Project 6

MGMTMFE 405

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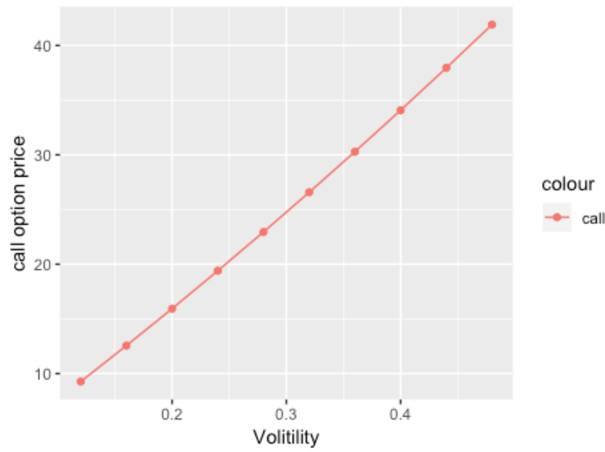
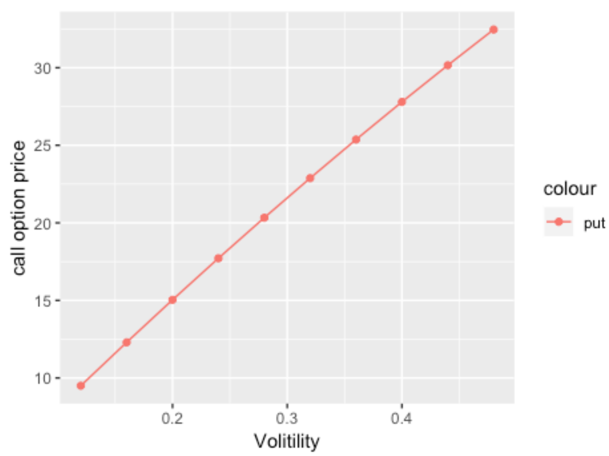
Question 1.
Call option price as function of volatility:



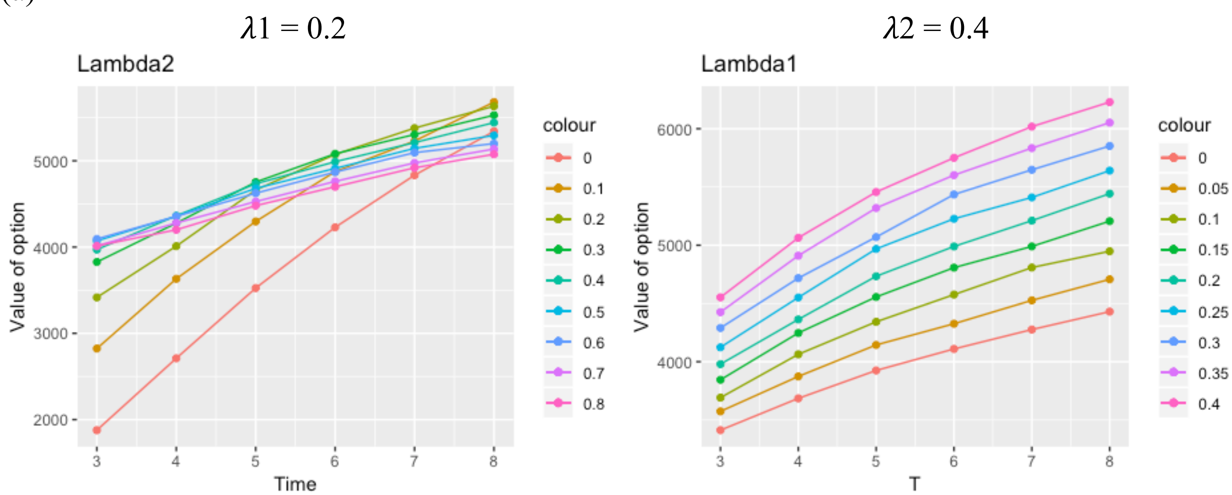
2. Put option price as function of volatility:



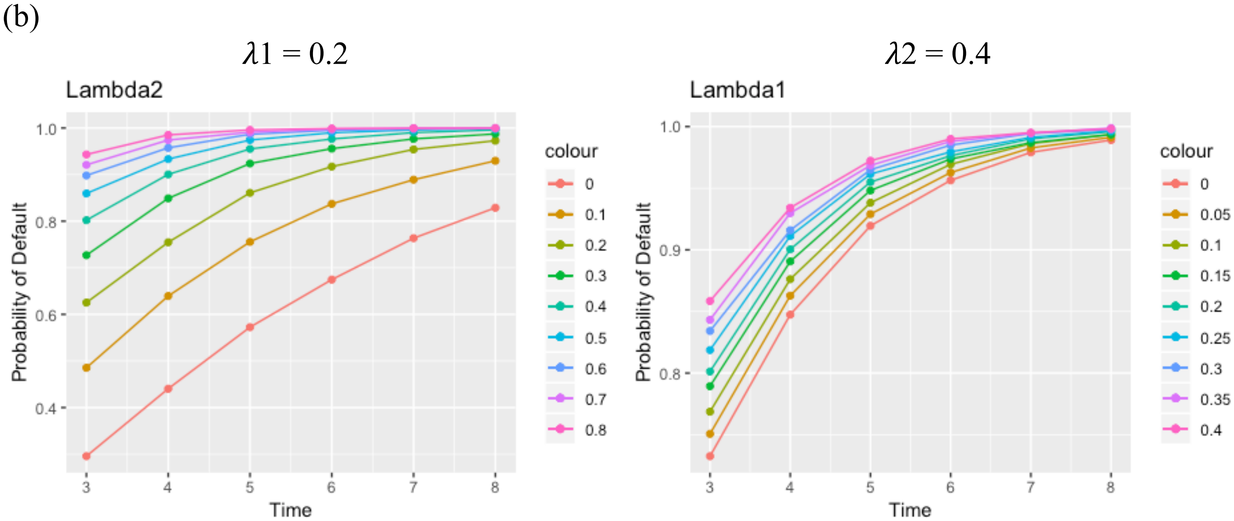
Question 2.

Value = 4765.49
Expected default = 0.9538
Expected default time 12.7435 month

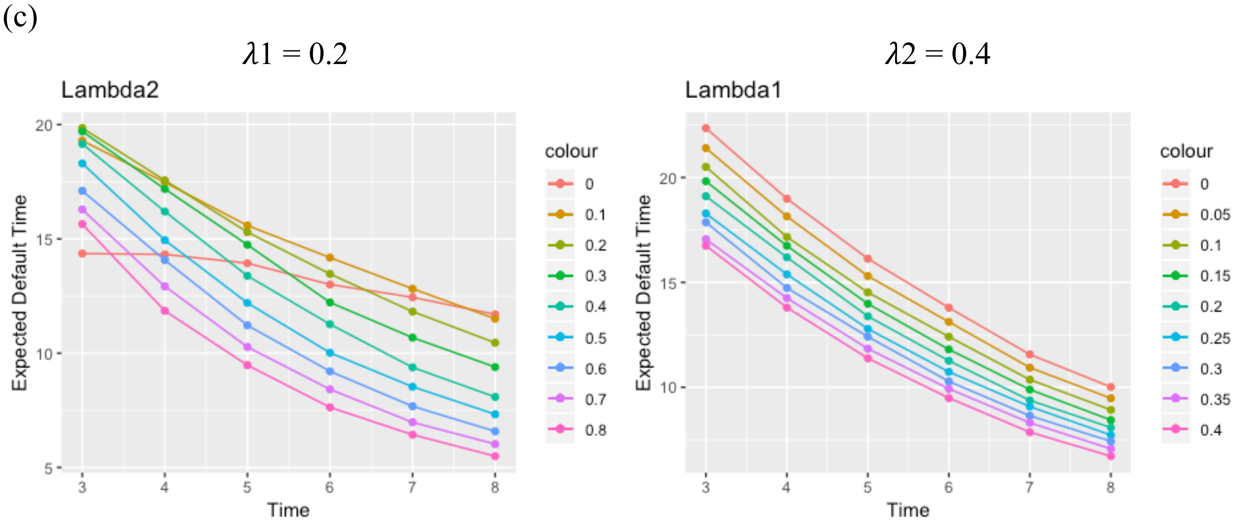
(a)


λ1 = 0.2
Lambda2
Value of option
Time
colour
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
λ2 = 0.4
Lambda1
Value of option
T
colour
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4

(b)


λ1 = 0.2
Lambda2
Probability of Default
Time
colour
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
λ2 = 0.4
Lambda1
Probability of Default
Time
colour
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4

(c)


λ1 = 0.2
Lambda2
Expected Default Time
Time
colour
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
λ2 = 0.4
Lambda1
Expected Default Time
Time
colour
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4