Errata: Asset Pricing and Portfolio Choice Theory

Second Edition

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1. Exercise 2.7 needs the additional assumption that $c_1 > c_0$. Also, there shouldn't be a tilde on c_1, because it is not random.

2. Part (e) of Exercise 8.1 relies on (9.6) and should not be assigned until Chapter 9 is covered.

3. Exercise 9.1 requires the assumption that the investor has log utility (this should be evident anyway).

4. Exercise 10.1 requires a link between ν and δ that is not specified in the problem. The displayed formula before (10.32) on p. 251 should be used.

5. Lognormal consumption growth should be assumed in Exercise 11.1.

6. Here is some advice regarding Exercise 13.2: The exercise is simpler if it is assumed that B is the only Brownian motion in the economy. In this case (13.58) is equivalent to

$$\frac{\mathrm{d}M}{M} = -r\,\mathrm{d}t - \lambda\,\mathrm{d}B\,.$$

   If there are other Brownian motions, then some regularity condition is needed to ensure a local martingale is a martingale. See Exercise 15.2 for such a result.

7. In Exercise 14.2, η_{hj} should be replaced by η_{hj}/X_j and η_j should be replaced by η_j/X_j to be consistent with the definitions in the chapter (which changed between the 1st and 2nd editions of the book). So, the equation that is given in the exercise should be

$$W_h \pi_h = \tau_h \Sigma^{-1}(\mu - r\iota) - \sum_{j=1}^{\ell} \tau_h \frac{\eta_{hj}}{X_j} \Sigma^{-1} \sigma \nu_j \,.$$

Equation (14.33), which is to be derived in part (a), should be

$$\mu - r\iota = \alpha W \Sigma \pi + \sum_{j=1}^{\ell} \frac{\eta_j}{X_j} \sigma \nu_j \,.$$

8. The rf on the right-hand side of the PDE (15.3) should not be present (it was copied from (15.1) but here it is subsumed in the $-mf_m r$ term on the left-hand side). The correct PDE is

$$g + f_t + \sum_{i=1}^{\ell} f_{x_i}(\phi_i - \nu_i'\lambda) - m f_m (r - \lambda'\lambda) + \frac{1}{2} \sum_{i=1}^{\ell} \sum_{j=1}^{\ell} f_{x_i x_j} \nu_i' \nu_j + \frac{1}{2} m^2 f_{mm} \lambda'\lambda - m \sum_{i=1}^{\ell} f_{m x_i} \nu_i' \lambda = 0 \,.$$

9. In Exercise 15.4, the same symbol ρ is used for the correlation between the two stochastic processes and also for relative risk aversion. This can be fixed by replacing the equation for $\mathrm{d}\mu$ by the following (which uses η for the correlation):

$$\mathrm{d}\mu = \kappa(\theta - \mu)\,\mathrm{d}t + \gamma \left[\eta\,\mathrm{d}B_1 + \sqrt{1 - \eta^2}\,\mathrm{d}B_2 \right] .$$

10. In Exercise 18.4, the one instance of $S(r, Y)$ should be $S(r, Z)$.

11. In the example on page 505, the decimal point is in the wrong place for the optimal coupons. In the static model, the optimal coupon is 2.69% of X_0. In the dynamic model, the optimal coupon is 1.58% of X_0.

12. The second γ in the displayed expression in Exercise 19.4(c) should be β. That is, the expression should be

$$\frac{c}{r} + as^{-\gamma} + bs^{\beta}\,.$$

13. On page 541, regading (20.35), the "volatility of X" should be interpreted as the instantaneous standard deviation of $\mathrm{d}X$, not the instantaneous standard deviation of $\mathrm{d}X/X$. Likewise, replace "risk of a stock return" on page 541 and in Exercise 20.3 with "risk of a stock price change."

14. In Exercise 20.2, replace the sentence "Using the formula for the constant c_π derived in the previous exercise, specify a condition on the parameters A, α, w, μ_z, and σ_z that is equivalent to $\delta > 0$" with "Specify a condition on the parameters r, ε, α, μ_z, and σ_z that is equivalent to $\delta > 0$."

15. Exercise 23.4(a) should ask for the equation for $\mathrm{d}\hat{\mu}$ instead of $\mathrm{d}\mu$.

16. There is a mistake in Exercise 24.1(b). The inventory control effect creates positive correlation that exactly offsets the negative correlation created by bid-ask bounce in this example. So, the problem should say "show that the serial correlation of the transaction price changes is zero."