
Most recent update: February 20, 2009

1. Page XVII, Preface, 2nd paragraph, line 1: Change 10 to 12. (12 chapters)

2. Page 11, Table 1.2, Monthly Simple Returns, SP: change 62/1 to 26/1.

3. Page 13, one line above Eq. (1.15), the second term on the right hand side of the equation should be $F(r_{i2}|r_{i1})$. Also, for consistency in notation, the last term of Eq. (1.16) should be $f(r_{it}|r_{i,t-1}, \ldots, r_{i1}; \theta)$.

4. Page 22, Table 1.3. Panel B and C for Monthly Treasury Rates and Weekly Treasury Bill Rates, remove the “negative” sign from each minimum, e.g. change $-0.82$ to $0.82$. Also, for the monthly treasury rates with 1-year maturity, the Excess Kurtosis is $1.16$ (not $1.27$).

5. Page 34, first equation of the subsection Autocorrelation of an AR(1) model: the coefficient $\phi_1$ is missing. This omission does not affect the result. The correct version is

$$E[a_t(r_t - \mu)] = \phi_1 E[a_t(r_{t-1} - \mu)] + E(a_t^2) = E(a_t^2) = \sigma_a^2,$$

6. Page 34, last equation: Change $\ell \geq 0$ to $\ell > 0$.

7. Page 49, line 5 after Table 2.2, the half-life should be $k = \ln(0.5)/\ln(|\phi_1|)$.

8. Page 60, Table 2.5. Some entries of the EACF table need modification, even though the implied ARMA order is unchanged. The new table is given below:

<table>
<thead>
<tr>
<th></th>
<th>MA order: $q$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 1 2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
<tr>
<td>$p$</td>
<td>-0.05 -0.04 -0.07 -0.01 0.01 0.07 0.00 0.02 -0.01 -0.06 0.03 0.09 0.00</td>
</tr>
<tr>
<td>1</td>
<td>-0.19 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.00 0.00 0.00 0.00</td>
</tr>
<tr>
<td>2</td>
<td>-0.21 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15</td>
</tr>
<tr>
<td>3</td>
<td>-0.18 0.08 0.39 -0.01 -0.02 0.05 -0.01 0.03 -0.02 -0.01 0.01 0.01</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>-0.04 0.21 0.44 0.15 0.22 0.00 0.01 0.05 -0.03 0.01 0.02 0.02 0.04</td>
</tr>
<tr>
<td>6</td>
<td>-0.13 -0.34 0.09 0.33 0.20 -0.06 0.01 0.06 -0.03 0.01 0.01 0.00 0.03</td>
</tr>
</tbody>
</table>

9. Page 68, line 5: change $r_t = \ln(p_t) - \ln(p_{t-1})$ to $r_t = \ln(P_t) - \ln(P_{t-1})$.

10. Page 98, Section 3.1: line 2 of the 2nd paragraph, change Blac-Scholes to Black-Scholes.

12. Page 129, line -3: To match with the recursive formula before the line, change $\Phi(\theta - \gamma)$ to $\Phi(\gamma - \theta)$.

13. Page 140, line -6: In the expression of $\hat{\sigma}^2$ change power $n$ to 2, i.e., $\hat{\sigma}^2$ should be
\[
\hat{\sigma}^2 = \frac{\sum_{i=1}^{n}(r_{t,i} - \bar{r}_t)^2}{n-1}.
\]

14. Page 194, the data set on the web has been updated. It is from 1948 to 1994 as stated in the book. The old data set was from 1948 to 1991.


16. Page 217, Table 5.3.: interchange the headings Upward Movements and Downward Movements.

17. Page 281, Example 6.8. The strike price is $K = 81$, not $85$.

18. Page 295, Example 7.3, Case 1. The volatility equation: Change $0.9073\sigma_t^2$ to $0.9073\sigma_{t-1}^2$.

19. Page 316, line 12: Change $n = 21$ to $n = 63$. Also, line 13, change the amount $184,127$ to $166,641$, and the resulting amount $575,397$ to $520,753$.

20. Page 383, line 2: change $-c_0$ to $c_0$.

21. Page 409, Table 9.1: The standard error of HPQ should be 11.8, not 0.42.

22. Page 415, Eq. (9.7): The second term in the right hand side should be $(\beta' D^{-1} \tilde{r}_t)$. Similarly, the second term of Eq. (9.8) should be $(\beta' \tilde{D}_o^{-1} \tilde{r}_t)$.

23. Page 432, lines 1 and 2: change Example 9.2 to Example 8.2.

24. Page 436, Section 9.6 concerning Asymptotic Principal Component Analysis:

The definition of $\mathbf{R}$ is incorrect. It should be the vector of sample means of individual asset returns. Let $\mathbf{R}$ be the $T \times k$ matrix of $T$ returns for $k$ assets as given in Eq. (9.4). Then, $\mathbf{R}$ is a $1 \times k$ vector of column means of $\mathbf{R}$. The covariance matrix $\hat{\Omega}_T$ is defined as
\[
\hat{\Omega}_T = \frac{1}{k}(\mathbf{R} - 1_T \bar{\mathbf{R}})(\mathbf{R} - 1_T \bar{\mathbf{R}})',
\]
where $1_T$ is the $T \times 1$ vector of ones.
25. Page 437, the definition of \( \hat{\Omega} \) should be changed to

\[
\hat{\Omega} = \frac{1}{k}(R_* - 1^T \bar{R}_*)(R_* - 1^T \bar{R}_*)',
\]

where \( \bar{R}_* \) is the \( 1 \times k \) vector of column means of \( R_* \). **Note:** I like to thank Mr. Tom Doan of Estima for pointing out the error.


27. Page 514, first equality of Eq. (11.34), change \( \psi_{my|t} \) to \( \phi_{my|t} \).

28. Page 516, Eq. (11.40), in the left-hand side of the equation, change \( z_{t+2} \) to \( z_t \).

29. Page 518, line 7, change \( (y_t, y_{t-1})' \) to \( (s_{1t}, s_{2t})' \), where \( s_{1t} = y_t \) and \( s_{2t} = -0.35y_{t-1} - 0.25a_t \).

30. Page 518, line 1 after Eq. (11.44), change \( H_t \) to \( Q_t \).

31. Page 518, line 2 after Eq. (11.44), change \( Q_t \) to \( H_t \).

32. Page 524, first equality of Eq. (11.60) should read as

\[
\Sigma_{t|t} = \text{Var}(s_t|F_t-1, v_t),
\]

i.e. the \( v_t \) is missing from the condition.

33. Page 526, Eq. (11.64). The \( v_t \) on the right hand side of the 2nd equality should be \( v_j \). Also, the \( V_t \) and \( v_t \) on the right hand side of the 3rd equality should be \( V_j \) and \( v_j \). More specifically, Eq. (11.64) should read as

\[
\begin{align*}
 s_{t|T} &= E(s_t|F_T) = E(s_t|F_{t-1}, v_t, \ldots, v_T) \\
 &= E(s_t|F_{t-1}) + \sum_{j=t}^T \text{Cov}(s_t, v_j)\text{Var}(v_j)^{-1}v_j \\
 &= s_{t|t-1} + \sum_{j=t}^T \text{Cov}(s_t, v_j)V_j^{-1}v_j,
\end{align*}
\]

34. Page 526, line \(-3\). Change the \( \Sigma_{T|T-1} \) matrix to \( \Sigma_{T-1|T-2} \). (two places.) The equation should be

\[
\begin{align*}
 s_{T-1|T} &= s_{T-1|T-2} + \Sigma_{T-1|T-2}Z'_{T-1}V_{T-1}^{-1}r_{T-1} + \Sigma_{T-1|T-2}L'_{T-1}ZTV_{T-1}^{-1}r_T,
\end{align*}
\]

35. Page 536, last line. Change \((0.00143, 0.2696, 0.1712)\) to \((2.045 \times 10^{-6}, 0.0727, 0.0293)\).

36. Page 537, line \(17\), remove the “sqrt”. The proper command is

\[
\text{jnjest} = \exp(\text{jnj.est$parameters}).
\]

Consequently, the non-zero elements of \( \Omega \) are 0.00528, 0.00086, and 4.18e-12, respectively. [The old numbers are 0.07270, 0.02932, 2.044e-06, respectively.]
37. Page 538, change max(up1) from 3.067664 to 2.795702, change min(lw1) from -1.063997 to -0.5948943, change max(up) from 0.5909587 to 0.3788652, change min(lw) from -0.6157968 to -0.3552441. In line -5, change ylim=c(-0.62,0.6) to c(-0.4,0.4). Line -10, change ylim=c(-1.1,3.1) to c(-0.6,2.8).

38. Page 539, because of the changes made in page 537, Figure 11.6 is changed. The confidence regions are tighter than before. See Figure 1.

39. Page 570, change (0,1.5s^2) to (0,4.5s^2).
Figure 1: Revised version of Figure 11.6