FIN 580 Homework 1

Yuan Yin (work with Hui Cai)

January 16, 2019

Question 1

a)

The total money is: $50 * e^{0.08*2.5} \approx 61.070$ dollars.

b)

The money to be invested today is: $1 \div e^{0.09*3} \approx 0.763$ dollars, and I will have 1 dollar 3 years later.
The PV of 10 dollars to be received in 3 years is: $10 \div (1 + 0.09)^3 \approx 7.633$ dollars

Question 2

a)

The total money will be: $50 * (1 + 0.08/2)^{2.5*2} \approx 60.833$ dollars.

b)

The money I invest now is: $1 \div (1 + 0.09/2)^{3*2} \approx 0.768$ dollars, and I will have 1 dollar 3 years later.
The PV of 10 dollars to be received in 3 years is: $10 \div (1 + 0.09)^3 \approx 7.679$ dollars

Question 3

a)

The total money will be: $50 * (1 + 0.08)^2.5 \approx 60.608$ dollars.

b)

The money I invest now is: $1 \div (1 + 0.09)^3 \approx 0.772$ dollars, and I will have 1 dollar 3 years later.
The PV of 10 dollars to be received in 3 years is: $10 \div (1 + 0.09)^3 \approx 7.722$ dollars

Question 4

The open interest is: $2000 + 4000 + 1000 = 7000$