Ahmad, J., M. Bladt, & C. Furrer (2023). Aggregate Markov models in life insurance: Properties and valuation. *Insurance: Mathematics and Economics* **113**, pp. 50-69. doi: 10.1016/j.insmatheco.2023.07.006.

Corrigendum

16 April 2024

Corrections

- Replace

$$\mathbb{P}(\tau > s+t \mid \tau > s) = \frac{\boldsymbol{\pi} \prod_0^s (\boldsymbol{I} + \boldsymbol{T}(x)\,\mathrm{d}x)}{\boldsymbol{\pi} \prod_0^s (\boldsymbol{I} + \boldsymbol{T}(x)\,\mathrm{d}x)\mathbf{1}_J} \prod_s^{t} (\boldsymbol{I} + \boldsymbol{T}(x)\,\mathrm{d}x)\mathbf{1}_J,$$

  in Equation (2.3) by

$$\mathbb{P}(\tau > s+t \mid \tau > s) = \frac{\boldsymbol{\pi} \prod_0^s (\boldsymbol{I} + \boldsymbol{T}(x)\,\mathrm{d}x)}{\boldsymbol{\pi} \prod_0^s (\boldsymbol{I} + \boldsymbol{T}(x)\,\mathrm{d}x)\mathbf{1}_J} \prod_s^{s+t} (\boldsymbol{I} + \boldsymbol{T}(x)\,\mathrm{d}x)\mathbf{1}_J,$$

- Replace

$$\mathbb{P}(\tau > s+t \mid \tau > s) = \frac{e^{-\int_0^s \mu_{12}(v)\,\mathrm{d}v}}{e^{-\int_0^s \mu_{12}(v)\,\mathrm{d}v}} e^{-\int_s^t \mu_{12}(v)\,\mathrm{d}v} = e^{-\int_s^t \mu_{12}(v)\,\mathrm{d}v}.$$

  on p. 52 by

$$\mathbb{P}(\tau > s+t \mid \tau > s) = \frac{e^{-\int_0^s \mu_{12}(v)\,\mathrm{d}v}}{e^{-\int_0^s \mu_{12}(v)\,\mathrm{d}v}} e^{-\int_s^{s+t} \mu_{12}(v)\,\mathrm{d}v} = e^{-\int_s^{s+t} \mu_{12}(v)\,\mathrm{d}v}.$$

- Replace

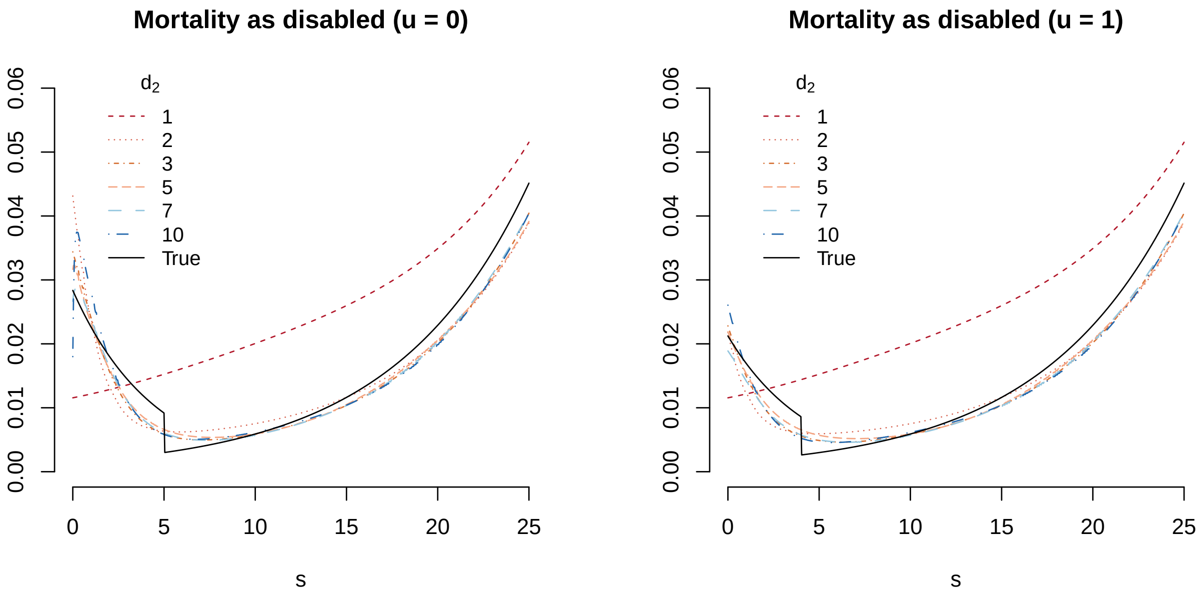
$$\boldsymbol{a}_u(t,t_\ell) = \boldsymbol{\gamma}(t,u)\bigg(\int_t^{t_\ell} \boldsymbol{P}(t,v)\widetilde{\boldsymbol{M}}(v)\bar{\boldsymbol{P}}(v,t_\ell)\boldsymbol{R}(t_\ell, t_\ell - v)\mathbf{1}_{\bar{d}}\,\mathrm{d}v - \bar{\boldsymbol{P}}(t,t_\ell)\boldsymbol{R}(t_\ell, u + t_\ell - t)\mathbf{1}_{\bar{d}} \bigg),$$

  on p. 61 by

$$\boldsymbol{a}_u(t,t_\ell) = \boldsymbol{\gamma}(t,u)\bigg(\int_t^{t_\ell} \boldsymbol{P}(t,v)\widetilde{\boldsymbol{M}}(v)\bar{\boldsymbol{P}}(v,t_\ell)\boldsymbol{R}(t_\ell, t_\ell - v)\mathbf{1}_{\bar{d}}\,\mathrm{d}v + \bar{\boldsymbol{P}}(t,t_\ell)\boldsymbol{R}(t_\ell, u + t_\ell - t)\mathbf{1}_{\bar{d}} \bigg),$$

- Replace the second panel of Fig. 2 on p. 64 by the plot on the next page.

These corrections do not impact the other results in the paper, nor the conclusions of the numerical example.



Mortality as disabled (u = 0)
Mortality as disabled (u = 1)
d2
1
2
3
5
7
10
True
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0
5
10
15
20
25
s