

CORPORATE PROFILE

ARCH Actuarial Consulting

An independent, black economically empowered firm of actuaries and consultants that provides a range of actuarial services to the insurance, medical, employee benefit and legal industries.

BACKGROUND

ARCH was established by Chanan Weiss in 1998 with a view to providing personalised and independent actuarial services. Initially, the financial modelling and consulting related to pension fund and health care valuations. Over the past few years the nature of the projects that we have been involved in has steadily expanded.

In January 2001 Nilen Kambaran and Riyadh Omardien co-founded PSI Actuarial Solutions , a company that insourced pension-related actuarial services from UK life offices. Locally, PSI also performed statistical analyses for large parastatal organisations.

In 2003, the two businesses merged under the **ARCH** banner.

We are an independent Black Economically Empowered firm. All of the owner-members are involved in the day-to-day business. **ARCH** is associated with and assisted by three senior actuaries from different areas of expertise: an Approved Retirement Fund Valuator, a Statutory Life Office Valuator and a Health Care Expert.

Our actuarial services include the valuation of pension funds' assets and liabilities, the valuation of employers' liabilities with respect to post-employment medical scheme subsidies, consulting to medical schemes, and 3rd party compensation calculations.

MISSION STATEMENT:

“to provide personalised service of excellent quality”

ARCH Actuarial Consulting has brought together varied talents from diverse backgrounds. This has given us a strong foundation with which to pursue our company mission.

Excellent quality is built on our key principles of:

- Developing and maintaining Close Client Relationships
- Keeping abreast of Professional and Best Practice guidelines
- Maintaining Independence to eliminate conflicts of interest
- Innovation and Flexibility

Members

Chanan Weiss BSc, FFA, FASSA

Chanan is the Managing Director of **ARCH** Actuarial Consulting.

He is an actuary and an Approved Retirement Fund Valuator. He spent 11 years in the life insurance industry with Norwich Life and Ginsburg, Malan & Carsons (Actuaries & Consultants), where he gained experience in group risk benefits, retirement funding and post-employment health care valuations.

Since establishing **ARCH** in 1998, he has gained further actuarial consulting experience in health care financing and 3rd party claims.

Chanan is the appointed valuator to a number of pension funds, he consults to many employers regarding their IAS19 liabilities (e.g. post-employment medical aid subsidies) and to medical schemes with regards to their financial soundness.

Nilen Kambaran BSc (Hons), AIA, AASSA

Nilen is an actuary with eleven years of employee benefit experience. He has worked at Norwich Life, Fifth Quadrant (Actuaries & Consultants) and PSI Actuarial Solutions. He has been involved in pension and health care valuations, design consulting and scheme conversions.

Together with Chanan, Nilen manages **ARCH**'s retirement fund portfolio and is actively involved in consulting to medical aid schemes.

Riyadh Omardien BBusSc (Act. Sci - Hons)

Riyadh was at Southern Life for four years where he formed part of the Corporate Actuarial division. He performed valuations, assisted in the fund management of a large annuity portfolio and was responsible for the pricing system that maintained a broad portfolio of unit-linked policies. A further two years were spent at PSI Actuarial Solutions providing pension valuation services.

At **ARCH**, Riyadh manages the 3rd party department, and he is actively involved with IAS19 and other valuations (such as valuations of share option trusts and businesses). He recently successfully completed all three of the examinations required for the Chartered Financial Analyst (CFA) qualification.

Empowerment

- More than 40% of ARCH is owned by historically disadvantaged individuals (HDI's)
- Our full-time staff complement is 50% HDI, 25% female
- Two of the three business managers (66.6%) are HDI's

Associates

Michael Brewis BCom, FIA, ASA, FASSA

Michael is an actuary by training and profession, and an Approved Retirement Fund Valuator. He spent most of his career in the financial services industry, culminating in his term as Managing Director of Norwich Life. During his career Michael held senior executive positions as well as directorships in various subsidiary and associate companies involved in the unit trusts, healthcare, property and life insurance broking industries. He also served on various Life Offices Association Committees.

In recent years Michael has held a number of independent non-executive directorships and trustee positions. He has also acted as a consultant and adviser to various life insurance companies, specialising in the development of low-cost products for members of the lower income socio-economic groups. He has also supervised a number of applications to the Financial Services Board for long-term insurance licences on behalf of his clients.

Anthony Hart FFA, FASSA

Anthony is an actuary and an Approved Life Office (Statutory) Valuator. Much of his career was spent at the Mercantile and General Reinsurance Company, ending as Managing Director from 1989 to 1993. He has consulted to various life offices in Southern and East Africa.

Anthony has been President of both the Insurance Institute of South Africa and the Actuarial Society of South Africa and was a member of the Council of the International Actuarial Association. He is the author of two international and three local papers. He is currently on the Board of three companies including RGA Reinsurance Company of South Africa Limited.

Johan Human BBusSc (Hons), FIA

Johan is an actuary and Consultant in the Healthcare Financing environment. After leaving the Norwich Group in 1998, he was Managing Director of both Jacques Malan Healthcare and the Healthcare Division of Simeka Consultants and Actuaries.

Johan forms part of the ARCH team that consults with a range of clients in this area, including medical schemes, medical scheme administrators and large employers.

Louise Allen BSc

Louise Allen holds a degree in Mathematics from the University of Cape Town, graduating in 1991. She has extensive experience in the South African Healthcare Industry, having held executive responsibility for the Administration and Fund Management portfolios within the Healthcare arm of a large insurer.

Louise also has had extensive experience in business process initiatives from both an operational and consulting perspective. She has been the principal business sponsor of a number of strategic change and system development projects. Since 1999, she has been consulting in association with various actuarial firms on both risk management and operational aspects and has run a number of significant administration tenders within the industry.

Vernon Boule BSc (Hons), FFA, FASSA

Vernon is an actuary who has worked in South Africa and the United Kingdom. Starting out in the product development arena at Norwich Life, he has been a pricing actuary at Swiss Reinsurance, the managing director of an offshore life insurance company, and a linked investment service provider.

Vernon has more recently been involved in the corporate finance arena, developing a stochastic-based financial planning module, and advising on appropriate asset allocations for retail and institutional clients. His collaborations with ARCH have included valuations of business entities and share option trusts. He has written papers for the actuarial society on financial planning and with-profit annuities.

SERVICES

The services that we offer are summarized below.

Please contact our offices should you wish to know more about our current fees, expected turnaround-times and client references.

Analysis

One definition of what actuaries do is to make financial sense of the future, so they tend to have a good knowledge of statistics, economics and mathematics. These skills can complement the skills set available to professionals and management practicing in fields outside of the usual scope of actuarial involvement:

SCIENTIFIC RESEARCH

Research projects are conducted by teams of specialists in a particular field or topic of research, at great expense, and these teams often lack timeous and adequately-involved statistical support.

Since 2001 ARCH has been applying its statistical know-how and technical skills towards the design, analysis, reporting and journal publication of research data gathered by the broader scientific community, particularly in the field of public health research.

Our services include:

- Consulting at the initial stages of research proposals and planning, mainly on sampling methodology and target sample size
- Primary and secondary analysis of research data
- Assisting with the presentation of findings
- Assisting with the preparation of research reports and co-authoring of papers for publication in scientific journals

We regularly consult to researchers from the Medical Research Council, and our clients also include the National Department of Health, several smaller research organisations, and also students at various post-graduate levels preparing dissertations.

Our primary client collaborates with leading international academia and researchers, and the members of ARCH have periodically traveled abroad to attend seminars and lectures, such as the University of Michigan's 2007 Summer Session in Epidemiology, which dealt with sophisticated statistical techniques being applied in health research.

RETIREMENT VILLAGE FINANCIAL SOUNDNESS

Residents usually enter a retirement village under a Life Rights system. This entitles them and their partner to reside there for life. On exit from the village the original purchase price is returned to the resident or to their estate. In some villages the resident/estate will also get a share of the resale profit. In this financial structure residents' monthly levies are generally subsidised in lieu of the resale profits that are forfeited at exit. The levies will usually increase annually, but these increases may be limited to a fixed percentage or to a maximum term.

Actuaries can assist by ensuring that the design and financial structure of the Life Right policy is financially sound. They do this by considering the demographic profile of the village, and the expected changes to it over time, in conjunction with the projected cash flows (expenses, levy income and resale profits). In so doing actuaries can answer the following kinds of questions:

- (1) if levies escalate at no more than 5% per annum for no more than 5 years will the stabilisation fund meet its annual expenses in the long term;
- (2) if the board wishes to now return 25% of the resale profits to the member/estate on exit, are the current levies sufficient to sustain village profits in the long-term; and
- (3) a developer would like to know the financial impact of returning 80% of the sale price on exit as opposed to 25% of the resale profits.

VALUATIONS OF BUSINESS ENTITIES AND SHARE OPTION TRUSTS

The ability to assess multiple risks and to project and value future cash flows are key parts of the actuary's tool set, and actuaries are therefore well placed to perform valuations of business entities and share option trusts.

These core actuarial skills are complemented at ARCH by one of our members having successfully completed all three examinations required for the CFA (Chartered Financial Analysis) qualification.

VARIOUS CONSULTING PROJECTS

ARCH has applied the actuarial and financial know-how of its members and associates to a range of diverse consulting projects, including:

- Investment performance analysis – computing periodical performance measures for fund administrators
- Independent appraisal of proposed insurance vehicles for licensing existing and planned insurance offerings (e.g. cell-phone insurance offered by a leading clothing retailer)

ARCH uses a range of statistical packages, including SPSS, Epi-info, SUDAAN and SAS.

Retirement

RETIREMENT FUND SERVICES

The retirement fund industry is governed by the Pension Funds Act. In terms of Sections 9A and 16 an actuary that has been approved as a fund valuator by the Registrar of Pension Funds is required to ensure, at least every three years, that the fund's assets are sufficient to meet its liabilities. These liabilities comprise the future withdrawal, death and retirement benefits described in the fund's rules. When the assets of a fund are greater than its liabilities, the excess assets are referred to as the fund's "surplus".

Where a fund's assets and liabilities are matched, as they generally are in modern defined contribution arrangements, triennial statutory valuations are unnecessary. A certificate applying for exemption from actuarial valuation is submitted instead.

In the early nineties many defined benefit funds converted to defined contribution funds. Predictable pensions, as a percentage of salary, were effectively converted to savings accounts that grew with interest. This went hand-in-hand with a transfer of the fund's risks from the employer to the member. These risks include poor investment returns, improving longevity and, in many cases, increasing fund expenses. This trend to defined contribution dispensations originated with members whose penal withdrawal benefits enriched the funds, and often the employer. Employers supported this drive as it meant a move away from open-ended liabilities and because it facilitated cost-to-company remuneration strategies.

The Pension Funds Second Amendment Act introduced legislation aimed at clarifying surplus ownership, improving withdrawal benefits and, where surplus existed, returning some of the surplus that arose as a result of poor past withdrawal benefits to former members of the fund.

ARCH consults to almost 50 pension funds. As valuers we are involved in the following services:

- Statutory three-yearly valuations, and interim valuations where necessary
- Regular benefit calculations including actuarial reserves values, minimum benefits and additional past service calculations
- Pension increase and bonus recommendations
- Conversion valuations and strategies

Other pension fund consulting includes:

- Surplus apportionment exercises
- AC116/IAS19/FRS17 valuations for the employer's financial statements
- Section 15K tribunals appointed to oversee the finalisation of surplus schemes
- Independent reviews of surplus schemes and conversion valuations
- General consulting in merger, takeover and termination situations

Compensation

To put it broadly, an actuary makes financial sense of the future. So, whenever someone needs to receive lump sum compensation at one point in time in return for cash flows at future points in time, it helps to have actuarial input.

In the case where a claimant, say, requires a lump sum now in return for several years of future income she has lost, an actuary takes into account factors necessary to arrive at a fair value - one that if awarded to the claimant is expected to leave her unaffected by the loss. One cannot arrive at this fair value without allowing for, inter alia:

- The possibility that the claimant may die in any given future year
- The fact that the current rate of income lost would have escalated in future in line with salary increases
- The fact that the award, once in the claimant's hands, will yield a return to the claimant between the date of the award and the date of being used to supplement her income

This type of calculation is often needed by legal practitioners in the Third Party / Personal Injury field, most often relating to Motor Vehicle Accidents (MVA's) that have resulted in Losses of Earnings by claimants injured on the road, and Losses of Support by the surviving dependants of road-users involved in fatal accidents. Certain aspects of these calculations are dictated by the Assessment of Damages Act 9 of 1969.

The same methods are applied, for example, in claims for maintenance, often against deceased estates, and other claims in respect of injuries, unfair dismissals, wrongful deaths and even wrongful births.

ARCH has extensive experience over the past five years in the quantification of roughly 3,000 MVA claims, receiving instructions from 100+ firms of attorneys, and appearing as an expert witness when required. Since our appointment as service providers to the Road Accident Fund (RAF) in 2004, we also receive instructions directly from the RAF and from attorneys acting on its behalf. Of course the actuarial methods and assumptions we use are independent of whether our client acts for the claimant or for the defendant.

Our response time from receiving an instruction to delivering a report is one to three days. We have sufficient resources to give urgent matters priority treatment, so that the turn-around can be as low as a couple of hours if required.

We believe that our fees are competitive and we are prepared to receive payment on settlement, provided the merits of the matter have been conceded prior to our being instructed.

See our website www.archac.com to download information requirements when instructing ARCH in Loss of Support and Loss of Earnings matters, as well as sample reports.

HEALTH CARE / MEDICAL AID CONSULTING

Since 2004 ARCH has consulted to medical aid schemes. We have been assisted by associates Johan Human and Louise Allen, who each have in excess of 15 years' experience in operational, actuarial and consulting areas within the health care industry. ARCH does not broker any business so our independence is maintained when appraising proposals and advising medical aid schemes.

Services offered to medical aid schemes include:

Benefit, contribution and budget reviews

- Benefits are reviewed in line with demographic changes, changes in claiming behaviour and changes to the underlying landscape: legislation, competition, managed care services etc.
- Contributions are reviewed annually unless there is a need to do it sooner
- Budgets are revised as the scheme's actual profile, claims experience and costs unfold during the year.

Monitor solvency margins

Identify trends in monthly claims analysis, and report on claims incurred but not yet reported

Monitor the industry and track the impact of regulations

Assist in product development, including the submission of Business Plans in respect of new options as and when required

Advise on the level of insurance or reinsurance that the scheme should consider and on the management of risk using tools such as managed health care

Participate in discussions on the strategic development of the scheme

Prepare and submit the actuarial reports required by the Registrar of Medical Schemes for the purpose of registration of benefit options or the validation of budget and funding arrangements

Perform competitive analyses against benchmark schemes

Other ad-hoc health care consulting tasks include:

- Run tenders for administration, managed care and distribution services
- Draw up detailed service level agreements between medical schemes and their administrators and managed care providers
- Perform technical, operational and market assessment of a merge opportunity between two funds
- Run strategic workshops for a number of funds on overall and distribution strategy
- Review industry pricing for legislative body
- Project impact on restricted scheme's finances in the event that the employer changes its remuneration and subsidy policies

IAS19 / AC116 Liability Valuations

Many employers subsidise the medical aid contributions of their employees and their dependants. Some continue to do this for employees after employees retire, and in many cases, after employees or pensioners die, for their widow/ers and children.

This post-employment medical aid subsidy is an example of a long-term defined benefit: when staff have earned clearly stipulated benefits that will be paid to them more than twelve months after doing the work that earns that benefit, given certain conditions (e.g. continuing in service until retirement or death)

Even where there is no explicit written subsidy policy – where companies provide these benefits, the precedent implies that it becomes a contractual obligation.

Other examples of this type of liability:

- Ex-gratia pensions
- Long service leave awards
- Retirement gifts and bonuses

The accounting standard IAS19 requires that companies disclose such liabilities in their financial statements.

Actuaries are required to value these liabilities because their calculations consider economic and demographic factors that affect the level and likelihood of payments due in future time periods.

So companies are now being forced to quantify these liabilities, and often realise for the first time how significant these subsidies are. As a result, fewer companies now continue to offer post-employment health care subsidies to new employees.

ARCH performs the following services relating to IAS19 liabilities:

- valuation of liabilities at financial year-end, including sensitivity analyses
- reconciliation with prior years and projection to future years
- illustrative journal entries and presentation for inclusion in Financial Statements
- presentation of results to management if requested
- advice on how to order to manage, reduce and/or remove the liability

A labour attorney should always be consulted before implementing employee benefit-related policy changes.

If any of the above is unclear or if you need anything further, please contact us.

COMPANY CONTACT INFORMATION

ARCH Actuarial Consulting CC

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