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

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

• Page 64, the last line, “time step \( t_1 \)” should be “time step \( t_k \)”.

• Page 65, the first equation should be

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

• Page 65, the last equation should be

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

• Page 66, in the first equation, “Exposure value” should be “Exposure value”.

• Page 80, the equation should be

\[
CVA = \cdots \int_{t=0}^{t=T} EPE(t) \times PD(t, t + dt) dt
\]

• 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

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

• 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

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

• Page 143, Equation (10) should be

\[
E_b(x) \left[ E(Y_i|b(X), T = 1) - E(Y_0|b(X), T = 0) \right] = E_b(x) \left[ E(Y_1|b(X)) - E(Y_0|b(X)) \right] = E(Y_1 - Y_0).
\]

• Page 148, Equation (16) should be

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

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

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

• Page 154, the equation in the middle should be

\[ Pr [T_A < 1, T_B < 1] = \Phi_2 \left( \Phi^{-1}_1(\Phi_A(1)), \Phi^{-1}_1(\Phi_B(1)), \gamma \right). \]
• 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 $\cdots \ln[p(G,g|Z_t)]$.

• Page 210, after the last equation, adding “where $\overline{P}_g$ 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

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

Equation (14) is changed to be

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

• 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
\[ X_1, \cdots, X_n. \]

• Page 270, in the line after the equation \( Pr(T \leq t) \cdots \), 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 \( X^n \) 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 \( X_i \) 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 \( \Delta V_j = V_j \left( X'_{1,j}, \cdots, X'_{n,j} \right) - V_j \left( X_{1,j}, \cdots, X_{n,j} \right) \).

• Page 286, in the last two equations, the integral \( \int_0^\infty \) should be \( \int_0^\infty \).

• Page 287, in the definition of \( B_i \), there is a space between “if” and \( i^{th} \).

• Page 289, in the second two line before the first equation, change \( L \) to be \( L_x \).

• Page 290, in “T”, it should be \( L_1 \leq L_2 \).

• Page 291, (2), “Marginal Method”, the formula is
\[ EC_\alpha(i) = \frac{EC_\alpha(L) - EC_\alpha(L \setminus L_i)}{\sum_{i} \left[ EC_\alpha(L) - EC_\alpha(L \setminus L_i) \right]} \ast EC_\alpha(L) \]

• Page 415, the equation \( P^+, P^- = \cos(\psi^*) \) should be
\[ < P^+, P^- > = \cos(\psi^*). \]