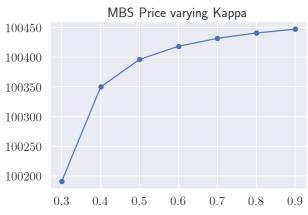
Problem Set 9 _ Kaiyue Wu

1.

a) The MBS price is 100418.3649

b)

k MBS M 0 0.3 100191.332559 1 0.4 100349.936148 2 0.5 100396.196404 3 0.6 100418.364881 4 0.7 100431.673114 5 0.8 100440.626103 6 0.9 100447.093347					
0 0.3 100191.332559 1 0.4 100349.936148 2 0.5 100396.196404 3 0.6 100418.364881 4 0.7 100431.673114 5 0.8 100440.626103 6 0.9 100447.093347		k	MBS		М
1 0.4 100349.936148 2 0.5 100396.196404 3 0.6 100418.364881 4 0.7 100431.673114 5 0.8 100440.626103 6 0.9 100447.093347	0	0.3	100191.332559	100450	
2 0.5 100396.196404 3 0.6 100418.364881 4 0.7 100431.673114 100250 5 0.8 100440.626103 100200 6 0.9 100447.093347 0.3 0.4	1	0.4	100349.936148	100400	
3 0.6 100418.364881 100300 4 0.7 100431.673114 100250 5 0.8 100440.626103 100200 6 0.9 100447.093347 0.3 0.4	2	0.5	100396 196404	100350	
4 0.7 100431.673114 100250 5 0.8 100440.626103 100200 6 0.9 100447.093347 0.3 0.4				100300	
5 0.8 100440.626103 100200 0.3 0.4	_			100250	
6 0.9 100447.093347 0.3 0.4	-			100200	
0.0				100200	4
		0.9	100447.093347		0.3 0.4



c)

	r bar	MBS	MBS Price varying R_Bar								
	1_541			•							
0	0.03	111582.879995	110000								
1	0.04	109111.603774					*				
2	0.05	106865.303909	105000								
3	0.06	105571.417424	100000								
4	0.07	105218.926582	100000								
5	0.08	100418.364881	95000								\
6	0.09	95258.401828		0.03	3 0.	04 0	0.05 0	.06 0	.07 0.	.08	0.09

2. The Option-Adjusted-Spread (OAS) if the Market Price of MBS is \$102,000 is - 0.0176040178901824

3.

The OAS-duration is: 6.84137682620905 The OAS-convexity is: 42.3203787769821

	Ю	РО
0.03	27085.580525	81797.567105
0.04	26562.817583	79306.232131
0.05	26726.959849	76348.771876
0.06	32665.892997	67834.302390
0.07	47600.633923	49178.500863
0.08	49083.162065	41848.669334
0.09	47577.613326	37895.204394

