SYNOPSIS

Stay or Go? The Science of Departures from Superannuation Funds
Nathan Bonarius and Richard Dunn

Key words: Superannuation, Member behavior, Exits, Predictive Modelling

Purpose of your paper:
This paper will:

- Examine the trends and demographics of exited superannuation fund members using Rice Warner's Superannuation Insights sample which covers over 10 million member accounts.
- Use predictive modelling to determine the key demographic indicators which can be used to help predict which members will leave a superannuation fund
- Segment exits by type, for example rollovers, retirements, consolidations, deaths etc.
- Consider how this data driven approach could be applied when developing Superannuation fund member retention strategies.

Synopsis:

Superannuation funds lose thousands of members to competitors and SMSFs every single year, in the latest APRA statistics over half of funds experienced a reduction in the number of members over the financial year with over 1.5 million accounts rolling over to another provider. Increasingly, funds will need to harness the data they have at hand to understand which members are most likely to exit the fund in order to develop better member retention strategies.

This paper aims to provide such analysis of exit data based on a large sample of information from funds which participate in Rice Warner's Superannuation Insights study and present a framework through which actuarial techniques can be applied to help predict which members will exit the fund.

SYNOPSIS

Retirement Planning and Social Security
Garry Khemka and Adam Butt

Key words: Superannuation, Retirement planning, taxation, social security, dynamic programming, utility functions

Purpose of your paper:
Impact of Australian social security and taxation rules on retirement planning using a CRRA utility function under a dynamic programming framework.

Synopsis:
Two of the main decisions in retirement planning are asset allocation and consumption. In this study employing a CRRA utility function in the dynamic programming framework; firstly we analyze the optimal decisions in retirement planning both during working life and in retirement under the current taxation rules. Then the impact of the existing social security structure, in particular the age pension, on the optimal decisions is analyzed. Any policy implications are discussed.

SYNOPSIS

Designing successful and resilient lifetime retirement income products
Jules Gribble and Cary Helenius

Key words:
Retirement income, income stream, longevity, older retirees

Purpose of your paper:
We propose a retirement income product that provides older retirees with an income stream for the rest of their lives, managing longevity risk. This is put in a broader context, including consumer and regulatory matters, to support successful delivery.

Synopsis:
The design and successful delivery of lifetime income streams to individuals is a long standing challenge, in Australia and globally. With an increasing proportion of the population living longer in their retirement, this is an important challenge to take up and fund, both now and as the superannuation system matures. The 2016 federal budget of May 2016 contained several technical proposals intended to assist the development of retirement income products in the Australian Defined Contribution superannuation environment.

Key to the success of a product is that it works from multiple perspectives. It needs to work from a technical point of view, but it also needs to work and be accepted from a consumer perspective and a regulatory perspective. Each of these perspectives or dimensions has a number of topics to consider and all need, to a necessary minimum level, be successfully addressed. The recent proposed changes may provide an opportunity for new products and approaches, however they still need to meet the relevant consumer and supervisory criteria for success.

We take up the challenge of managing longevity risk in the context of receiving a regular income stream in later life through until death. This is one aspect of a more comprehensive retirement plan, albeit important. We characterise the group of people for whom this type of product is relevant and specify a number of criteria a successful and sustainable product needs to meet.

From this basis we examine a number of product designs that are in the market place and assess then against our criteria. This lead us to develop an improved product design that better matches the needs of multiple stakeholders, providers, consumers and supervisors.

SYNOPSIS

Embedding Behavioural Finance in an Investment Management Process
Douglas Isles MA (Cantab) FFA

Key words: Investment Behaviour Herding Crowding Extrapolation Recency Timing Equities Customer Returns

Purpose of your paper: Emphasising the importance of embedding an understanding of Investor Behaviour into an Investment Manager's Process, focusing on Time and Herding (Applied Behavioural Finance). Customer Outcomes will also be examined as they also suffer from biases.

Synopsis:
The purpose of the talk will be to give a clear insight as to why it is essential to embed an understanding of Behaviour into an Active Investment Process. Investment Managers must Think Differently in order to get an edge on the market, and on their competitors. This can be best described as Applied Behavioural Finance.

First will be a brief explanation of how one generates returns from an Active Global Equities portfolio, using historical evidence, based on:

- Long-term return drivers for the Asset Class as a whole.
- Awareness of major swings in Sentiment (Boom/ Bust) driven by collective emotion, and how to manage this.
- A simple framework to identify Cheap and Expensive stocks via Analysis of Company and Industry Drivers, with a particular focus on Change and Uncertainty

The main focus of the talk is around two key principles explored in relation to Behaviour. This relies on an understanding that stock markets function as an interaction between buyers and sellers of stocks, driven by different motivations, and who are all subject to the flaws of human behaviour.
The two key areas of focus are:

- Herding (or Crowding) – focusing on tribalism, social exclusion and "self-organised criticality"; the importance of conviction in driving superior return outcomes; Discuss Contrarian and Momentum approaches.
- Time – look at the challenges of forecasting; demonstrate why extrapolation is a problem faced by practitioners of finance; explore the recency/ availability bias and relate to Bayes Theorem; desire for instant gratification; Discuss so-called Value and Growth styles of investing.

Having explained how this knowledge is critical for building an investment process, the talk will also look at the Customer Experience, and hence has applicability to Retail Financial Services too.

- Agency issues will be raised, relating to obstacles many investment managers face in delivering optimal outcomes for Clients eg benchmarking, incentives.
- Finally, data will be presented on the behavior of real cohorts of retail clients from the speaker's company to demonstrate the second order challenge when customers of investment managers exhibit similar behavioural challenges and compound the issues raised in the talk to their own detriment.

Bio: Douglas initially joined Platinum in May 2003 as an investment analyst, having previously worked as an Investment Manager with Aegon UK and as an Actuary for CBA. Douglas left Platinum in October 2008 to work in Singapore where he helped build Standard Chartered Bank's equity broking business before re-joining Platinum in February 2013 as investment specialist and intermediary between Platinum's investment team and the financial advisory network. Douglas has an MA in Mathematics from Trinity College, Cambridge and is a Fellow of the Faculty of Actuaries.

Actuaries Summit
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MEMBER'S DEFAULT UTILITY FUNCTION FOR DEFAULT FUND DESIGN

David Bell, Adam Shao and Estelle Liu

Key words: utility function, default super fund design, retirement outcomes, retirement income, longevity risk, investment risk, CIPR

Purpose of your paper: To detail the development of the Member's Default Utility Function for Default Fund Design version 1 (MDUF v1) and provide examples of how it can assist super funds and policymakers.

Synopsis:

The "retirement challenge" represents the need for industry and policymakers to focus on the efficient delivery of retirement income streams. This compares with the historic focus on accumulation balances. Amongst many challenges we need to address longevity risk, acknowledge that a more certain outcome is valuable and that any residual account value at death has (at least) some value. The Government recently announced its support for the development of comprehensive income products for retirement (CIPR) and the industry will likely be shaped towards this direction.

This creates significant challenge for industry and policymakers. For instance how do we compare the range of possible outcomes from two competing fund designs? One way to do this is to shift our focus from pure financial outcomes to the level of satisfaction associated with the range of possible outcomes measured by a representative utility function. To assist industry and policymakers, a working group has spent over a year developing the Member's Default Utility Function for Default Fund version 1' (MDUF v1). This paper details the design considerations investigated by the working group and the final MDUF v1. We illustrate with examples how the utility function can be used to address fund design and policy issues.

SYNOPSIS

Housing and Retirement Financing: Optimal Time to Buy a Residential Home
Mengyi Xu, Michael Sherris and Adam W. Shao

Key words: Housing, Consumption investment strategy, Retirement savings, Monte Carlo simulation

Purpose of your paper: To investigate the optimal time to buy a residential home by looking at how purchasing home property at different ages affects an individual's pre-retirement consumption, retirement savings, and ultimately the lifetime utility level.

Synopsis: The family home is typically the single most important asset in household portfolios. Outright home owners can live rent-free, which provides a hedge against rental inflation. Wealth stored in housing can be unlocked through equity release products to improve retirement living standard or to fund health care and long term care. Given the importance of housing in retirement planning, a natural question that arises is when to become a home owner.

We examine this question by looking at how purchasing home property at different ages would affect an individual's pre-retirement consumption level, savings for retirement, and ultimately the utility level over the working life. The utility is derived from consumption and wealth at retirement. The wealth consists of liquid assets (cash and stocks), superannuation, and home equity. We use a vector autoregressive (VAR) process to model the dynamics of asset returns and labour income growth, and then perform Monte Carlo simulations on various scenarios. The consumption and asset allocation decisions are calibrated to the Household, Income and Labour Dynamics in Australia (HILDA) Survey data, reflecting an average Australian's decisions in his/her age group and housing tenure.

Our simulation results show that purchasing the property earlier during the working life often leads to a higher level of wealth at retirement due to a higher home equity value and more liquid assets. The home equity is higher because the earlier the property is purchased, the lower the mortgage balances at retirement. In terms of the liquid assets, the earlier the investor becomes a home owner, the lower the annual mortgage repayment amount because of a lower house price. In addition, the mortgage repayment is typically less the rental payment. The investor is therefore able to accumulate more liquid assets. Purchasing the property, however, also leads to several years of consumption cut after the property purchase because a significant proportion of liquid assets are transferred to the housing wealth (which is illiquid) after a large amount of down payment is made. The consumption cut contributes to the utility loss, and the earlier the property is purchased, the higher the discounted utility loss. On the other end of the spectrum is to keep renting during the working life. We find it unattractive both in terms of retirement wealth and utility level. Individuals who rent the property throughout the working life have to incur high rental costs. This not only constrains the spending on non-housing consumption, which results in a low utility level, but also slows down the wealth accumulation. The results are robust to different initial values of wealth, income, rental cost, and key parameter values.

In summary, we examine the question as to when to become a home owner by looking at the impact of purchasing the property at different ages on consumption, wealth, and ultimately the utility level. We conclude that purchasing the property early in life is preferred if one wants to enjoy more savings for retirement, while deferring the property purchase to 50's is more attractive if one wants to have a higher utility level.