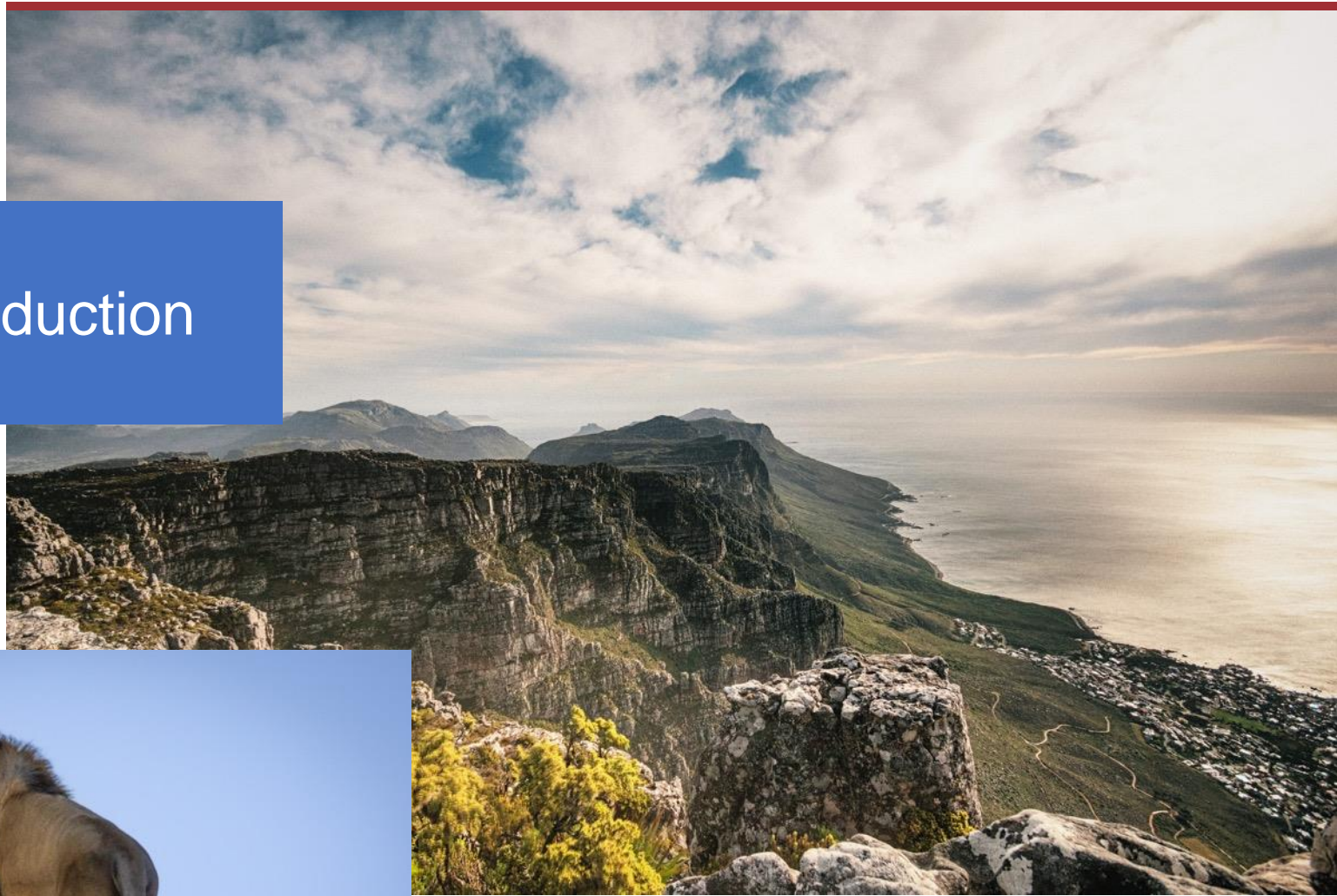




CTICC

Professionalising actuarial  
advice in the DC space:  
ASSA Retirement Matters Committee

# Introduction





## Introduction

- The **global retirement fund industry** has in essence moved towards a **defined contribution (“DC”) fund industry**.
- Despite so-called “innovation” by service providers, the vast majority of retirees out of such arrangements are retiring with **grossly inadequate levels of income**.
- This is a **global trend**.
- The retirement industry is facing a **serious global financial crisis**.
- As custodians of this industry, our **role in DC arrangements is perceived to be extremely limited**.



# Introduction

## AIM

- **Actuarial skills** can, and **SHOULD** be used to improve the **likelihood of better member outcomes**.
- A framework that actuaries can use in order for DC retirement funds and members to **achieve better outcomes**.
- Ultimately we want to **professionalise** the advice actuaries provide to DC funds and their members.
- **Team**
  - **ASSA Retirement Matters** Sub-Committee
  - Katherine Barker, Lucia Viegas, Michael de Villiers, Tommie Doubell, Niel Gerrys, John Anderson, Costa Economou



## **Statutory work**

- Financial valuations and reviews
- Section 14 transfers
- Exemption certificates

## **Systems and administration**

- Review of administration processes and migrations
- Risk mitigation for retirement funds and administrators
- Monitoring of assets and account balances on systems

## **Accumulation phase**

- Unit price calculations and interest declarations
- Investment strategy – typically life-stage or one-fund-for-all (coupled with MIC)
- Benefit design (at implementation)
- Replacement ratio analysis and communications



## Areas of Current Advice

### Decumulation phase

- Assessing risks in drawdown strategies, advising on optimal solutions and improving design
- Design and management of in-fund annuity solution frameworks

### Other

- Rebroke of umbrella fund / administrators

### Why actuaries?

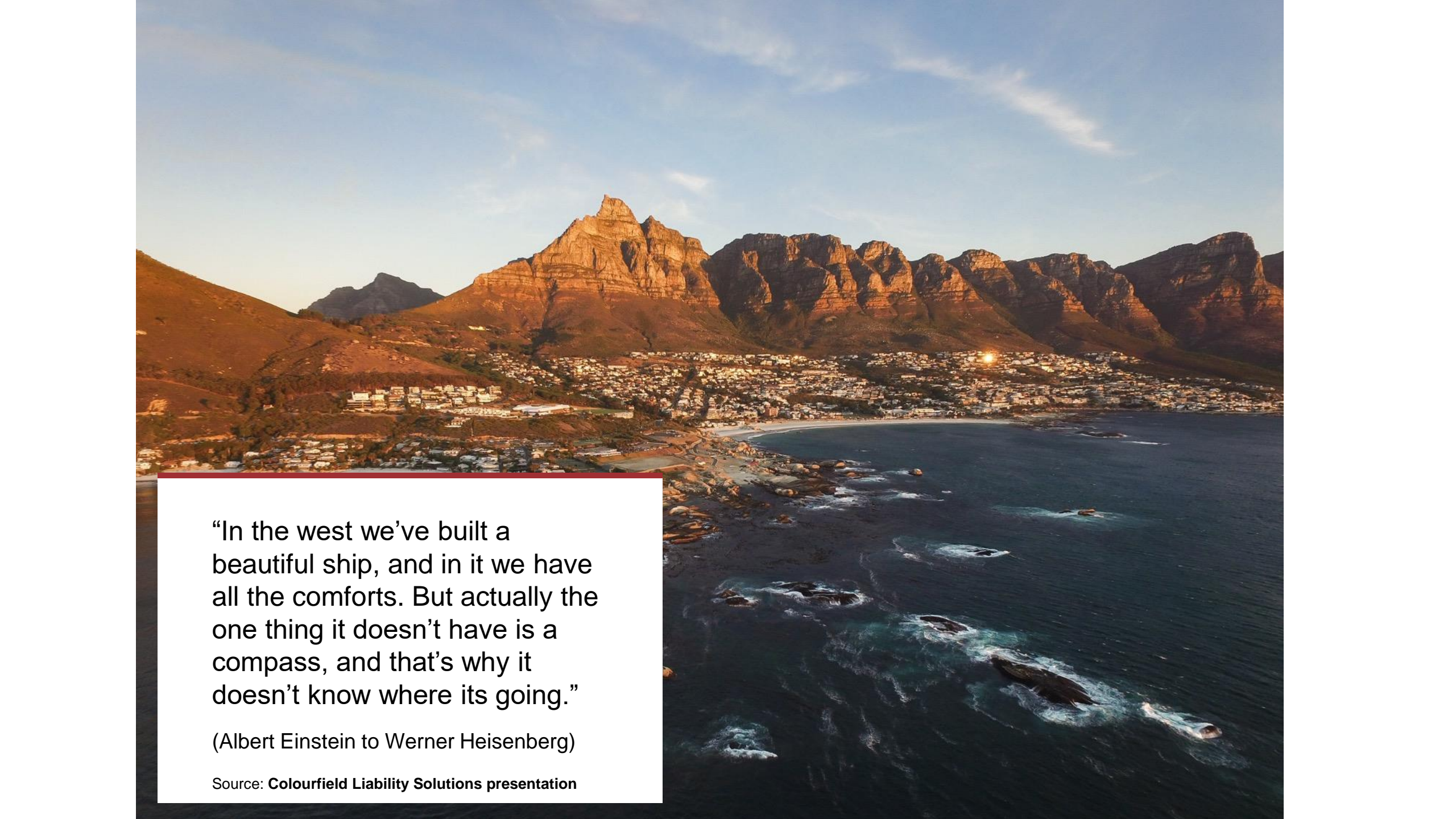
Actuaries **understand** and can assist in managing the following **risks**:

- longevity risk
- efficiency risk
- investment and inflation risks
- product design risk
- systemic risk
- confidence risk
- exploitation risk



## Problems with existing DC actuarial advice

- DC retirees are retiring with **grossly inadequate levels of income**
  - Retirement goals being missed
  - No liability based approach.
- Based on “Investment” framing instead of “**income & consumption**” framing at retirement
- Issues are **not holistic** and **aligned** – issues are typically tackled separately and without due regard to implications on the financial wellness of member.
- Actual **member experience** and **behavior** not incorporated.
- **Single investment strategy** that is not linked to the retirement goals and people’s positions in relation to the goals – **everyone at the same age is invested in the same way!**
- **No / little post retirement** annuity work.
- Very **little alignment** between pre- and post-retirement phases.
- **Incentives of brokers** will skew the decision-making framework of people when they get to retirement
- **Communication** – people are receiving information that is not meaningful and gives them no sense of where they are going.



“In the west we’ve built a beautiful ship, and in it we have all the comforts. But actually the one thing it doesn’t have is a compass, and that’s why it doesn’t know where its going.”

(Albert Einstein to Werner Heisenberg)

Source: **Colourfield Liability Solutions** presentation



## A new framework is needed...

- **Needs of DC members** are the same as DB members.
- **Techniques applicable to DB** can be **applied** in **DC** to **improve outcomes**.
- Actuaries well-placed given **long-term modelling** and **risk management skills**.
- **Technology** now enables **actuarial analytics and techniques** to be applied at an **individual member level on scale**.
- **Practical considerations**
  - Assumption setting
  - Data quality
  - Setting of fund and member targets
  - Alignment of targets to fund-endorsed annuitisation strategies
  - Integration between actuarial, investment management and administration functions
  - Fund and member monitoring and engagement strategies.



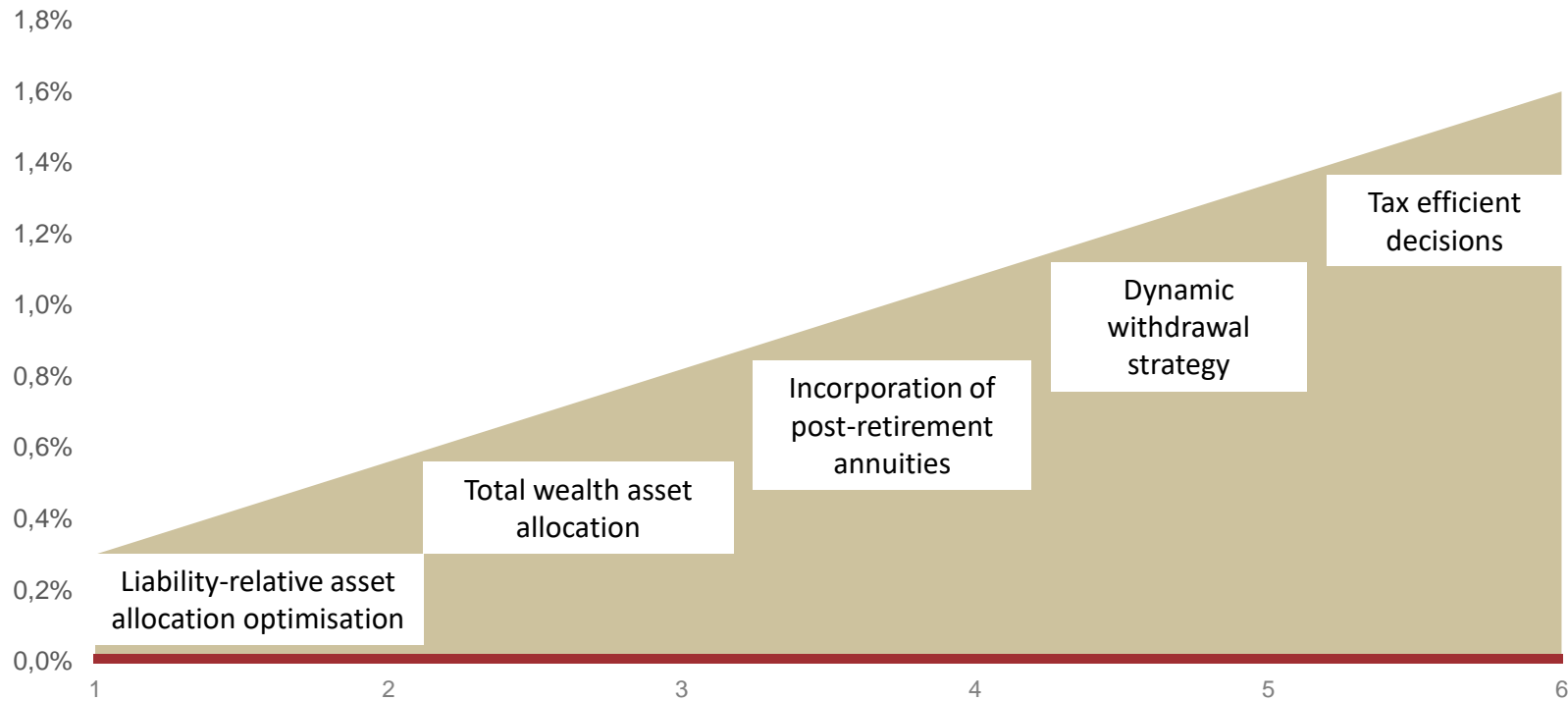
## A shift in focus

- What is a retirement fund's **key objective**?
  - To replace **standard of living** at retirement.
- Measure **standard of living** in the form of **"income"**.
- The move away from a DB fund to a DC fund has brought about an industry focused on **"inputs"**,
  - i.e. contribution levels, pensionable salary percentage, costs.
  - Obsessed with level of **Fund Credit** – a **"pot of money"**.
- Need to **shift focus to the right "output"**, that is the **level of income** in retirement.
- This will provide greater **clarity** to members on whether they are on track to be able to retire comfortably, or whether they are missing the goal.
- By **focusing on the outputs**, members will be **encouraged to improve their inputs**
  - Increase their contribution level
  - Delay retirement
  - Take on more investment risk.



# What value can actuaries bring through this framework?

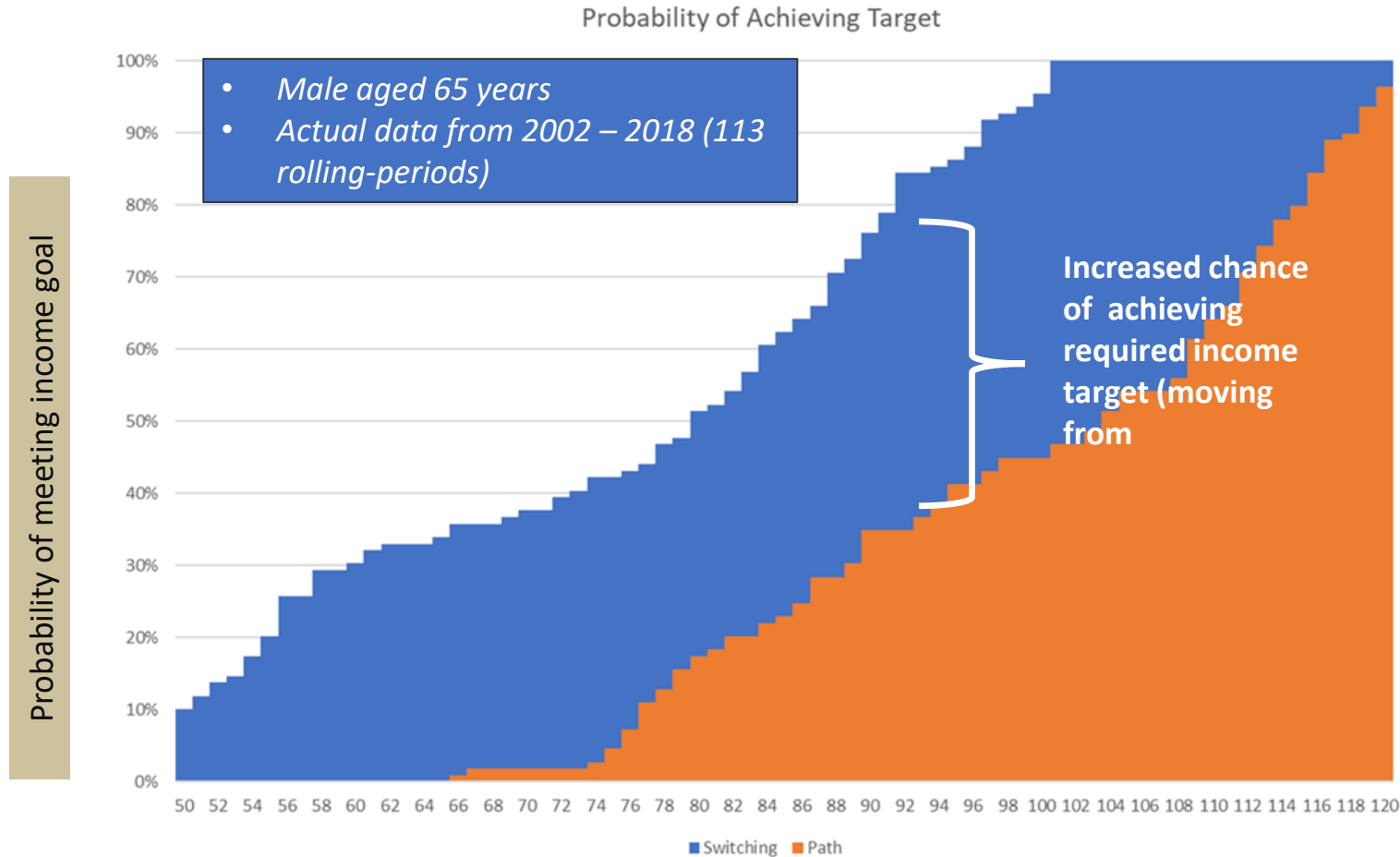
Additional value per annum as % of assets from liability-focussed strategies based on utility measures\*



Source : \*Alexander Forbes research, 2015. Morningstar research titled "alpha, beta, now gamma" dated August 2013



# Value added from liability-focused approach vs traditional lifestage approaches – historical



Funding level of individual from 50% to 120% (7 years before retirement)

Source : Colourfield research, 2018



## Members have their own balance sheet

- The **income targeted** at retirement for each member can be **actuarially valued** .
- **Value** it as a cost similar to that of a **defined benefit liability**
  - Cost will be a function of the **benefits, pension increase, likelihood thereof, type of annuity being targeted and underlying investment strategy.**
  - This will vary based on market factors like **interest rates** and **inflation levels.**
  - Demographic factors.
- The value in effect is an **individualised benchmark** for the stream of income to be provided.
- The assets that are funding this benefit (existing Fund Credit, future contributions, preservation assets) must **track this cost – resulting in the need for more individualised investment strategies.**
- If you achieve this value at retirement, **members will always retire in line with expectations.**

## Considering both sides

### Assets



Current  
Fund Credit



Future  
Contributions



Preservation  
assets

### Liabilities



Cost of providing  
for income  
requirements



# Ensuring that pre- and post-retirement phases aligned

## Post-retirement

- Need for advice after retirement.
- Who provides the advice after retirement (if anyone).
- Elements of advice
  - Integration with other income sources
  - Product selection
  - Provider selection
  - Investment choice (if applicable)
  - Drawdown rates
  - Impact of expenses.



## Post-retirement phase

- **General Risks**
  - Longevity
  - Investment
  - Risk profile e.g. bulk costs in later life.

✓ Actuaries are better placed to quantify this risk
- **Product specific risks**
  - Life annuities
    - Affordability vs value for money
    - Impact of increases or lack thereof
    - Assessing consumption requirements
    - Evaluating costs and investment profiles.

✓ Actuaries have in-depth knowledge of life products



## Post-retirement phase

- **Product specific risks**
  - Draw down products
    - Ongoing decisions: drawdown rate, investment strategy
    - Impact of cognitive decline
    - Tax implications
    - Cost implications.
  - ✓ Perform training function
  - ✓ Influence legislation to better meet consumer needs
- Can the post-retirement phase be structured to complement some of the pre-retirement problems?



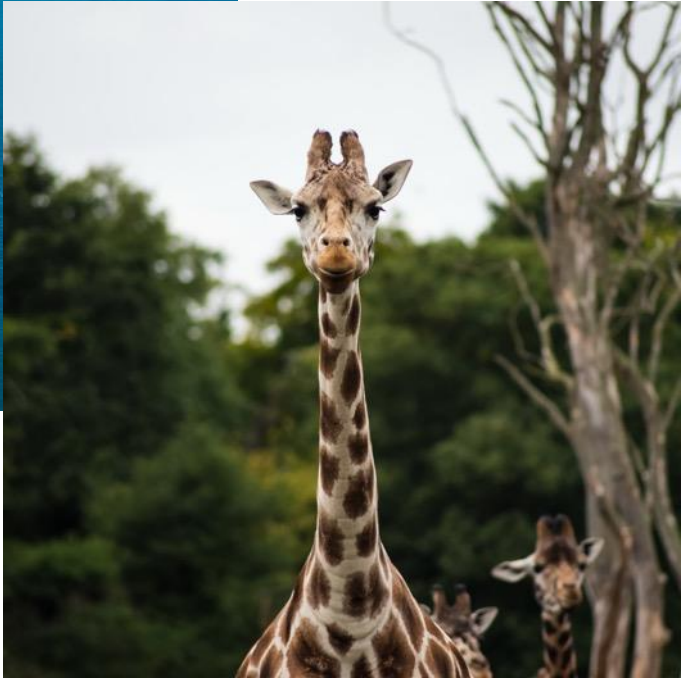
# New DC Analytics: Actuaries' involvement

| Data  | Model design   | Assumptions  | Risk  | Analytics   |
|---|--|--|---|---|
| <ul style="list-style-type: none"><li>• Understand data, issues, limitations</li><li>• Establish data strategy for refined modelling</li><li>• Establish and advise on administration procedures to cater for new data requirements</li></ul> | <ul style="list-style-type: none"><li>• Incorporate factors impacting individual</li><li>• While making it applicable to majority of fund members</li><li>• Ensure governance of model</li></ul> | <ul style="list-style-type: none"><li>• Analyse past experience</li><li>• Set salary increase, returns, expenditure pattern assumptions</li><li>• Set assumptions for different investment strategies</li><li>• Align to market conditions</li><li>• Ensure assumption governance framework in place</li><li>• Align assumptions to FSCA regulations</li></ul> | <ul style="list-style-type: none"><li>• Identify and quantify risks</li><li>• Communicate risks to stakeholders</li></ul> | <ul style="list-style-type: none"><li>• <b>Track outcomes compared to expectations</b></li><li>• Provide <b>attribution</b> analysis to members and trustees</li><li>• Use <b>data visualisation tools to identify and address problem cases, communicate to stakeholders</b></li></ul> |

*Do we need actuarial industry guidelines /standards for these new DC analytics?*



Communication





## Communication

- Consumers need to be **empowered** to make decisions – **financial education** is key (current low level of literacy).
- Need is **amplified in DC** – risk is borne by the member.
- Members must **understand** the issues to actively participate in retirement planning.
- **Annual benefit statements** must be sent to members.
- Benefit statements contain **static information** – focus on fund credit.
- In some cases, a **projected replacement ratio** – hard to understand.
- **Benefit statement does not contribute to improved understanding of benefits.**
- Results in **complacency** on the part of the member, a **lack of interest** and **disengagement**.



## Communication

- FSCA (South Africa) has recently issued a notice – **benefit projections mandatory** for inclusion in benefit statements
  - To **improve education** about the realistic values of their future retirement benefit and the effect of their decisions taken.
  - Should be relevant to each specific member and easy to understand.
  - Should increase the level of engagement and positive choices made by the member.



# Communication

## From a Vicious to a Virtuous cycle

- Members who know and understand their **expected outcomes** are in a position to take **corrective action** when required.
- This will lead to **improved outcomes**, and members will be more focused on those outcomes.
- Improved retirement outcomes for members will, over time, lessen the burden on the State.
- It takes us from the vicious cycle of **poor understanding of and disinterest** in retirement planning, with resultant poor retirement outcomes, to a **virtuous cycle of comprehension and engagement**.



# Communication

## Incorporation of behavioural economics

- Calling members to action after they have been very complacent historically is a major shift
- Show more relevant and understandable outcomes.
- Members will also have to be a **“nudged”** in the right direction – being able to take corrective action is not the same as wanting to take it.
- The IFoA published a paper in 2011 highlighting the importance of learning **from behavioural economics when designing member communication.**

## Guidelines for effective communication

- Principle 6 of the Actuaries’ Code provides that **“members must communicate appropriately”**.
- Communication should be accurate and **impartial** and conducted in accordance with relevant **professional standards.**
- Making it easy for users who are relying on that information to **understand** the context of the information and be clear about the message conveyed.

To be able to communicate appropriately would require the actuary putting him/herself in the place of the members of the fund.



# Communication

## Guidelines for effective communication

- Because the focus is on calling members, previously complacent, to action, the communications need to be **appealing and encourage engagement**.
- **One size does not fit all**, and communicating retirement outcomes should therefore be as tailored as possible, taking member-specific selections into account as well as the environment and level of financial literacy of each member.
- **Don't aim too high!**
  - The mass market's understanding of probabilities and other assumptions would result in communication having little to no effect.
- Communicating outputs as opposed to inputs in isolation is not the answer:
  - Communication must be drastically simplified (using **plain language**) and jargon should be eradicated as far as possible.
  - Plain language that **demystifies complex concepts** is therefore important to allow members to make good choices.
  - **Use pictures!**



New DC  
Actuarial  
Reporting  
Standards





# New DC Actuarial Reporting Standards

## Actuarial reporting – Macro

- Financial reviews must focus on **holistic member retirement wellness**.
- Terminology must be in "plain English" - perhaps phrases such as "**financial freedom in retirement**" are better?
- **Objectives** of "financial freedom in retirement" must be clearly defined.
- Holistic reporting must include all aspects of a member's needs/objectives, e.g.:
  - Leaving a legacy
  - Preparing for the unexpected (dread disease, death, etc)
  - Ensuring lifestyle continuation
  - Covering essentials
  - Etc.



# New DC Actuarial Reporting Standards

## Actuarial reporting – Macro (cont.)

- **Projected levels of income at retirement** should be quoted in understandable formats:
  - Must include all sources of income.
  - Present value of income in retirement expressed as a percentage of current income is more easily understood and appreciated.
  - The nuances of what constitutes "income" must be understood and be treated consistently.
  - Targets (or objectives) set on the same basis would then allow for easy comparison.
  - A "funding level" type picture can then be created for individual members.
- At a macro level, the "**funding levels**" for individual members can be accumulated to scheme level:
  - Provide important management information to the board and/or employer.
  - Allow appropriate measures of intervention.
  - Measures of intervention can be targeted at specific sub-categories of membership.



# New DC Actuarial Reporting Standards

## Actuarial reporting – Micro

- At a micro level, reporting on **individual contribution level adequacy** in relation to benefit levels targeted is crucial.
- A re-iteration of the principle **factors affecting "financial freedom in retirement"** is vital:
  - Levels of Contribution
  - Salary increases – not spending your entire increase
  - Investing in portfolios with returns in line with your financial plan
  - Increasing your Pensionable Base
  - Preservation of retirement capital when changing employment.
- Highlighting what has the **biggest impact on future financial freedom** (my salary after retirement):
  - Contribution levels and additional savings
  - Investment portfolio
  - Preservation
  - Date of retirement.



# New DC Actuarial Reporting Standards

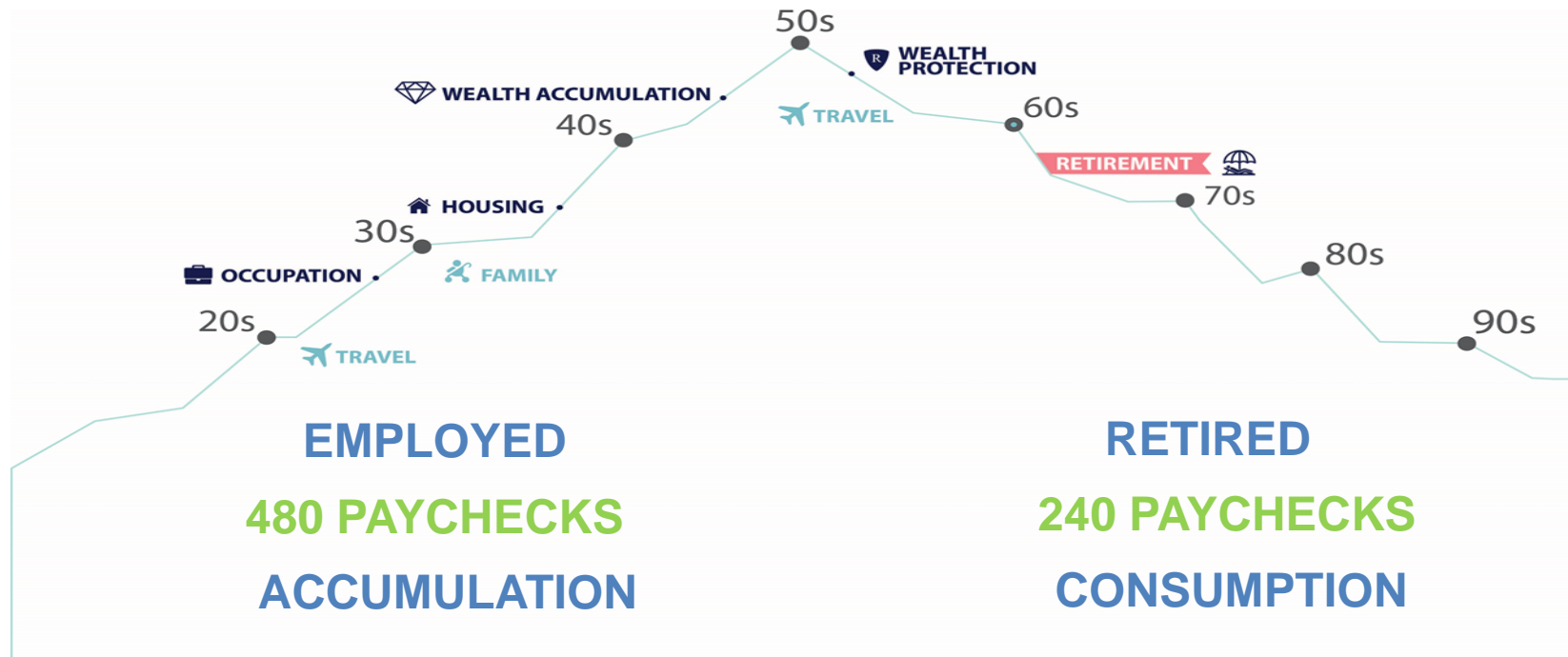
## Actuarial reporting – Micro

- **Illustrations** of impact of conservative, moderate and aggressive levels of these factors on salary after retirement important.
- Where a member is not meeting objectives, specific **intervention options** should be given:
  - What can be done to improve situation.
  - Investment portfolios, contribution levels, one off amounts etc should all be addressed.

# New DC Actuarial Reporting Standards

## The message ...

- How the **outcome is reported/presented can significantly influence response.**
- Alternative ways of presentation should be considered, e.g. looking at retirement from a paycheque perspective:





# New DC Actuarial Reporting Standards

## Consequence of technology and its use in better facilitating member outcomes

- Much of the traditional DC fund actuarial work can now be done by relatively simple online technology.
- This technology is accessible and available to everyone.
- How does the DC actuary **remain relevant** in this context?
- Holding on to traditional ways of doing things will result in a shrinking market share (and impact).

## Embracing the technology

- More thought needed on the use of this technology for financial freedom in retirement.
- The use of AI can go some way to facilitate the uncertainties of future projections and allow for more personalised outcomes.
- The increase in computing power and alternative ways of doing things needs to be embraced.



# New DC Actuarial Reporting Standards

## Embracing the technology (cont.)

- The instant availability of information to users via smartphones and other devices and the opportunities this opens up in the DC fund space must be explored.
- Instantaneous updates to changes in an individual's underlying factors are a reality to be used.
- The ability to manipulate and analyse significantly larger data bases must also be explored.
- The grouping of data from across divides (geographical, social, economic, etc) can allow much greater understanding of communities and how the individuals fit.



## Conclusion

- Focus on the correct objective – **income**.
- Actuarial advice should be geared towards **members' readiness to achieve the fund's correct objective**.
- **Our skills can assist funds and members in improving outcomes!**
- **Communication** should be with reference to this income level and any intervention offered, should be with reference to this level.
- Actuaries are **custodians of the retirement fund industry** and should use DB techniques to establish member financial well-being.

### NEXT STEPS

Paper to follow

Actuarial guidance

Regulation