

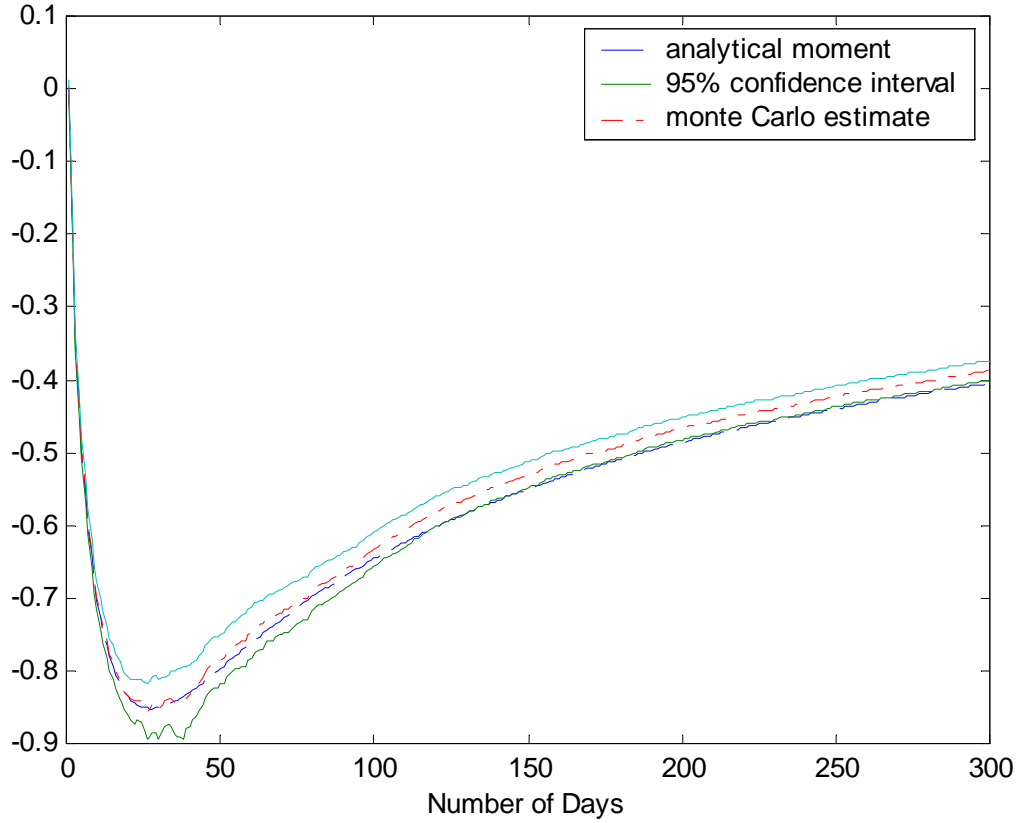
# 1 Erratum

The followings are the corrections to “An analytical approximation for the GARCH option pricing model”, J.C. Duan, G. Gauthier and J.G. Simonato, *Journal of Computational Finance* 2 (1999), 75–116.

- On page 78, in equations (8) and (10),  $S_0$  should be replaced with  $S_0 \exp(\delta\sigma_{\rho_T})$ .
- On page 78, equation (9) should be replaced with

$$A_3 = \frac{1}{3!} S_0 \exp(\delta\sigma_{\rho_T}) \sigma_{\rho_T} \left[ \left( 2\sigma_{\rho_T} - \tilde{d} \right) n(\tilde{d}) + \sigma_{\rho_T}^2 N(\tilde{d}) \right].$$

- On page 81, the line of the text that reads “except terms 8, 11, and 12 of  $S_{Q^4}$ ” should be replaced with “except terms 8 and 12 of  $S_{Q^4}$ ”.
- On page 89, FIGURE 3 should be replaced with the following graph:



- On page 101, the integral in the second term term for  $C_{approx}$  should be replaced with:

$$\int_{-\infty}^{K^*} [S_0 \exp(\mu_{\rho_T} - \sigma_{\rho_T} z) - K] (z^3 - 3z) n(z) dz.$$

- On page 102, the last term of the equation in Lemma 3 should be replaced with

$$\left(1 - \frac{3p}{4} + \frac{p^2}{8}\right) \left(E_0^Q[h_{s+t}]\right)^{\frac{p}{2}} E_0^Q[X_{s-1}\epsilon_s^r].$$

- On page 111, the last term of the expression for  $E_0^Q\left[h_i^p\epsilon_i^q h_{i+j}^r\epsilon_{i+j}^s h_{i+j+k}^{\frac{n}{2}}\right]$  in subsection C.1.8 should be replaced with

$$\left(1 - \frac{3n}{4} + \frac{n^2}{8}\right) \left(E_0^Q[h_{i+j+k}]\right)^{\frac{n}{2}} E_0^Q[h_i^p\epsilon_i^q h_{i+j}^r\epsilon_{i+j}^s].$$

- On page 111, the last term of the expression for  $E_0^Q\left[h_i^p\epsilon_i^q h_{i+j}^{\frac{n}{2}}\right]$  in subsection C.1.8 should be replaced with

$$\left(1 - \frac{3n}{4} + \frac{n^2}{8}\right) \left(E_0^Q[h_{i+j}]\right)^{\frac{n}{2}} E_0^Q[h_i^p\epsilon_i^q].$$

- On page 112, the numerical value for  $\zeta_1$  should be replaced by 1.025.
- On page 112, the numerical value for  $v_3$  should be replaced by  $-0.33619$ .
- On page 112, the line of the text that reads “and Appendix C.1.6” should be replaced with “and Appendix C.1.5”.
- On page 113, the line of the text that reads “Indeed, from Appendix C.1.6 with  $p = \frac{3}{2}$ ” should be replaced with “Indeed, from Appendix C.1.5 with  $p = \frac{1}{2}$ ”.
- On page 114,  $\sigma_{\rho_T}$  in subsection D.3.3 should be replaced with  $\sigma_{\rho_T}^2$ .
- On page 114, the value for  $\kappa_3$  in subsection D.3.3 should be replaced with  $-2.6579 \times 10^{-1}$ .
- On page 114, the value for  $\kappa_4$  in subsection D.3.3 should be replaced with  $3.40179 \times 10^0$ .
- On page 114, the expression for  $A_3$  should be replaced with

$$A_3 = \frac{1}{3!} S_0 \exp(\delta\sigma_{\rho_T}) \sigma_{\rho_T} \left[ \left(2\sigma_{\rho_T} - \tilde{d}\right) n(\tilde{d}) + \sigma_{\rho_T}^2 N(\tilde{d}) \right].$$

- On page 114, in the expressions for  $A_4$  and  $C$ , the variable  $S_0$  should be replaced with  $S_0 \exp(\delta\sigma_{\rho_T})$ .
- On page 114, the values for  $A_3, C$  and  $C_{approx}$  should be replaced by  $-4.7308 \times 10^{-3}, 0.93229$  and  $0.91986$ , respectively.
- On page 115, the expression containing the values for computing  $\hat{g}(z)$  should be replaced by

$$\frac{1}{\sqrt{2\pi}} \exp\left(-\frac{z^2}{2}\right) \left( \begin{array}{c} 0.9498 - 0.0502 z - 0.1004 z^2 \\ +4.4298 \times 10^{-2} z^3 + 1.6741 \times 10^{-2} z^4 \end{array} \right).$$

The above corrections are mainly due to typesetting errors and they have negligible impacts on the values reported in the tables of the article. These tables are not updated so as to conserve space.