

ERRATA

Interest and Prices, Princeton University Press, 2003

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Chapter 1:

- page 26, line 4 from bottom; page 27, line 12 from bottom; and p. 28, footnote 17: Woodford (2001c) should be (2001b).

Chapter 2:

- pages 65, 66, 70, and 72: (2.2) should be replaced by (1.2).
- page 68: y should be Y in equation (1.10).
- page 70: there is an extra comma after C_t in equation (1.17).
- page 72: in the Definition, condition (1.22) is redundant, as it is implied by (1.24).
 - page 78: last unnumbered equation: $\bar{\pi}$ should be $\bar{\Pi}$.
 - page 80: notation used in equation (1.33): \hat{Y}_t should be defined as $\log(Y_t/\bar{Y})$, where \bar{Y} is the constant (steady-state) level of output introduced on p. 78.
 - page 86: end of line 12 from bottom: “this is the not” should instead be “this is not the”
- page 107: in the definition of η_y , the ∂y should be ∂Y .
- page 115: unnumbered equation below (3.14): this should be numbered (3.15).
- page 124, second line below equation (4.2): (1.7) should be replaced by (1.25).

Chapter 3:

- page 143: subsection number should be 1.1 instead of 3.1.
- page 160: equation (1.33) should instead read

$$\log Y_t = \frac{1}{1 + \kappa} (E_{t-1} \log Y_t^n + \kappa \log Y_t^n) + \frac{1}{1 + \kappa} (\log \mathcal{Y}_t - E_{t-1} \log \mathcal{Y}_t)$$

Correspondingly, next equation should be

$$\log P_t = E_{t-1}(\log \mathcal{Y}_t - \log Y_t^n) + \frac{\kappa}{1 + \kappa} [\log \mathcal{Y}_t - \log Y_t^n - E_{t-1}(\log \mathcal{Y}_t - \log Y_t^n)].$$

- page 165, fourth equation on page: $\psi(X/A)$ should instead be $\Psi(X/A)$, and on the line below this equation, the reference should be to (1.18) rather than to (1.17).

- page 168: in the right-hand side of equation (1.39), the argument of the function μ is $(y_t(i)/Y_t)$, and the arguments of the function s are $(y_t(i), Y_t; \tilde{\xi}_t)$. Thus the right parenthesis following the first Y_t should be paired with the left parenthesis preceding the first $y_t(i)$ [whereas it has been typeset smaller]; and the left parenthesis following s should be paired with the right parenthesis at the end [whereas it has been typeset smaller]. Perhaps a space should be inserted between the right parenthesis and the s to make this clearer.

- page 181, bottom: definition of $\tilde{\omega}$ should be

$$\tilde{\omega} \equiv \epsilon_\mu + s_y.$$

- page 182: statement of Prop. 3.4, line between equations (2.9) and (2.10): the β^1 should instead be β^{-1} .

- page 192, line 1: $P(\lambda)$ should be $\mathcal{P}(\lambda)$, and this polynomial should be defined as the left-hand side of (2.19). On the line below the equation at top of p. 193, the explanation should read “where $\mathcal{P}(\lambda)$ is again the characteristic polynomial defined by the left-hand side of (2.19),” rather than referring to equation (B.20) in the appendix.

- page 201, second equation on page: the p_{1t} and p_{2t} in the expression on the right-hand side should instead be P_{1t} and P_{2t} . On p. 203, line 10, the same correction is needed.

- page 204, third equation on page: reference is made here to coefficients ξ_1, ξ_2 that are only defined in Appendix B. Instead, the passage should read, “in the case that prices are equally sticky in both sectors ($\alpha_1 = \alpha_2$), $\kappa_1 = \kappa_2$, and hence

$$n_1\gamma_1 + n_2\gamma_2 = 0.”$$

[The statements in the text as written are also correct, but can only be understood after reading the appendix.]

-page 214, equation at bottom: the correct first-order condition is

$$E_t \left\{ \sum_{T=t}^{\infty} (\alpha\beta)^{T-t} u_c(Y_T; \xi_T) Y_T P_T^{\theta-1} \left(\frac{P_{T-1}}{P_{t-1}} \right)^{\gamma(1-\theta)} \right. \\ \left. \left[p_t^* - \mu \left(\frac{P_{T-1}}{P_{t-1}} \right)^{-\gamma} P_T s(Y_T (p_t^*/P_T)^{-\theta} (P_{T-1}/P_{t-1})^{-\gamma\theta}, Y_T; \tilde{\xi}_T) \right] \right\} = 0$$

-page 223, second equation from bottom: definition of ν should be

$$\nu \equiv \frac{v_{hh}(\bar{h}; 0)\bar{h}}{v_h(\bar{h}; 0)} > 0.$$

-page 224: third equation from bottom should read

$$\hat{s}_t = \log W_t - \log P_t - \log \bar{w} + \hat{\psi}_t.$$

Also, in equation (4.10), ϕ should be ϕ_h .

- page 230, three lines below (4.18); p. 231, two lines above (4.22); and p. 233, final paragraph: references to (4.19) should instead be references to (4.18)[two such references in final paragraph of p. 233].

Chapter 4:

- page 247, 11th line: (1.15) should be (1.14).

- page 249, second line: (1.13) should be (1.14).

- page 257, second line: “> 0” should be “≥ 0.”

- page 263, last line of last complete paragraph: should read: “The matrix B is just the inverse of the matrix A defined in Appendix C.2.” [The matrix A in equation (2.5) is a special case of this.]

- page 276, third line of the last paragraph: r_t^n should be \hat{r}_t^n .

- page 277, passage just below (2.33): this makes reference to the notation A, a , and z_t defined in the proof of Prop. 4.3, in Appendix C.2. The reference to equation (C.19) is also a reference to that section of the Appendix. [In fact, the entire passage between (2.33) and the end of the paragraph should be added to the proof of Prop.

4.3, and the text on p. 277 should simply refer to that section of the Appendix.] In addition, the right-hand side of equation (2.34) should be preceded by a minus sign.

- page 281, equation (2.35): first pair of parentheses should be deleted, so that the equation reads

$$\tilde{l}_t = \rho \tilde{l}_{t-1} + \phi_\pi (\tilde{\pi}_t - \dots) + \dots$$

- page 288, seventh line: r_t^n should be \hat{r}_t^n .
- page 290, footnote 53: Svensson and Woodford (2003) should be (2003c).
- page 291: in equation (2.42), $\bar{\pi}_t$ should be just $\bar{\pi}$.
- page 301: in equation (3.7), Y_t should be \hat{Y}_t .
- page 302: in equation (3.9), Y_t^n should be \hat{Y}_t^n , and the ϵ_{mt} , $\epsilon_{m,t+1}$ should be ϵ_t^m , ϵ_{t+1}^m .
- page 303: equation (3.12) should read

$$\epsilon_{mc} = \omega + \sigma^{-1} - \eta_y \chi.$$

- page 305, first line: (3.4) should be (3.10).

Chapter 5:

- page 324: line below (1.5): “optional” should be “optimal”
- page 356: expression given for q_t at middle of page should instead be replaced by the expression given at middle of p. 358. Footnote 29 on p. 358 is also appropriate at this point in the text.
- page 356, line below the equation for q_t : the reference to (3.4) should instead be to (3.6).
- page 358: in equation (3.11), the final term in square brackets should be replaced by ωq_t . [The expression given here is also correct, but makes the reference to q_t three lines below mysterious. And it is the form with q_t in the equation that is used on p. 360 to derive (3.18).]
- page 358: definition of q_t again on this page is redundant [but formula here is correct].
- page 359: formulas in Proposition 5.1 are incorrect, as is the inflation equation (3.17) obtained on the next page. See Woodford, “Inflation and Output Dynamics with Firm-Specific Investment,” May 2004, for a corrected derivation.

- page 360: equation (3.17) should instead have the form

$$\pi_t = \xi \hat{s}_t + \beta E_t \pi_{t+1},$$

where the coefficient ξ is (implicitly) defined, as a function of model parameters, in the note just cited.

- page 362: Figure 5.6 is incorrect, as it is based on the incorrect equation (3.17). When (3.17) is corrected as indicated above, one finds that $\Psi_j = \xi \beta^j$, as in the model with constant capital. It follows that the coefficients cannot change sign as j increases, and that they decay exponentially to zero at the relatively gradual rate shown in the figure for the case $\epsilon_\psi = \infty$.

- page 363: discussion from bottom of this page through middle of p. 364 must be changed, as it is based on the incorrect form of equation (3.17).

- page 368: the coefficients in the calibrated monetary policy rule are $\phi_\pi = 2, \phi_x = 1$, which also correspond to the long-run response coefficients Φ_π and Φ_x respectively. [Footnote 35 is correct.]

- page 369: in Figure 5.8, the units on the vertical axes should be divided by 10 in order to correspond to responses in percentage points. For example, the equilibrium nominal interest rate falls by slightly more than 0.1 percentage points (per annum) when the intercept of the monetary policy reaction function is shifted up by one percentage point.

- page 373: in equation at middle of page: $\hat{K}_{t=1}^{ncc}$ should be \hat{K}_{t+1}^{ncc} . Also, in equation near bottom of the page: \hat{I}_t should instead be \hat{I}_t^n .

- page 374: equation (3.28) should instead read

$$\begin{aligned} \tilde{\lambda}_t + \epsilon_\psi \tilde{K}_{t+1} &= \beta(1 - \delta) E_t [\tilde{\lambda}_{t+1} + \eta_\lambda \tilde{K}_{t+1}] \\ &+ [1 - \beta(1 - \delta)] [\rho_y (E_t \tilde{Y}_{t+1} + \eta_y \tilde{K}_{t+1}) - \rho_k \tilde{K}_{t+1}] \\ &+ \beta \epsilon_\psi [(E_t \tilde{K}_{t+2} + \eta_k \tilde{K}_{t+1}) - \tilde{K}_{t+1}] \end{aligned}$$

Also, on the line below this equation: only ρ_y and ρ_k are defined in equation (3.7). The coefficients $\eta_y, \eta_k, \eta_\lambda$ are defined on p. 373.

- page 376: when equation (3.17) is corrected, the vector \hat{z}_t has only three elements: $E_t \pi_{t+1} - \bar{\pi}$ should be omitted. The third row of (3.36) is obtained by solving [the corrected] (3.17) for $E_t \pi_{t+1}$ and then substituting for \hat{s}_t using (3.27).

- page 420: on line above equation (4.5): Y_t^n should be \hat{Y}_t^n .

- page 423, footnote 44: the reference should be to the proof of Proposition 6.7, not Proposition 6.8.

- page 455, equation (5.1): the +2 multiplying the second term inside the curly braces should instead be -2.

- page 458: in equation (5.6), L_t should be \tilde{L}_t .

- page 474: line 12: “commmit” should be “commit.”

- page 475: line 7 from bottom: “when $x^* = 0$ ” should be “when $x^* > 0$.”

Chapter 7:

- page 479, equation (1.20): in the numerator, the quantity multiplying $(\bar{r} - i^m)$ should be $(\lambda_i + \lambda_x \varphi^2)$, rather than simply λ_i . Further note: in the case of arbitrary weights λ_x, λ_i in the loss function, the final term in parentheses in the denominator should be $(\lambda_x/\kappa + \omega)$. In the case of the welfare-theoretic loss function assumed here, $\lambda_x = \kappa/\theta$, so that the expression can alternatively be written as $(\theta^{-1} + \omega)$, as in (1.20).

- page 487, last two lines of the statement of Proposition 7.5: omit the parentheses around $\Delta_{-1}^{1/2}, \Phi_y, \tilde{\xi}$, simply writing the norm as $\|\Delta_{-1}^{1/2}, \Phi_y, \tilde{\xi}\|$. [This is for consistency with the notation elsewhere, for example in the statement of Proposition 7.9.]

- page 489, next-to-last paragraph, second line from end: ϕ_{t_0-1} should instead be φ_{t_0-1} .

- page 496: equation at bottom of page: first term inside curly braces on right-hand side of equation should be $E[\pi_t]^2$. (The left parenthesis before the E should be deleted.)

- page 503: next-to-last line of first full paragraph on this page: “is only as” should be “are only as.”

- page 506: equation (2.30) should instead be

$$\bar{v}_t = (\mu_2 - 1) \sum_{j=0}^{\infty} \mu_2^{-j-1} E_t r_{t+j}^n.$$

- page 528: final equation at bottom of page: the + sign on the right-hand side should instead be a - sign.

Chapter 8:

- page 544, line 18 from bottom: “Svensson and Woodford (2003)” should instead be “Svensson and Woodford (2003c).”
- page 571: in equation (2.32), the γ_{t+d-1} should instead be $\gamma\pi_{t+d-1}$.
- page 587, line 6 from bottom: same as page 544.
- page 607, line 16 from top; footnote 46; and page 608, line 14 from bottom: “Svensson and Woodford (2002a)” and “(2002b)” should instead be “(2003a)” and “(2003b)” respectively.
- page 614, line 8 from top: same as page 607.

Appendix A:

- page 628: equation on the last line, p should be P. Similarly, p should be P on p. 629, first line; p. 629, fourth line; p. 629, ninth line from bottom [two times]; p. 629, fifth line from bottom [two times]; p. 638, first equation; and on p. 645, in equation (A.32).
- page 639, first equation on page: denominator of left-hand side should be P_{t-1} rather than p_{t-1} .
- page 640, fifth line, and again in ninth line: (2.12) should be (2.11).
- page 642: line of text below (A.23): term in parentheses in equation in text should be $(\hat{i}_t - \rho\hat{i}_{t-1})$, not $(\hat{i}_t - \hat{i}_{t-1})$.

Appendix B:

- page 659: equation between (B.12) and (B.13): minus (-) sign before $\tilde{\omega}\theta$ should instead be a plus (+) sign.
- page 660: third line from bottom, left-hand side should be $(1 - \lambda_1)(1 - \lambda_2^{-1})$, rather than $(1 - \lambda_1)(1 - \lambda_2)$.
- page 665: the final term in (B.23) should be $1 - \rho^{k+1}$, rather than $1 - \rho^k$.

Appendix C:

- page 673: In the first line of the Proof, “four cases” should be “three cases.” In the third line of the Proof, “ $\mathcal{P}(1) > 0$ and $\mathcal{P}(-1) < 0$ ” should be “ $\mathcal{P}(1) < 0$ and $\mathcal{P}(-1) > 0$.” In the fifth line from the bottom, “ $\mathcal{P}(1) < 0$ and $\mathcal{P}(-1) > 0$ ” should be “ $\mathcal{P}(1) > 0$ and $\mathcal{P}(-1) < 0$.”

- page 675: In the equation at the bottom of the page, the final inequality “ < 3 ” should instead be “ < -3 .”

- page 682: In the first line of the second paragraph of the Proof, “(A.1) and (A.2)” should be “(C.11) and (C.12).” In the third line of the second paragraph of the Proof, “(A.3) and (A.4)” should be “(C.13) and (C.14).” Subsequent references to (A.3) and (A.4) should similarly be replaced by (C.13) and (C.14) respectively, and references to (A.5) and (A.7) replaced by references to (C.15) and (C.17) respectively.

- page 683: In the second line of the last paragraph of the Proof, “(A.3) and (A.4)” should again be “(C.13) and (C.14).” Similarly, in the third line, (A.7) should be (C.17), and in the fifth line, (A.6) should be (C.16).

Appendix D:

- Appendix D.3: statement of Proposition 5.2: equation (D.7) should be corrected as in the note for p. 374 above.

Appendix E:

- page 692: in the statement of Proposition 6.1, on the line just below (E.1), there should be a right parenthesis following \bar{Y} in the definition of $\hat{y}_t(i)$ [as in the statement of this proposition in the text, page 394].

- page 693: on the left-hand side of equation (E.3), and also on the line above: in the expression $\tilde{v}(y_t(i); \xi_t)$, the ξ_t should instead be $\tilde{\xi}_t$.

- page 693: in the second line of equation (E.3), the symbol Φ should instead be Φ_y . The same is true of the Φ that appears in the text just above equation (E.14) on p. 698, in equation (E.14) itself, and in the equations following (E.18) on p. 700.

- page 694: on the left-hand side of (E.4), the integral expression should be followed by di , to indicate the variable integrated over.

- page 697: equations (E.11), (E.12), and (E.13): in each case, on the right-hand side of the equation, the term β^t should be inserted just before the curly braces.

Appendix F:

- page 709: equation (F.2): in all time subscripts on the right-hand side of this equation, t should be replaced by t_0 . Thus subscript $t - 1$ should be $t_0 - 1$, and $t + j$ should be $t_0 + j$.

Appendix G:

- page 731, middle: in the first line of the equation for $E_t \hat{f}_{t+j}$, the factor $\frac{\kappa\sigma}{\lambda_i}$ should be omitted. (The factor is correct on the next line.)

- page 732, line below (G.32): the reference to “ V_t ” should instead read “ v_t .”

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