ACTEX MFE Study Manual

November 2017 Edition

Errata

March 12, 2018

M1-71 Solution to #5:

$$100-\frac{K}{1.01}=\begin{cases}0.4963 & K=100\\ -0.4988 & K=101\\ -4.4789 & K=105\end{cases}$$

M1-72 The first table: The costs are (A) –0.4963, (B) 0, (C) 0.4988 ,(D) 0, (E) 4.4789

M1-85 Solution to Example 1.4.3:

Line 4: … = $\$100(1.6 - x_{1/3})_+$
Lines 6 and 7:

$$\text{Call price} - \text{put price} = 100\,(F^P_{0,1/3}(x) - 1.6e^{-0.08/3})$$

$$4.3 - \text{put price} = 100 \times 1.6e^{-0.11/3} - 160e^{-0.08/3},$$

M1-90 #9 line 3 last sentence: The put premium is NZD 0.026 million

M1-93 Solution to #9 line 4: The payoff of the call is
Last two lines:

$$\text{call price} - 0.026 = 1.37e^{-0.009 \times 0.5} - 1.4e^{-0.019 \times 0.5},$$

giving call price = 0.0031 million New Zealand dollars.

M2-79 Solution to #8 line 4: $\Delta_X X(1) + \Delta_Y Y(1) + 1.1W$

M3-3 line 9 (1) A lognormal distribution is …. See part (c) of Example 3.1.1.

Formula box: The expression for E[Y I($Y < K$)] should be denoted as (3.1.6)
Line -2: (3.16) should read (3.1.6).

M3-23 Solution to #7: change 244.44540 to 24.44540

M3-31 The line preceding Equation (3.2.1): $d_1 = \dfrac{\ln[S(0)/K] + (r - \delta + \sigma^2/2)T}{\sigma\sqrt{T}}$

M3-37 "The Black-Scholes Formula": $d_1 = \dfrac{\ln[S(0)/K] + (r - \delta + \sigma^2/2)T}{\sigma\sqrt{T}}$

M3-41 #14 line -3: change 36.5 to 36

M3-43 Solution to #5: Change 58.0111 to 5.80111. The last sentence should read
… not involved in the Black-Scholes call pricing formula.

M3-45 Solution to #12, line 6: $F^P_{0,T}(x) = 1.2e^{-0.02 \times 0.5}$

M3-46 Solution to #14, line 2: $d_1 = \dfrac{\ln\frac{40}{36} + \frac{0.4^2}{2}}{0.4}$, line 5: $d_1 = \dfrac{\ln\frac{40}{46} + \frac{0.4^2}{2}}{0.4}$

Solution to #15: line 3: $d_1 = \dfrac{\ln\frac{75}{70} + \frac{0.35^2}{2}\times\frac{8}{12}}{0.35\sqrt{8/12}}$

M3-47 line 1: $d_1 = \dfrac{\ln\frac{75}{80} + \frac{0.35^2}{2}\times\frac{8}{12}}{0.35\sqrt{8/12}}$

M3-84 line 1: For a ~~nondividend-paying~~ stock that follows

M3-95 #5, line -7: Delete 700.2203

M3-96 #10: in the table, gamma should be theta.

M3-97 #1: change “lending” to borrowing.

M3-102: Example 3.5.1: 1st line should write “For a stock currently priced at 25, you…”
Line 2 of the Solution to the example: $d_2 = d_1 - \sigma\sqrt{T} = -d_1$

M4-52 solution to 14: next-to-last line: $d_2 = -0.599043 - 0.3\sqrt{0.25} = \underline{-0.74904}$,

M5-40 #8: Calculate the price of a 18-month 30-strike European put

T1-2 Q4: X2 is the expected price in <u>two</u> years.

T1-6 Q12: Change (E) to "Sell forward, buy synthetic forward, profit = <u>0.2</u>"

T1-12 Q24: Change the choices as follows: (A) 0.15 (B) 0.16 (C) 0.17 (D) 0.18 (E) 0.19

T1-16 Q13's answer should be (E).

T1-18: Change the answer to Q9 as follows:

…, so the prepaid forward price is S0. Applying put-call parity with $K = 30$ and $K = 32$,

$$c(30) - p(30) = S_0 - 30e^{-0.1/3}$$
$$c(32) - p(32) = S_0 - 32e^{-0.1/3}$$

T1-20 Q16: last line: $S_T = \underline{52}$

T1-23 Q24: 3rd line: $d_1 = ... = 0.29583$, $d_2 = 0.29583 - 0.264^{0.5} = -0.21798$

4th line: $N(-d_1) = 0.38368$, $N(-d_2) = 0.58628$

5th line: $\exp(-0.02) \times 0.58628 - 0.38368 = 0.1910$.