

CURRICULUM VITAE OF KOJO AMONKWANDOH ESSEL-MENSAH

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PERSONAL DETAILS:

Date of Birth: 30 December 1963
ID Number: 6312305921085
Nationality: South African

PROFILE:

Kojo Essel-Mensah is currently an Associate Professor at the Department of Mathematical Statistics and Actuarial Science, University of the Free State. Kojo holds a PhD in Actuarial Science from the University of Pretoria, South Africa, an MSc (with distinction) in Mathematical Statistics from Rhodes University in South Africa, and a BSc (Hons) in Mathematics and Statistics from the University of Ghana

Kojo took up Actuarial Studies later in his career and qualified as a Fellow of the Institute and Faculty of Actuaries (United Kingdom) in 2012. In that same year, he qualified as a Fellow of the Actuarial Society of South Africa. Kojo is currently a Fellow Member of both the Actuarial Society of South Africa and the Actuarial Society of Ghana.

Kojo has over 20 years of experience in the Life Insurance Industry working in both South Africa and the UK. His Life Insurance experience is primarily in valuations with a specific focus on embedded values, reserving, experience investigation, and regulatory reporting. Kojo also has over 10 years of experience in teaching in both South Africa and Ghana. Kojo served the Independent Examinations Board (IEB) in South Africa as an examiner and assessor for a period of two years. He is currently assisting the Ghana Tertiary Education Commission (GTEC) in assessing various universities in Ghana and their capabilities of providing Actuarial Science programs. Kojo is heavily involved in the activities of the Actuarial Society of Ghana (ASG). He is the Chairman of the Finance & Enterprise Risk Committee and a Member of the Education Committee of ASG.

Kojo is a co-author of the three papers. These are “A computable general equilibrium model for banking sector risk assessment in South Africa” published in the Annals of Finance journal in 2020, “A computable general equilibrium model as a banking sector regulatory tool in South Africa” published in the South African Journal of Economics in 2021, and “Agricultural growth in Ghana: A time-series analysis with autoregressive distributed lag approach” published in Cogent Food and Agriculture journal in 2023. He is also a co-author of a

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series (12 in all) of Mathematics textbooks written for adults interested in doing Mathematics at the high school level through distance education.

With his experience in teaching and the life insurance industry, Kojo is well-positioned to teach Statistics and Actuarial Science courses at any University in South Africa and elsewhere in the world.

CAREER OBJECTIVE:

To assist in building actuarial capacity among students from previously disadvantaged communities in South Africa and help them obtain exemptions from recognized actuarial bodies and practise their actuarial career with confidence.

PROFESSIONAL EXPERIENCE:

NOV 2016 to SEPT 2023 UNIVERSITY OF PROFESSIONAL STUDIES, ACCRA,
GHANA
Senior Lecturer

- Coordinator of the Actuarial Science program
- Teaching Statistics and Actuarial Science Courses
- Assisting in the development of the Actuarial Science Curriculum for the BSc degree in Actuarial Science

JAN 2014 to OCT 2016 Self-employed South Africa
Berrybright Trade and Invest and INNOBIZ-IT Services – Director

- Basic function - accountable for the administrative, financial, and risk management operations of the company, to include the development of a financial and operational strategy, metrics tied to that strategy, and the ongoing development and monitoring of control systems designed to preserve company assets and report accurate financial results.
- Set up a financial system for accurate reporting of financial results
- Liaised with the South African Revenue Service (SARS) regarding taxations issues
- Developed models for the valuation of intellectual property of IT products
- Developed pricing models
- Developed depreciation model
- Managed staff members
- Involved in the marketing of products
- Managed properties and equity investments

SEPT 2007 to DEC 2013 SANLAM Cape Town, South Africa
Senior Actuarial Consultant/ Actuary

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- Prospective Embedded Value (EV), SAM/Solvency II, and Financial Soundness Valuations (FSV) of the Participating Annuities, Guaranteed Plans, and Non-Participating Annuities (The Complete Picture Pension)
- Developed valuation methods and programs for new products
- Bonus Declaration for Participating Annuities
- Analysed valuation results and investigated any discrepancies
- Projected various profit accounts for budgetary purposes
- Presented the Guaranteed Plans profits to the Top Management and Executive Director of Sanlam Actuarial on a monthly basis
- Completed Long-term Insurance returns (LT2010, LT2011 and LT2012)

JAN 2004 – JULY 2007 MUNICH REINSURANCE COMPANY OF AFRICA
Johannesburg, South Africa
Actuarial Analyst

- Managed the valuation process
- Conducted Experience investigation for the purpose of setting bases for valuation and Embedded Value
- Reviewed and signed off quotations for individual and group life products
- Completed FSB returns (LT2000)
- Developed models for Profit Share and Portfolio Transfer calculations
- Reallocated tax codes to different classes of business (4 funds taxation)

OCT 2001 – DEC 2003 AMP PEARL Peterborough, England
Actuarial Consultant

Life Reporting UKGAAP & FSA, AGAAP

- Reviewed liabilities valued using mainframe software
- Completed FSA returns
- Analysed Valuation results
- Drafted board/fund reports
- Bonus Declaration for With-Profit products
- Calculation of Solvency Margin, Mortgage Endowment Promise, and Deferred Acquisition Costs

JAN 1998 – SEPT 2001 FEDSURE LIFE Johannesburg, South Africa
Profit Analyst

- Developed Models from which branch/business unit profitability could be obtained

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- Developed Models to determine profitability for various schemes and life products
- Made recommendations to management based on the profitability analyses
- Acted as a link between the Actuarial Department and the Financial Services Department
- Made presentations to sales staff on profitability and persistency of business

JAN 1994 – DEC 1997 METROPOLITAN LIFE Cape Town, South Africa
Actuarial Researcher

- Analysed the "lapse" Statistics for the actuaries and management of Metropolitan Life.
- Developed models on which the investment yields of different products over different periods could be obtained.
- Conducted research on various projects for the Actuarial Research Department including the central mortality investigation.

JAN 1993 – DEC 1993 KHANYA COLLEGE Cape Town, South Africa
Mathematics and Statistics Course Co-ordinator

- Taught Mathematics and Statistics
- Developed materials for teaching
- Managed Tutors for the Mathematics and Statistics Courses

JAN 1989 – DEC 1992 VARIOUS INSTITUTIONS Ghana/South Africa

Taught Mathematics and Statistics at tertiary institutions:

University of Ghana	Accra, Ghana
Rhodes University	Grahamstown, South Africa
University of Cape Town	Cape Town, South Africa

Taught Mathematics at Secondary Institutions:

Mfantsipim School	Cape Coast, Ghana
Zweliyandila High School	Eastern Cape, South Africa

ACADEMIC AND PROFESSIONAL EDUCATION:

PROFESSIONAL - ACTUARIAL

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Year of Qualification

- 2012 Fellow of the *Institute and Faculty of Actuaries (UK)*
Fellow of the *Actuarial Society of South Africa*

ACADEMIC

Year of Qualification

- 2021 University of Pretoria (South Africa)
PhD Actuarial Science
- Rhodes University (South Africa)*
- 1992 **M.Sc. (with Distinction) in Mathematical Statistics**
- University of Ghana*
- 1988 **B.Sc. (Hons) Mathematics and Statistics**
- Mfantsipim School (Ghana)*
- 1984 *GCE 'A' level*
- 1982 *GCE 'O' level*

COMPUTER SKILLS

- Mathematica
- Latex
- Tillinghast valuation system (TVS)
- Basys
- Prophet (Professional and Enterprise)
- Microsoft Office (Word, Excel, Access, and PowerPoint)
- Knowledge of statistical packages such as BMDP and GLIM

SUPERVISION

Total number of students supervised

- Postgraduate level: 2
- Undergraduate level: 15

Total number of students currently supervising

- Postgraduate level: 5

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- Undergraduate level: 2

PUBLICATIONS

Current Research

Currently in collaboration with Prof Conrad Beyers of the Actuarial Science Department of the University of Pretoria and Prof Dimitrios Tsomocos of SAID Business School and St. Edmund Hall, University of Oxford in the United Kingdom working on Financial Stability in the South African and Ghanaian Banking Sectors.

Published Articles

1. Beyers, C. F., De Freitas, A., Essel-Mensah, K. A., Seymore, R., & Tsomocos, D. P. (2020). A computable general equilibrium model for banking sector risk assessment in South Africa. *Annals of Finance*, 16(2), 195-218.
2. Beyers, F.J.C., De Freitas, A., Essel-Mensah, K.A., Seymore, R. & Tsomocos, D.P. (2021) A computable general equilibrium model as a banking sector regulatory tool in South Africa. *South African Journal of Economics*, 1–28.
3. Ashiagbor A.A., Ablateye S., Essel-Mensah, K.A. (2023). Agricultural growth in Ghana: A time-series analysis with autoregressive distributed lag approach. *Cogent Food and Agriculture*, 9(1), 2244267.

Pre-prints

1. Nyamekye, Kofi Afriyie; Essel-Mensah, Kojo; Owusu-Ansah, Emmanuel; Nzoley, Charles (2022). Extreme Value Modelling of Ghanaian Commercial Banks. Available at SSRN
2. Nyamekye, Kofi Afriyie; Essel-Mensah, Kojo; Pius, Kley (2022). Modeling Motor Insurance Policy Claims Using Probability Distributions: Evidence from Ghana. Available at SSRN 4220235

Books

1. C. James, M. Kibi, K. Essel-Mensah, P. Seaman, and I. Moetsana, (1995) *Mathematics: Unit 1: Number and measurement: A course for adults at secondary level by distance education*. Cape Town: Juta & Co. Limited.
2. C. James, M. Kibi, K. Essel-Mensah, I. Moetsana, and P. Seaman, (1995) *Mathematics: Unit 2: Calculations, space, and shape: A course for adults at secondary level by distance education*. Cape Town: Juta & Co. Limited.
3. C. James, M. Kibi, K. Essel-Mensah, P. Seaman, and I. Moetsana, (1995) *Mathematics: Unit 3: A course for adults at secondary level by distance education*. Cape Town: Juta & Co. Limited.

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4. C. James, M. Kibi, K. Essel-Mensah, P. Seaman, and I. Moetsana, (1995) Mathematics: Unit 4: A course for adults at secondary level by distance education. Cape Town: Juta & Co. Limited.
5. C. James, M. Kibi, K. Essel-Mensah, I. Moetsana, and P. Seaman, (1995) Mathematics: Unit 5: Some mathematical tools: A course for adults at secondary level by distance education. Cape Town: Juta & Co. Limited.
6. K. Essel-Mensah, C. James, M. Kibi, P. Seaman, and I. Moetsana, (1995) Mathematics: Unit 6: Some mathematical answers: A course for adults at secondary level by distance education. Cape Town: Juta & Co. Limited.
7. K. Essel-Mensah, C. James, M. Kibi, and S. McAuliffe, (1995) Mathematics: Unit 7: Points, lines and angles: A course for adults at secondary level by distance education. Cape Town: Juta & Co. Limited.
8. K. Essel-Mensah, C. James, M. Kibi, and S. McAuliffe, (1995) Mathematics: Unit 8: Useful graphs: A course for adults at secondary level by distance education. Cape Town: Juta & Co. Limited.
9. K. Essel-Mensah, M. Kibi, and S. McAuliffe, (1995) Mathematics: Unit 9: More algebra and trigonometry: A course for adults at secondary level by distance education. Cape Town: Juta & Co. Limited.
10. K. Essel-Mensah, C. James, M. Kibi, and S. McAuliffe, (1995) Mathematics: Unit 10: The calculus: A course for adults at secondary level by distance education. Cape Town: Juta & Co. Limited.
11. K. Essel-Mensah, M. Kibi, and S. McAuliffe, (1995) Mathematics: Unit 11: Patterns and exponents: A course for adults at secondary level by distance education. Cape Town: Juta & Co. Limited.
12. K. Essel-Mensah, M. Kibi, and S. McAuliffe, (1995) Mathematics: Unit 12: Statistics and probability: A course for adults at secondary level by distance education. Cape Town: Juta & Co. Limited.