Project 8
MFE 405: Computational Finance
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This is a summary of the project for data visualisation, for detail implementation and result,

please refer to the print out of the program

NOTE: Qn 1d and 3 uses monte carlo simulation to get bond price, hence takes a long time to finish (rough 5 mins each)

Qn 1. Vasicek Model

Implementation in C++

(a)

The bond price at time 0 is: 975.824

(b)

The bond price at time 0 is: 1081.47

(c)

European Call on the zero coupon bond in part(a) is: 11.7919

(d)

European Call on the coupon paying bond in part(a) is: 121.91

Qn 2. CIR Model

Implementation in C++

(a)

European Call on the zero coupon bond in is: 1.12946

(b)

Compute using the explicit method, The European Call on the zero coupon bond is:1.14161

Comment: the European Call option obtained from Monte carlo simulation is very close to the price calculated using explicit method in part(a)

Qn 3. G2++ Model

The European Put on the zero coupon bond is: 13.4579