

Additional errata for
Stochastic Calculus for Finance II
Continuous-Time Models
 July 2007

Page 30, line 6 from bottom. Change $\mathbb{E}X = \int_{\Omega} X(\omega) d\mathbb{P}(\omega)$ to $\mathbb{E}g(X) = \int_{\Omega} g(X(\omega)) d\mathbb{P}(\omega)$.

Page 43, line 4 from bottom. At the end of Exercise 1.7, add the question, “Why does this not violate the Dominated Convergence Theorem, Theorem 1.4.9?”

Page 56, line 9 from bottom. The second set should be $\{\omega \in \Omega_{\infty}; \omega_k = T\}$; the three dots should be omitted.

Page 60, line 4. The last integral in the equation should be

$$\int_{-\infty}^b f_Y(y) dy,$$

that is, the lower limit of integration should be $-\infty$.

Page 61, line 6 from bottom. The sentence should begin with “The joint distribution of $\mu_{X,Y}$ is”

Page 66, line 14. The citation should say “(see Definition 2.3.1 of Volume I)”.

Page 130, line 4 from bottom. The integral should be $\int_0^t \Delta(u) dW(u)$.

Page 170, line 10. The line should begin with the equation $[M_1, M_2](t) = 0$.

Page 178, line 8. Change (*Definition 4.7.5*) to (*Definition 4.7.4*).

Page 179, line 7. The first line of the equation should be

$$\mathbb{E}Z_j = \frac{1}{\tau_j} \mathbb{E}X^{a \rightarrow b}(t_j) - \frac{1}{\tau_{j-1}} \mathbb{E}X^{a \rightarrow b}(t_{j-1}).$$

Page 229, line 14. Delete the extra right parenthesis in the equation $\Delta_2(t) = -\frac{1}{S_2(t)\sigma_2}$.

Page 246, equation (5.6.10). The left-hand side of the equation should be

$$\frac{1}{D(t)} \tilde{\mathbb{E}}[D(T)X(T)|\mathcal{F}(t)].$$

Page 253, line 4 from bottom. The upper limit of the integral $\int_0^t \Gamma(u) dW(u)$ should be t rather than T .

Page 259, line 2. $\tilde{\mathbb{P}}$ should be \mathbb{P} .

Page 299, line 1. The second integral

$$\frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\frac{m-\alpha T}{\sqrt{T}}} e^{-\frac{1}{2}y^2} dy$$

should end with a dy rather than a du .

Page 352, line 11. In the line beginning “The left-hand and right-hand....,” the equation at the end should be $v''(L_*-) = 0$.

Page 358, line 7. The equation should end with “for $x \in \mathcal{S}$,” rather than “for $x \in \mathcal{C}$.”

Page 380, line 7. The integrator should be $d\widetilde{W}_j(t)$, not $d\widetilde{W}_u(t)$.

Page 382, line 12 from bottom. $W_3(t)$ is a Brownian motion under \mathbb{P} , not under $\widetilde{\mathbb{P}}$.

Page 386, line 3 from bottom. There is a du missing after $-\sigma_2(u)\sqrt{1-\rho^2(u)}$ in

$$+ \int_0^t \sqrt{1-\rho^2(u)} (-\sigma_2(u)\sqrt{1-\rho^2(u)} du + d\widetilde{W}_2(u)).$$

Page 406, line 8. “minimum” is misspelled.

Page 422, last line. Change $Y_2(t)$ at the end of the line to $Y_2(0)$.

Page 430, lines 4 and 5. In both lines, the upper limit of the integral $\int_0^t (\sigma^*(u, T))^2 du$ should be t rather than T .

Page 438, equation (10.4.6). The second case on the right-hand side should be

$$L(T, T), T \leq t \leq T + \delta.$$

Page 440, line 5. The second integral $\int_0^T \gamma^2(t, T) dt$ should have upper limit of integration T , not t .

Page 451, line 3 from bottom. The left-hand side of the equation should be

$$Y_2(t) - \widetilde{\mathbb{E}}Y_2(t).$$

Page 473, line 8 from bottom. “filtration” is misspelled.

Page 474, line 2. “relative” is misspelled.

Page 526, line 9. Change P in (Ω, \mathcal{F}, P) to \mathbb{P} .

Page 528, line 14. Change $\bigcap_{k=1}^{\infty} A_k = (\bigcup_{k=1}^{\infty} C_k)^c$ to $\bigcap_{k=1}^{\infty} A_k = (\bigcup_{k=1}^{\infty} C_k)^c$.

Page 530, line 1. Change $x_2 \neq K_1$ to $x_2 \notin K_1$.