

Erratum

Commercial Banking Risk Management: Regulation in the Wake of the Financial Crisis

- Page 5, Line 11, change “.. the risk weight to the loan is 10%” to be ...the risk weight to the loan is **100%**.
- Page 14, (C) Operational Risk is changed to be **Operational RWA**; (D) Market Risk is changed to be **Market RWA**.
- Page 16, Page 22, “Example” is changed to be **Example**.
- Page 64, the formula should be

$$\tilde{A}_j^{(m)}(t_k) = \begin{cases} A_j^{(m)}(t_k), & \text{if nettable} \\ [A_j^{(m)}(t_k)]^+, & \text{otherwise} \end{cases}$$

- Page 64, the last line, “time step t_1 ” should be “time step t_k ”.
- Page 65, the first equation should be

$$EPE(t_k) = \frac{1}{S} \sum_{m=1}^S [P^{(m)}(t_k)]^+$$

- Page 65, the last equation should be

$$\text{effective EPE} = \sum_{k=1}^{\min\{1 \text{ y, maturity}\}} \text{effective } EE_k \times \Delta_k$$

- Page 66, in the first equation, “Exposurevalue” should be “**Exposure value**”.
- Page 80, the equation should be

$$CVA = \dots \int_{t=0}^{t=T} EPE(t) \times PD(t, t + dt) dt$$

- Page 81, Delete “Table 1” above the equation.
- Page 81, Figure 1, y-label, “X’PE” should be “**PE**”.

- Page 85, in the first equation, it should be

$$S(t) = - \int_{u=0}^{u=t} \lambda(u) du$$

- Page 85, the second equation should be

$$PV_{risky}(S(t)) = \mathbb{E}[1_t] \times V(s) \times RFDF(t).$$

- Page 99, “Conclusion”, the first sentence should be: **Most classical financial theory grounded itself in the idea that there are large unconstrained actors which could enter ...**

- Page 141, Equation (6) should be

$$ATT = \frac{1}{N} \sum_{i=1}^N \left(\frac{T_i Y_i}{p(x_i)} - \frac{(1 - T_i) Y_i}{1 - p(x_i)} \right)$$

- Page 143, Equation (10) should be

$$\begin{aligned} E_{b(x)} [E(Y_i|b(X), T = 1) - E(Y_0|b(X), T = 0)] \\ = E_{b(x)} [E(Y_1|b(X)) - E(Y_0|b(X))] = E(Y_1 - Y_0). \end{aligned}$$

- Page 148, Equation (16) should be

$$Var(V^+) = \frac{p^+(1 - p^+)S(S + 1)(2S + 1)}{6}$$

- Page 148, the line after Equation (16) should be “where $p^+ = \frac{\Gamma}{1+\Gamma}$, p^+ may be interpreted ...

- Page 148, Line 4 from bottom, delete “(” before $S(S + 1)/2$.

- Page 154, the equation in the middle should be

$$Pr [T_A < 1, T_B < 1] = \Phi_2 (\Phi_1^{-1}(\Phi_A(1)), \Phi_1^{-1}(\Phi_B(1)), \gamma) .$$

- Page 173, in (F), the format should be:
 - proper ...
 - robust ...
 - change ...
 - reporting
- Page 206, Equation (5), the left side should be $p(G, g|Z_t)$.
- Page 206, Equation (6), it should be $\dots Ln [p(G, g|Z_t)]$.
- Page 210, after the last equation, adding “ where \bar{P}_g is the average default probability through the cycle.”
- Page 211, the last paragraph before “Establishing Future Credit Scenarios”, $\rho_0^*(US) = 12\%$.
- Page 218, Equation (13) is changed to be

$$PD(g|Z_r) = \Phi \left[\frac{\Phi^{-1}(\bar{PD}_r) - \sqrt{\rho_r} Z_r}{\sqrt{1 - \rho_r}} \right]$$

Equation (14) is changed to be

$$PD(g|Z_s) = \Phi \left[\frac{\Phi^{-1}(\bar{PD}_s) - \sqrt{\rho_s} Z_s}{\sqrt{1 - \rho_s}} \right]$$

- Page 254, equation (1) is:

$$VaR(p) = \min \{l | P(\{V(0) - V(\Delta t) \geq l\}) \leq 1 - p\}.$$

- Page 255, in the formula for $N(x)$, it should be

$$N(x) = \int_{-\infty}^x \frac{1}{\sqrt{2\pi}} e^{-\frac{t^2}{2}} dt$$

- Page 256, middle equation should be $Var(p) \sim M + \Sigma N^{-1}(p)$.

- Page 259, in the equation before “By expanding the Taylor series ...”, the second term should be

$$\frac{1}{2} \frac{V(X+h) - 2V(X) + V(X-h)}{h^2} \Delta X^2$$

- Page 268, the last equation should be

$$X_1, \dots, X_n.$$

- Page 270, in the line after the equation $Pr(T \leq t) \dots$, change “for a large value of n ” to be “for a large value of t ”.
- Page 270, in “How Well Does Your Model Fit the Data?”, Change Xn to be X_n .
- Page 271, Line 6 should be $A \in \mathbb{R}^{d \times k}$.
- Page 273, Line 5 from the bottom, change “ $\hat{\mu}x - \hat{\mu}$ ” to be $\hat{\mu}$.
- Page 275, In the paragraph (B), change Xi to be X_i .
- Page 278, the last paragraph before “Expected Shortfall”, the formula is $f_{W|X}(x|x)$.
- Page 280, Line 5, the formula should be $\Delta V_j = V_j(X'_{1,j}, \dots, X'_{n_j,j}) - V_j(X_{1,j}, \dots, X_{n_j,j})$.
- Page 286, in the last two equations, the integral \int_{∞}^0 should be \int_0^{∞} .
- Page 287, in the definition of \mathcal{B}_i , there is a space between “if” and i^{th} ”.
- Page 289, in the second two line before the first equation, change \mathcal{L} to be \mathcal{L}_* .
- Page 290, in “I”, it should be $L_1 \leq L_2$.
- Page 291, (2), “Marginal Method”, the formula is

$$EC_{\alpha}(i) = \frac{EC_{\alpha}(L) - EC_{\alpha}(L \setminus L_i)}{\sum_i [EC_{\alpha}(L) - EC_{\alpha}(L \setminus L_i)]} * EC_{\alpha}(L)$$

- Page 415, the equation $P^+, P^- = \cos(\psi^*)$ should be

$$\langle P^+, P^- \rangle = \cos(\psi^*).$$