Corrections to *Time Series Analysis* by James D. Hamilton

1 Corrections to first printing.

p. xiv, last paragraph, line 5. After "Donald W. K. Andrews," insert: Jushan Bai, Peter Bearse,

p. xiv, last paragraph, line 6. After "Michael Dotsey," insert: John Elder,

p. xiv, last paragraph, line 9. After "Kenneth F. Kroner," insert: Jaime Marquez,

p. 34, equation [2.4.5]. Replace first term, "λ_p", with: λ^p

p. 189, second line below equation [7.2.9]. Replace "specifies" with: specified

p. 241. Header for subsection should use roman 2 rather than italics 2

p. 445, 2 lines above equation [15.4.7]. The expression "unit root" should be: stationary

p. 464. See attached corrected version

p. 465. The parameters α and δ appearing in the matrix in [16.3.8] and in the expression following [16.3.8] and [16.3.16] should be replaced by α^* and δ^*, respectively

p. 467. The parameters α and δ appearing on the right-hand side of equation [16.3.16], on the right-hand side of the equation following [16.3.16], and on the right-hand side of the fifth displayed equation on this page should all be replaced with α^* and δ^*

p. 467, third displayed equation from bottom. The parameter δ here should be replaced by δ^*; note, however, that $\hat{\delta}$ remains as $\hat{\delta}$ and should not become δ^*

p. 571, 3 lines above equation [19.1.1]. The expression "$(n \times 1)$" appears incorrectly as

"$(n \times \mathbf{1})$" in some copies of the book but not others

p. 662, 2 lines above equation [21.2.22]. "If u_t has" should be: If, conditional on M_t, the term u_t has

p. 662, equation [21.1.22]. The left-hand side, "$f(u_t)$", should be: $f(u_t|M_t)$

p. 662, equation [21.1.23]. The left-hand side, "$f(u_t)$", should be: $f(u_t|h_t)$

p. 664, line following equation [21.1.26]. The term "uncentered" should be: centered

p. 718, fourth displayed equation. The denominator, "$d\log x$" should be: $d\log(x)$

p. 728, equation [A.4.13]. Left-hand side should be

$$
\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix}^{-1}
$$

p. 767, Table B.10. The label on the far right column, "0.001", should be: 0.010

p. 768, Table B.11. The label on the far right column, "0.001", should be: 0.010

2 Corrections to second printing.

p. xiii, fifth paragraph, line 1. "econometrics couse" should be: econometrics course

p. xiv, last paragraph, line 10. After "Rocco Mosconi," insert: Edward Nelson,

p. 284, third line below DE following [10.5.22]. "Newey and West (1992)" should be: Newey and West (1994)

p. 290, 5 lines from bottom. Replace "_____ and ____. 1992." with: _____ and _____. 1994.

p. 290, 4 lines from bottom. Replace "University of Wisconsin, Madison. Mimeo." with: *Review of Economic Studies* 61:631-54.

p. 427, fourth line. Replace "Gallant and Tauchen (1992)" with: Gallant and Tauchen (1996)

p. 433, 7 lines from bottom. Replace "_____ and George Tauchen. 1992." with: "_____ and George Tauchen. 1996.

p. 433, 17 lines from bottom. Replace "Duke University. Mimeo." with: *Econometric Theory* 12:657-81.

p. 530, 15 lines from bottom. Replace "Hall (1991)" with: Hall (1994)

p. 532, third from last line of Section 17.8. Replace "Stock (1993)" with: Stock (1994)

p. 540, third line of exercise 17.6. Replace "then roots" with: the roots

p. 541, reference line for Beveridge and Nelson. Replace "Approcah" with: Approach

p. 542, entry after that for Hall, Alastair 1989. Replace "_____. 1991." with: _____. 1994.

Following line. Replace "Department of Economics, North Carolina State University. Mimeo." with: *Journal of Business and Economic Statistics* 12:461-70.

p. 543, fourth line from bottom. Replace "(1993)" with: (1994)

p. 556, three lines below [18.2.43]. Replace "driftless $I(0)$ regressors" with: driftless $I(1)$ regressors

p. 568, sixth line of exercise 18.1. Replace "asolutely" with: absolutely

p. 570, line 3. Replace "forthcoming." with: 61:1367-93.

p. 573, line 11. Replace "Clarida (1991)." with: Clarida (1994).

p. 584, 13th line from bottom. Replace "crtical" with: critical

p. 627, fourth line from bottom. Replace "1991" with: 1994

p. 627, fourth line from bottom. Replace "Co-Integration" with: Cointegration

p. 637, third line from bottom. Replace "Columbia University. Mimeo." with: *American Economic Review* 84:298-308.

p. 662, last line. Replace "(Cai, forthcoming)" with: (Cai, 1994)

p. 662, last line. Replace "(Hamilton and Susmel, forthcoming)" with: (Hamilton and Susmel, 1994)

p. 669, 8th line from bottom. Replace "Jagannathan and Runkle (1989)" with: Jagannathan and Runkle (1993)

p. 670, 8th line of Section on Multivariate GARCH Models. Replace "Engle and Kroner (1993)" with: Engle and Kroner (1995)

p. 672, 6th line of second paragraph. Replace "Ng (1991)" with: Ng (1993)

p. 672, second to last line of main text. Replace "Noh (1991)" with: Noh (1993)

p. 674, 11th line from bottom. Replace "Cai, Jun. Forthcoming." with: Cai, Jun. 1994.

p. 674, 11th line from bottom. Replace "Unconditional Variance in" with: Switching-Regime

p. 674, 10th line from bottom. Replace "*Economic Statistics.*" with: *Economic Statistics* 12:309-16.

p. 675, 3rd line. Replace "Noh. 1991." with: Noh. 1993.

p. 675, 4th line. Replace "forthcoming." with: 6:393-415.

p. 675, 6th line. Replace "Kroner. 1993." with: Kroner. 1995.

p. 675, 7th line. Replace "UCSD. Mimeo." with: *Econometric Theory* 11:122-50.

p. 675, line 13. Replace "Ng. 1991." with: Ng. 1993.

p. 675, line 14. Replace "University of California, San Diego. Mimeo." with: *Journal of Finance* 48:1749-78.

p. 675, entry for Glosten, Jagannathan and Runkle. Replace "1989" with: 1993.

Following line. Replace "Northwestern University. Mimeo." with: *Journal of Finance* 48:1779-1801.

p. 675, entry for Hamilton and Susmel. Replace "Forthcoming." with: 1994.

Following line. Replace "Econometrics." with: *Econometrics* 64:307-33.

p. 676, last two lines. Replace "*Economics,* forthcoming." with: *Economics* 35:23-46.

p. 690, 8 lines above [22.4.2]. Replace "Filardo (1992)" with: Filardo (1994)

p. 691, last line. Replace "Filardo (1992)" with: Filardo (1994)

p. 691, last two lines. Replace "McCurdy (1992)" with: McCurdy (1994)

p. 695, last line of section preceding Maximum Likelihood Estimation of Parameters. Replace "Hamilton (1989, 1993b, 1993c)" with: Hamilton (1989, 1993a, 1993b)

p. 698, next to last line. Replace "Hansen (1993)" with: Hansen (1996)

p. 698, last two lines. Replace "Ploberger (1992)" with: Ploberger (1994)

p. 699, third line. Replace "Hamilton (1993a)" with: Hamilton (1996)

p. 702, first reference. Replace "1992." with: 1994.

Following line. Replace "Yale University. Mimeo." with: *Econometrica* 62:1383-1414.

p. 702, entry for Filardo. Replace "Filardo, Andrew J. 1992." with: Filardo, Andrew J. 1994.

Following line. Replace "Federal Reserve Bank of Kansas City. Mimeo." with: *Journal of Business and Economic Statistics* 12:299-308.

p. 702, entries for Hamilton. Change label for what is currently "1993b" to "1993a". Change label for what is currently "1993c" to "1993b". Move what is currently 1993a to follow after what is currently 1993c and amend it to read as follows: _____. 1996. "Specification Testing in Markov-Switching Time Series Models." *Journal of Econometrics* 70:127-57.

p. 703, second line. Replace "7:S61-82." with: 7:S61-82. Erratum: *Journal of Applied Econometrics* 11:195-8.

p. 703, third line. Replace "1993." with: 1996.

Following line. Replace "University of Rochester. Mimeo." with: *Econometrica* 64:413-30.

p. 703, entry for Kim. Replace "*Econometrics*, forthcoming." with: *Econometrics* 60:1-22.

3   Corrections to third printing.

p. 519, third expression in the second row. "$\Sigma u_{t-1} u_{t-p+1}$" should be: $\Sigma u_{t-2} u_{t-p+1}$

4   Corrections to fourth printing.

P. xiv, after "Tomoo Inoue," add: "Isao Ishida"

  p. 221, expression below [8.3.6].   Upper case "K" should be lower case: k

  p. 222, second line after [8.3.9].   Italics "x_1" should be bold: $\mathbf{x}_1$

  p. 429, final term in expression [14.4.15].   The term "$N(\boldsymbol{\theta}, \mathfrak{I}^{-1})$" should be: $N(\mathbf{0}, \mathfrak{I}^{-1})$

  p. 432, equation before 14.A.7.   The term "$N(\boldsymbol{\theta}, \mathbf{S})$" should be: $N(\mathbf{0}, \mathbf{S})$

  p. 519, third expression in the second row.   Boldface "$\boldsymbol{\Sigma \mathbf{u}_{t-2} \mathbf{u}_{t-p+1}}$" should be italics:

$\Sigma u_{t-2} u_{t-p+1}$

5   Corrections not yet incorporated in a printing.

p. xiv, after "Isao Ishida," add: "Chi Ku"

  p. xiv, after "Jaime Marquez" add "Yehand Mercado"

  p. xiv, after "T. Wake Epps" add "Zheng Fang"

  p. 77, equation[4.1.24], "$E(\mathbf{X}'_t \mathbf{X}_t)$" should be "$E(\mathbf{X}_t \mathbf{X}'_t)$"

  p. 105, expression in second line below last displayed equation, "$\sigma^2 > \sigma_u^2 + \sigma_v^2$" should

be "$\sigma^{*2} > \sigma_u^2 + \sigma_v^2$"

  p. 185, end of Example 7.6, "$X_T^2 \xrightarrow{p} \chi^2(1)$" should be "$X_T^2 \xrightarrow{L} \chi^2(1)$"

  p. 191, four lines below Example 7.12, "includes $\{Y_{1,T}, Y_{2,T}, \ldots, Y_{T,T}\}$" should be "in-

cludes $\{Y_{1,T}, Y_{2,T}, \ldots, Y_{t,T}\}$"

p. 273, fourth line of equation [10.4.29],

$$\left\{ \sum_{t=\tau}^{T} (y_\tau - \overline{y}) \cdot \exp[-i \cdot \omega_j (\tau - 1)] \right\}$$

should be

$$\left\{ \sum_{\tau=1}^{T} (y_\tau - \overline{y}) \cdot \exp[-i \cdot \omega_j (\tau - 1)] \right\}$$

p. 288, in second line of equation [10.A.11],

$$\left\{ \sum_{\nu_2=0}^{\infty} \psi_{i_2,l_2}^{\nu_1} \varepsilon_{l_2,l_2-\nu_2} \right\}$$

should be

$$\left\{ \sum_{\nu_2=0}^{\infty} \psi_{i_2,l_2}^{\nu_2} \varepsilon_{l_2,t_2-\nu_2} \right\}$$

p. 299, displayed equation preceding equation [11.1.38],

$$\sqrt{T}(\mathbf{R}\hat{\boldsymbol{\pi}}_T - \mathbf{r}) \xrightarrow{p} N\left(\mathbf{0}, \mathbf{R}(\hat{\boldsymbol{\Omega}}_T \otimes \mathbf{Q}_T^{-1})\mathbf{R}'\right)$$

should be

$$\sqrt{T}(\mathbf{R}\hat{\boldsymbol{\pi}}_T - \mathbf{r}) \xrightarrow{L} N\left(\mathbf{0}, \mathbf{R}(\hat{\boldsymbol{\Omega}}_T \otimes \mathbf{Q}_T^{-1})\mathbf{R}'\right)$$

p. 590, two lines above Proposition 19.3. The term "$I(1)$" should be: $I(0)$