Corrigendum to "A general equilibrium model of investor sentiment" [Economics Letters 218 (2022) 110749]

Giulio Bottazzi [*,a], Daniele Giachini [a]

Institute of Economics & Department LEMbeDS, Scuola Superiore Sant'Anna, Piazza Martiri della Libertà 33, 56127 Pisa, Italy

The authors regret that the proof of Proposition 4.2 in the published version of the letter (Bottazzi and Giachini, 2022) was not modified after the update of Definition 2.1, according to which the limit of $\mathrm{E}[F_j(\sigma_t)]$ for large values of j must be taken after the limit for large t. Although none of the general comments in our letter are affected by this modification, we believe that readers deserve a more consistent statement and proof of the proposition. They are provided below.

Proposition 4.2 If $f_-(\overline{w}) < \overline{w}$, then reversal occurs if and only if

$$2\underline{w} < \frac{2\pi_2 - 1}{\pi_2 - \pi_1}.$$

Proof. Let $f^{(n)} = f \circ f \circ \cdots \circ f$ be the n-th composition of the function f, then

$$F_j(\sigma_t) = (2\pi_2 - 1) - (\pi_2 - \pi_1)\left(f_-^{(j-1)} \circ f_+(w(\sigma_t)) + f_-^{(j-1)} \circ f_-(w(\sigma_t))\right).$$

By **P1** and **P2**, it is $F_{j+1}(\sigma_t) \geq F_j(\sigma_t)$. Thus, a necessary and sufficient condition for the presence of reversal is that

$$\lim_{j \to \infty} \liminf_{t \to \infty} \mathrm{E}\left[F_j(\sigma_t)\right] > 0.$$

By hypothesis and **P1**, the sequence $(f_-^{(n)}(\overline{w}))$ is strictly decreasing and converging to $\underline{w}$. Hence, $\forall \epsilon > 0$, there exists a n_ϵ such that $\forall n > n_\epsilon$, $\underline{w} < f_-^{(n)}(\overline{w}) < \underline{w} + \epsilon$. By **P2**, $f_-^{(n)}(w) < f_-^{(n)}(\overline{w})$, $\forall w \in \left(\underline{w}, \overline{w}\right)$. Thus $\forall \sigma_t$, $\forall j > n_\epsilon + 1$,

$$(2\pi_2 - 1) - 2(\pi_2 - \pi_1)\left(\underline{w} + \epsilon\right) < F_j(\sigma_t) < (2\pi_2 - 1) - 2(\pi_2 - \pi_1)\underline{w},$$

whence the assertion. □   The authors would like to apologise for any inconvenience caused.

Reference

Bottazzi, G., Giachini, D., 2022. A general equilibrium model of investor sentiment. Econ. Lett. 218, 110749 https://doi.org/10.1016/j.econlet.2022.110749.

DOI of original article: https://doi.org/10.1016/j.econlet.2022.110749.
* Corresponding author.
  E-mail address: giulio.bottazzi@sssup.it (G. Bottazzi).