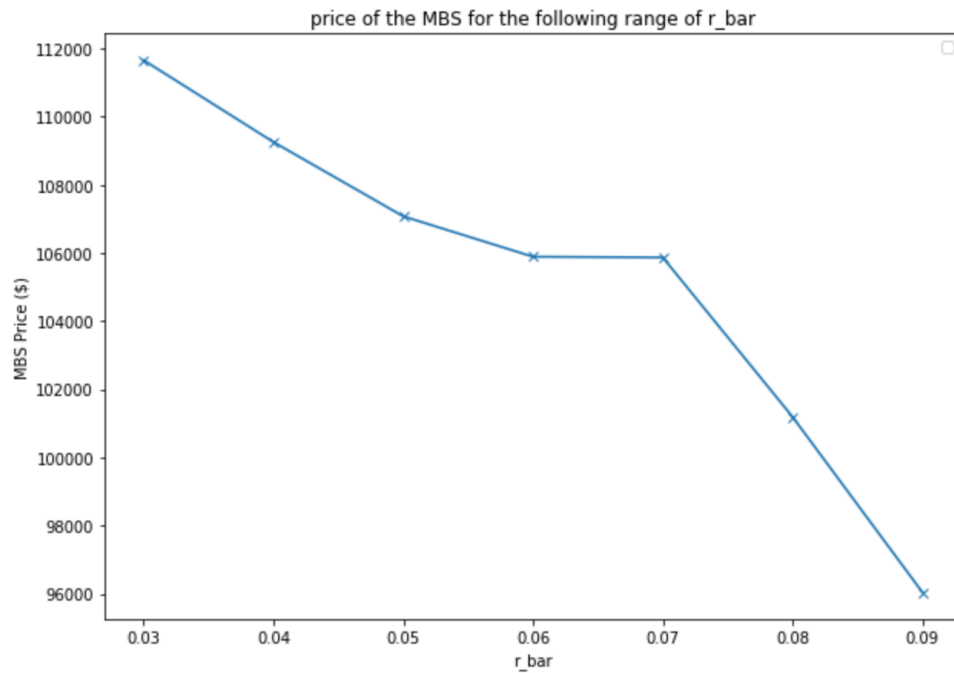# MFE405 Project 9

Heyu Zhang

Problem 1.

(1a)

Given the input, the price of the MBS is : 100510.885894

(1b)

(1c)

(2)

Given the market price of 110000, the option adjusted spread for Numerix Model : -0.012837

(3)

The duration of option adjusted spread for Numerix Model is :   7.216697331562649

The convexity of option adjusted spread for Numerix Model is :   45.79911606481553

(4)

	long run mean (r)	IO Price($)	PO Price($)
0	0.03	27230.561415	84156.698297
1	0.04	26842.362130	82427.291328
2	0.05	27193.812082	79694.576292
3	0.06	33735.255812	72033.522189
4	0.07	51105.477351	54336.334975
5	0.08	53683.801504	47223.926425
6	0.09	52568.698680	43017.226487

Plot of IO and PO with r_bar