

## Cumulative index

- Abraham SE, Malherbe KL & Carswell MJB (2018). Extending the normal retirement age in occupational defined-contribution funds in South Africa. *SAAJ* **18**, 41–70.  
DOI: <http://dx.doi.org/10.4314/saaj.v18i1.3>
- Adékambi F (2015). Reserves in the multi-state health insurance model with stochastic interest of diffusion type. *SAAJ* **15**, 109–29. DOI: <http://dx.doi.org/10.4314/saaj.v15i1.5>
- Adékambi F (2018). Linear predictor of the discounted renewal aggregate claims with dependent inter-occurrence times. *SAAJ* **18**, 17–39. DOI: <http://dx.doi.org/10.4314/saaj.v18i1.2>
- Agostinho PJF & Cherry CJ (2016). The significance of claims fraud in microinsurance and a statistical method to channel limited fraud identification resources. *SAAJ* **16**, 143–81.  
DOI: <http://dx.doi.org/10.4314/saaj.v16i1.6>
- Andrew JP (2004). The conversion of members' rights in South African retirement funds from defined benefits to defined contributions and the statutory apportionment of the resulting actuarial surplus. *SAAJ* **4**, 1–62
- Asher A (2001). The appropriate disposal of retirement fund surpluses. *SAAJ* **1**, 1–33
- Asher A (2002). What actuaries might learn about life. *SAAJ* **2**, 53–68
- Asher A (2005). The relative investment performance of the Community Growth Fund. *SAAJ* **5**, 1–26
- Asher A (2007). Pension benefit design: flexibility and the integration of insurance over the life cycle. *SAAJ* **7**, 73–115
- Bertolis DE & Hayes M (2014). An investigation into South African general equity unit trust performance during different economic periods. *SAAJ* **14**, 73–99. DOI: <http://dx.doi.org/10.4314/saaj.v14i1.3>
- Butler MJB, Hu B & Kloppers D (2013). A comparison of probability of ruin and expected discounted utility as objective functions for choosing a post-retirement investment strategy. *SAAJ* **13**, 185–219. DOI: <http://dx.doi.org/10.4314/saaj.v13i1.6>
- Butler MJB, Reddy T & Da Silva R (2015). The process of ethical decision-making in South African retirement funds. *SAAJ* **15**, 171–208. DOI: <http://dx.doi.org/10.4314/saaj.v15i1.7>
- Butler MJB & Van Zyl CJ (2012). Consumption changes on retirement for South African households. *SAAJ* **12**, 1–29. DOI: <http://dx.doi.org/10.4314/saaj.v12i1.1>
- Butler MJB & Van Zyl CJ (2012). Retirement adequacy goals for South African households. *SAAJ* **12**, 31–64. DOI: <http://dx.doi.org/10.4314/saaj.v12i1.2>
- Caldis KS, McLeod HD & Smith PR (2001). The fall of the bamboo curtain: a review of complementary medicine in South Africa. *SAAJ* **1**, 63–93

- Carswell MBJ, Ng D, Eydatoula Z, Murray SH & Curtis M (2019). The effectiveness of South African defined-contribution occupational fund benefit statements to inform and persuade: framework and initial applications. *SAAJ* **19**, 1–25. DOI: <http://dx.doi.org/10.4314/saaj.v19i1.1>
- Channa A, Yuan J & Carswell MBJ (2021). Updated remarriage contingency deductions for widowed South Africans. *SAAJ* **21**, 49–73. DOI: <https://dx.doi.org/10.4314/saaj.v21i1.3>
- Clover RJ (2008). Taxation of life insurance in South Africa revisited. *SAAJ* **8**, 1–34
- Clur JC, Dorrington RE, Schriek KA & Lewis PL (2013). Modelling the mortality of members of group schemes in South Africa. *SAAJ* **13**, 143–83. DOI: <http://dx.doi.org/10.4314/saaj.v13i1.5>
- Dardis A (2002). Risk-position reporting in the South African life-insurance industry. *SAAJ* **2**, 1–28
- Da Silva R, Milner K, Kolbe-Alexander TL, Greyling M & Patel D (2014). The prevalence of chronic conditions associated with modifiable health risk factors in corporate employees in South Africa. *SAAJ* **14**, 101–36. DOI: <http://dx.doi.org/10.4314/saaj.v14i1.4>
- Da Silva R & Wayburne L (2008). The effects of HIV/AIDS on medical schemes in South Africa. *SAAJ* **8**, 35–91
- Davies N & Kijko A (2003). Seismic risk assessment: with an application to the South African insurance industry. *SAAJ* **3**, 1–28
- Davis RWD & Kendal S (2012). Surplus? What surplus? Did the Pension Funds Second Amendment Act achieve its aims? *SAAJ* **12**, 97–128. DOI: <http://dx.doi.org/10.4314/saaj.v12i1.4>
- Dorrington RE & Tootla S (2007). South African annuitant standard mortality tables 1996–2000 (SAIML98 and SAIFL98). *SAAJ* **7**, 161–84
- Emslie S & Mataramvura S (2020). Comparison of numerical methods to price zero coupon bonds in a two-factor CIR model. *SAAJ* **20**, 109–47. DOI: <http://dx.doi.org/10.4314/saaj.v20i1.5>
- Farmar GJ (2002). Deficiencies in the theory of free-knot and variable-knot spline graduation methods with specific reference to the ELT 14 males graduation. *SAAJ* **2**, 69–82
- Flint E & Maré E (2017). Estimating option-implied distributions in illiquid markets and implementing the Ross recovery theorem. *SAAJ* **17**, 1–28. DOI: <http://dx.doi.org/10.4314/saaj.v17i1.1>
- Flint E & Maré E (2019). Regime-based tactical allocation for equity factors and balanced portfolios. *SAAJ* **19**, 27–52. DOI: <http://dx.doi.org/10.4314/saaj.v19i1.2>
- Flint EJ, Ochse ER & Polakow DA (2014). Estimating long-term volatility parameters for market-consistent models. *SAAJ* **14**, 19–72. DOI: <http://dx.doi.org/10.4314/saaj.v14i1.2>
- Flint E, Seymour A & Chikurunhe F (2020). Defining and measuring portfolio diversification. *SAAJ* **20**, 17–48. DOI: <http://dx.doi.org/10.4314/saaj.v20i1.2>
- Foroughi K, Jones IA & Dardis A (2003). Investment guarantees in the South African life insurance industry. *SAAJ* **3**, 29–75
- Ganz MD (2012). The effect of SAM on the South African medical-scheme environment: a quantitative analysis. *SAAJ* **12**, 65–96. DOI: <http://dx.doi.org/10.4314/saaj.v12i1.3>
- Georgiopoulos N (2017). A closed-form approximation for deriving expected losses in excess loss life reinsurance. *SAAJ* **17**, 29–42. DOI: <http://dx.doi.org/10.4314/saaj.v17i1.2>
- Govender P, Kambaran N, Patchett N, Ruddle A, Torr G & Van Zyl, N (2007). Poverty and inequality in South Africa and the world. *SAAJ* **7**, 117–60

- Harris R & Besesar S (2021). Anti-selection in voluntary health insurance markets: A focus on medical schemes in South Africa. *SAAJ* **21**, 93–118. DOI: <https://dx.doi.org/10.4314/saaj.v21i1.5>
- Hong L & Zou H (2015). Jump tests for semimartingales. *SAAJ* **15**, 93–108.  
DOI: <http://dx.doi.org/10.4314/saaj.v15i1.4>
- Jeaven H, Wapnick R & Carswell MBJ (2021). The impact of giving and receiving remittances on life insurance purchases. *SAAJ* **21**, 27–47. DOI: <https://dx.doi.org/10.4314/saaj.v21i1.2>
- Johnson LF & Dorrington RE (2007). The potential effect of an HIV/AIDS vaccine in South Africa. *SAAJ* **7**, 49–72
- Kijko A, Smit A & Van de Coolwijk N (2015). A scenario approach to estimate the maximum foreseeable loss for buildings due to an earthquake in Cape Town. *SAAJ* **15**, 1–30.  
DOI: <http://dx.doi.org/10.4314/saaj.v15i1.1>
- Kilian CG (2020). An investigation of an overlap in penalty calculations: profit commission in reinsurance treaties versus profit commission in binder agreements for underwriting managers. *SAAJ* **20**, 1–16. DOI: <http://dx.doi.org/10.4314/saaj.v20i1.1>
- Koch RJ (2011). Damages for personal injury and death: legal aspects relevant to actuarial assessments. *SAAJ* **11**, 111–33. DOI: <http://dx.doi.org/10.4314/saaj.v11i1.4>
- Lowther MW (2004). Exercising actuarial discretion in the pricing of transfer values. *SAAJ* **4**, 63–95
- Lowther MW (2011). Promoting quality in the actuarial assessment of quantum of damages in South Africa. *SAAJ* **11**, 85–110. DOI: <http://dx.doi.org/10.4314/saaj.v11i1.3>
- Lowther MW & McMillan W (2006). Planning lifelong professionalisation learning for actuaries. *SAAJ* **6**, 1–17
- Lowther MW & McMillan WJ (2014). Authentic professional development: key to quality service delivery. *SAAJ* **14**, 1–18. DOI: <http://dx.doi.org/10.4314/saaj.v14i1.1>
- Lowther MW, McMillan WJ & Venter F (2009). Education for actuarial quality must develop more than technical competence. *SAAJ* **9**, 53–75
- Lowther MW & Mort JWT (2002). Managing actuaries' professional risk. *SAAJ* **2**, 29–52
- Lowther MW & Mort JWT (2016). Towards best practice in the actuarial assessment of claims for maintenance against deceased estates. *SAAJ* **16**, 127–41.  
DOI: <http://dx.doi.org/10.4314/saaj.v16i1.5>
- Maitland AJ (2001). An empirical approach to immunization in South Africa. *SAAJ* **1**, 119–38
- Maitland AJ (2002). Interpolating the South African yield curve using principal-components analysis: a descriptive approach. *SAAJ* **2**, 129–45
- Maitland AJ (2010). A multiple Markov switching model for actuarial use in South Africa. *SAAJ* **10**, 71–108
- Martin M & Hayes M (2013). Operational risk management: practical implications for the South African insurance industry. *SAAJ* **13**, 39–95. DOI: <http://dx.doi.org/10.4314/saaj.v13i1.3>
- McLeod HD (2005). Mutuality and solidarity in healthcare in South Africa. *SAAJ* **5**, 135–67
- McLeod HD, Achmat Z & Stein AM (2003). Minimum benefits for HIV/AIDS in South African medical schemes. *SAAJ* **3**, 77–112
- McLeod HD, Slattery PG & Van den Heever AM (2001). The use and abuse of reinsurance in medical schemes. *SAAJ* **1**, 95–117

- Molloy L & Ronnie L (2020). Sustaining the life insurance industry in the Fourth Industrial Revolution. *SAAJ* **20**, 81–107. DOI: <http://dx.doi.org/10.4314/saaj.v20i1.4>
- Mourik T (2018). Mortality risks, reinsurance and risk-based supervision. *SAAJ* **18**, 1–15. DOI: <http://dx.doi.org/10.4314/saaj.v18i1.1>
- Ngugi A, Maré E & Kufukunesu R (2015). Pricing variable annuity guarantees in South Africa under a Variance-Gamma model. *SAAJ* **15**, 131–70. DOI: <http://dx.doi.org/10.4314/saaj.v15i1.6>
- O'Malley BR, Dorrington RE, Jurisich SC, Valentini JA, Cohen TM & Ross BJ (2005). An investigation of the mortality of South African assured lives, 1995–1998. *SAAJ* **5**, 27–59
- Plaks S & Butler MJB (2012). Access to public healthcare in South Africa. *SAAJ* **12**, 129–64. DOI: <http://dx.doi.org/10.4314/saaj.v12i1.5>
- Plantinga AA, Corubolo D & Clover R (2015). Catastrophe modelling: deriving the 1-in-200-year mortality shock for a South African insurer's capital requirements under Solvency Assessment and Management. *SAAJ* **15**, 51–92 [print]. Online version with full appendices at DOI: <http://dx.doi.org/10.4314/saaj.v15i1.3>
- Polakow DA, Dunne TT & Whitworth JAG (2001). Parameterisation of expected residual lifetime after seroconversion in a Ugandan sample population. *SAAJ* **1**, 35–61
- Ramjee S, Kooverjee A & Dreyer KA (2013). The construction of a price index for contributions to South African open medical schemes. *SAAJ* **13**, 1–19. DOI: <http://dx.doi.org/10.4314/saaj.v13i1.1>
- Ramjee S, Sibiya FG & Dreyer KA (2013). The gender profile of the South African actuarial profession. *SAAJ* **13**, 21–37. DOI: <http://dx.doi.org/10.4314/saaj.v13i1.2>
- Ranchod S, Abraham M & Bloch J (2015). An actuarial perspective on healthcare expenditure in the last year of life. *SAAJ* **15**, 31–49. DOI: <http://dx.doi.org/10.4314/saaj.v15i1.2>
- Ranchod S, Childs B, Abraham M & Taylor R (2016). International benchmarking of hospital utilisation: how does the South African private sector compare? *SAAJ* **16**, 69–90. DOI: <http://dx.doi.org/10.4314/saaj.v16i1.3>
- Raubenheimer H & Kruger MF (2010). Generating interest-rate scenarios for fixed-income portfolio optimisation. *SAAJ* **10**, 1–42
- Raubenheimer H & Kruger MF (2010). A stochastic-programming approach to integrated asset and liability management of insurance products with guarantees. *SAAJ* **10**, 43–70
- Reddy TL & Thomson RJ (2011). The capital-asset pricing model: the case of South Africa. *SAAJ* **11**, 43–84. DOI: <http://dx.doi.org/10.4314/saaj.v11i1.2>
- Rusconi RD (2005). Saving for retirement in South Africa: charges to the consumer. *SAAJ* **5**, 61–133
- Rusconi R (2020). The contribution of South Africa's insurers to systemic risk: thoughts for policy-makers. *SAAJ* **20**, 149–210. DOI: <http://dx.doi.org/10.4314/saaj.v20i1.6>
- Şahin Ş & Levitan S (2020). A stochastic investment model for actuarial use in South Africa. *SAAJ* **20**, 49–79. DOI: <http://dx.doi.org/10.4314/saaj.v20i1.3>
- Schriek KA, Lewis PL, Clur JC & Dorrington RE (2013). The mortality of members of group schemes in South Africa. *SAAJ* **13**, 97–142. DOI: <http://dx.doi.org/10.4314/saaj.v13i1.4>
- Slattery PG & Kemp HJ (2007). Options for the development of the education and professional qualification of South African actuaries. *SAAJ* **7**, 1–48

- Smith ML, Beyers FJC & De Villiers JP (2016). A method of parameterising a feed forward multi-layered perceptron artificial neural network, with reference to South African financial markets. *SAAJ* **16**, 35–67. DOI: <http://dx.doi.org/10.4314/saaj.v16i1.2>
- Strugnell D & Ranchod S (2017). Throughput in the UCT Actuarial Science programme: a microcosm of the profession's transformation challenge. *SAAJ* **17**, 43–72. DOI: <http://dx.doi.org/10.4314/saaj.v17i1.3>
- Strydom ML, Corubolo D & Nel C (2016). Changes in mortality of people living with HIV in South Africa and their potential implications for life assurers. *SAAJ* **16**, 1–33. DOI: <http://dx.doi.org/10.4314/saaj.v16i1.1>
- Taljaard BH & Maré E (2019). Considering the use of an equal-weighted index as a benchmark for South African equity investors. *SAAJ* **19**, 53–70. DOI: <http://dx.doi.org/10.4314/saaj.v19i1.3>
- Terblanche W (2009). Demand for actuarial resources in South Africa. *SAAJ* **9**, 1–52
- Thomson RJ (2006). A typology of models used in actuarial science. *SAAJ* **6**, 19–36
- Thomson RJ (2010). Modelling the market in a risk-averse world: the case of South Africa. *SAAJ* **10**, 109–36
- Thomson RJ (2011). The arbitrage-free equilibrium pricing of liabilities in an incomplete market: application to a South African retirement fund. *SAAJ* **11**, 1–41. DOI: <http://dx.doi.org/10.4314/saaj.v11i1.1>
- Thomson RJ & Posel DB (2002). The management of risk by burial societies in South Africa. *SAAJ* **2**, 83–128
- Thomson RJ & Reddy TL (2013). The capital-asset pricing model reconsidered: tests in real terms on a South African market portfolio comprising equities and bonds. *SAAJ* **13**, 221–63. DOI: <http://dx.doi.org/10.4314/saaj.v13i1.7>
- Van Appel V, Maré E and Van Niekerk A (2021). Quantitative guidelines for retiring (more safely) in South Africa. *SAAJ* **21**, 75–91. DOI: <https://dx.doi.org/10.4314/saaj.v21i1.4>
- Van Zyl N & Van Zyl DJJ (2016). The impact of behavioural economics and finance on retirement provision. *SAAJ* **16**, 91–125. DOI: <http://dx.doi.org/10.4314/saaj.v16i1.4>
- Walters NM, Beyers FJC, Van Zyl AJ & Van den Heever RJ (2018). A framework for simulating systemic risk and its application to the South African banking sector. *SAAJ* **18**, 99–133. DOI: <http://dx.doi.org/10.4314/saaj.v18i1.5>
- Whittaker GA (2018). The Life Esidimeni arbitration and the actuarial quantification of constitutional damages. *SAAJ* **18**, 71–97. DOI: <http://dx.doi.org/10.4314/saaj.v18i1.4>
- Whittaker GA (2021). A history and forecast of the South African life tables No. E1 to No. E9. *SAAJ* **21**, 1–25. DOI: <https://dx.doi.org/10.4314/saaj.v21i1.1>