APPLICATIONES MATHEMATICAE
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CORRECTIONS TO "TARGET ACHIEVING PORTFOLIO UNDER MODEL MISSPECIFICATION: QUADRATIC OPTIMIZATION FRAMEWORK"
(APPL. MATH. (WARSAW) 39 (2012), 425–443)

Abstract. We provide a number of corrections to the paper in the title.

(1) It should be mentioned that the research was partially based on the PhD thesis (in Polish) of Zawisza [3] and partially presented during The Fifth General AMaMeF Conference in Bled (2010-05-04 – 2010-05-08) under a different title.

(2) We apologize to the authors of Gerrard et al. [1] for using fragments of their text without attribution. On page 428, the text in lines 25–31 starting with "The quadratic function" should be preceded with: "Additional motivation is well described by Gerrard et al. [1]:".

(3) We would like to correct a few typos, mainly in the assumptions of Proposition 5.1. The corrections leave the proof of Proposition 5.1 unchanged (with one typo corrected) and do not influence other results.

Here is the correct version of Proposition 5.1:

Proposition 5.1. *Suppose that a, f, h, i are continuous functions and there exists $L \geq 1$ such that*

$$|f(y_1) - f(y_2)| \leq \frac{1}{4}L|y_1 - y_2|,$$
$$|i(y_1,\eta) - i(y_2,\eta)| \leq \frac{1}{4}L|y_1 - y_2|,$$
$$|h(y_1,\eta) - h(y_2,\eta)| \leq L|y_1 - y_2|,$$

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$$
\begin{aligned}
|a(y_1) - a(y_2)|^2 &\leq \frac{1}{4} L |y_1 - y_2|^2, \\
|a^2(y_1) - a^2(y_2)| &\leq \frac{1}{4} \frac{e^{-2LT}}{4L|c|T^2} |y_1 - y_2|.
\end{aligned}
$$

In addition, suppose that for $R = 2LTe^{LT}$ *there exists a bounded solution to* (5.4) *with the terminal condition* $\alpha(y,T) = 0$. *Then there exists a solution to* (5.3) *with the terminal condition* $\alpha(y,T) = 0$, *which is bounded together with the first* y*-derivative.*

Moreover, the following typos and omissions should be corrected:

(a) Page 433, line 3: replace the expression

$$dS_t = b(Z_t)S_t dt + \sigma(Z_t) S_t dW_t^1$$

with

$$dS_t = b(Y_t)S_t dt + \sigma(Y_t) S_t dW_t^1.$$

(b) Page 435, line 5: add reference to Maenhout [2].

(c) Page 438, line 17: replace the expression

$$2LT \exp\left(T \max\left(L, 2R|c|\frac{e^{-2LT}}{4L|c|T^2}\right)\right)|y_1 - y_2|$$

with

$$\exp\left(T \max\left(L, 2R|c|\frac{e^{-2LT}}{4L|c|T^2}\right)\right)|y_1 - y_2|.$$

(d) Page 440, lines 11, 12: replace the expression

$$
\begin{aligned}
\mathcal{H}^{\pi,\eta} V(x,y,t) := V_t &+ \frac{1}{2} a^2(y) V_{yy} + \frac{1}{2} \pi^2 \sigma^2(y) V_{xx} + \rho \pi \sigma(y) a(y) V_{xy} \\
&+ \pi(b(y) + \eta_1 \sigma(y)) V_x + (\rho \eta_1 + \bar{\rho} \eta_2) a(y) V_y + g(y) V_y
\end{aligned}
$$

with

$$
\begin{aligned}
\mathcal{H}^{\pi,\eta} V(x,y,t) := V_t &+ \frac{1}{2} a^2(y) V_{yy} + \frac{1}{2} \pi^2 \sigma^2(y) V_{xx} + \rho \pi \sigma(y) a(y) V_{xy} \\
&+ \pi(b(y) + \eta_1 \sigma(y)) V_x + (\rho \eta_1 + \bar{\rho} \eta_2) a(y) V_y + g(y) V_y \\
&- \frac{\theta}{2} (\eta_1^2 + \eta_2^2) V.
\end{aligned}
$$

(e) Pages 442–443: add entries [1, 2, 3] below to the reference list.

References

[1] R. Gerrard, S. Haberman and E. Vigna, *Optimal investment choices post-retirement in a defined contribution pension scheme*, Insurance Math. Econom. 35 (2004), 321–342.

[2] P. J. Maenhout, *Robust portfolio rules and asset pricing*, Rev. Financial Studies 17 (2004), 951–983.

[3] D. Zawisza, *Optymalne strategie inwestycyjne wobec ryzyka modelu*, PhD thesis, Jagiellonian University, 2010 (in Polish).

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