

FALKIRK COUNCIL

Subject: CLUB VITA - LONGEVITY ANALYSIS
Meeting: PENSIONS COMMITTEE
Date: 25 SEPTEMBER 2014
Author: CHIEF FINANCE OFFICER

1. INTRODUCTION

- 1.1 This report updates the Committee with initial findings from the Pension Fund's participation in the Club Vita longevity analysis.

2. BACKGROUND

- 2.1 One of the key risks faced by a pension fund is where life expectancy increases more rapidly than has been envisaged and that, as a result, funding pressure is created.
- 2.2 Longevity risk is taken into account by the Actuary when setting employer contribution rates at the three yearly valuation. Until now, however, the actuary has used longevity assumptions based on national UK demographic data rather than data that is specific to the Falkirk Fund.
- 2.3 In order to gain a better understanding of the Fund's longevity profile, the Pensions Committee at its meeting of 12th December, 2013 agreed that the Fund should take part in Club Vita. It was highlighted at the time that other LGPS Funds who had participated in Club Vita had generally been able to adopt less stringent longevity assumptions and had thus seen a reduction in overall liabilities.
- 2.4 The availability of more accurate longevity data means that Fund calculations, such as cessation valuations, bulk transfers and funding assessments will be of a more reliable nature. Having robust evidence based longevity assumptions is also consistent with the Pension Regulator's view that Schemes should pay due attention to longevity risk.
- 2.5 Club Vita is an established provider of longevity research for pension funds and operates in conjunction with the Fund's actuaries, Hymans Robertson. Results are obtained by comparing Fund experience with the Club Vita dataset of 2 million scheme members and 700,000 deceased pensioners. Factors taken into account in establishing longevity trends include postcode, salary at cessation and occupation at retirement.

3. CLUB VITA OUTCOME

- 3.1 The Club Vita analysis indicates that the longevity assumption used in the 2011 actuarial valuation over-estimated the life expectancy of the Fund's pensioners. Applying the assumptions implied by the recent Club Vita analysis will result in a reduction in the Fund's liabilities of around £130m. This will clearly be of beneficial effect for employers when the actuary comes to set contributions rates for the three years starting from April, 2015, however other factors such as the discount rate and pending scheme changes will also have a significant part to play.
- 3.2 Catherine McFadyen, Fund Actuary with Hymans Robertson will give a short presentation highlighting the Club Vita process and summarising the key points of the findings.
- 3.3 More detailed analysis is attached at Appendix 1 of the report.

4. CONCLUSION

- 4.1 The Club Vita analysis has revealed that less stringent longevity assumptions can be justified for the Fund.
- 4.2 Continued participation in Club Vita will ensure that the Fund's longevity assumptions are more closely aligned with actual experience.

5. RECOMMENDATION

- 5.1 **The Committee is asked to note the findings of the Club Vita analysis and invited to comment as appropriate.**

Chief Finance Officer

Date: 12 September 2014

Contact Officer: Alastair McGirr

LIST OF BACKGROUND PAPERS

NIL

Longevity Risk

Addressee and Scope

This paper is addressed to Falkirk Council, as the administering authority to the Falkirk Council Pension Fund, ("the Fund") for the purpose of sharing with the Pension Fund Panel and Committee. This paper summarises some of the information provided in the recent Club Vita reports addressed to the Fund and is written to assist the Committee and Panel in understanding the Fund's longevity risk. For more detail please refer to your full set of reports (which are compliant with relevant Technical Actuarial Standards). The contents of this report are reliant on the data supplied to us on your behalf including administration data provided by David Cunningham of the Falkirk Pensions Team on 7 May 2014.

This paper must not be released or otherwise disclosed to any third party (in whole or in part) except as required by law, regulatory obligation. Third parties placing reliance on this report do so at their own risk and neither Hymans Robertson LLP nor Club Vita accepts liability in relation to any such reliance.

No decisions are required based on the information in this paper. Decisions regarding the Fund's approach to managing longevity risk will be made later in the year as part of the formal funding valuation.

Club Vita

Club Vita aims to provide greater insight into the longevity characteristics in occupational pension schemes by bringing like-minded schemes together in a community where longevity experience data is pooled. By combining the data from individual schemes a clearer picture of the underlying patterns emerges.

Falkirk Council Pension Fund became a member of Club Vita in December 2013 with the aim of gaining a better understanding of the longevity characteristics of the Fund's membership. This impacts directly on the cost of pension provision and is therefore a key funding risk to manage. The cost of membership was £10,000 p.a. for an initial period of 3 years.

The Fund's membership data was submitted to Club Vita in May 2014. Club Vita carried out a full data cleansing exercise and analysed the data for the availability and the consistency of key membership statistics required to perform the comprehensive review of the Fund's longevity experience. The quality of the Fund's data was found to compare well to other Fund's in the LGPS peer group (all LGPS Funds participating in Club Vita) and Club Vita was able to proceed with detailed analysis, the results of which were recently reported back to the Fund. This paper summarises some of the key results.

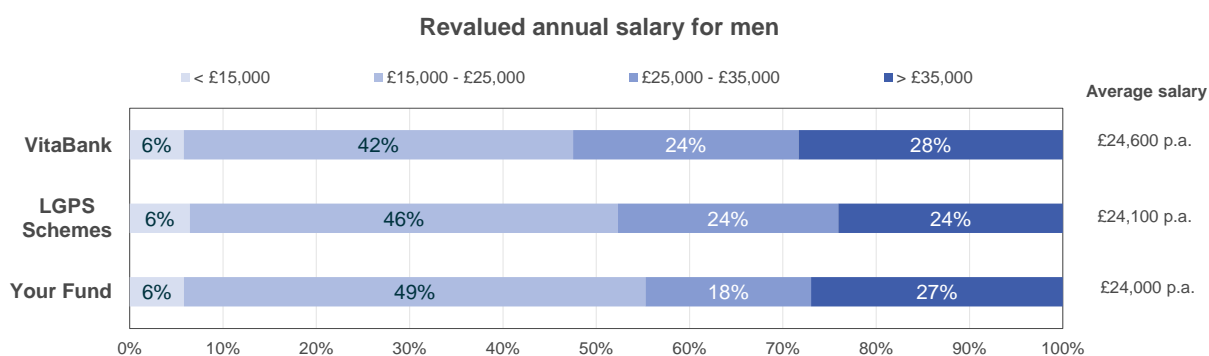
Longevity 'DNA'

Club Vita uses a dataset ("VitaBank") of pension scheme mortality experience of c2m pensioners and c0.7m deaths to analyse the death rates of pensioners. The availability of such a large data set enables statisticians and actuaries to identify particular characteristics of individual members, specifically, **affluence, lifestyle, retirement, health and occupation** which are predictors of individual life expectancy. Your fund's demographic 'DNA' can be considered to be the 'DNA' of your fund in terms of its longevity characteristics. Just as every individual is unique in terms of his or her DNA, every fund is a unique collection of individuals, each of whom will have very different characteristics which will define their longevity prospects. Your fund's demographic 'DNA' considers the Fund's membership profile in terms of the concentrations (or sparsity) of these particular characteristics, each of which, are crucial to understanding your fund's longevity risk.

Your affluence 'DNA'

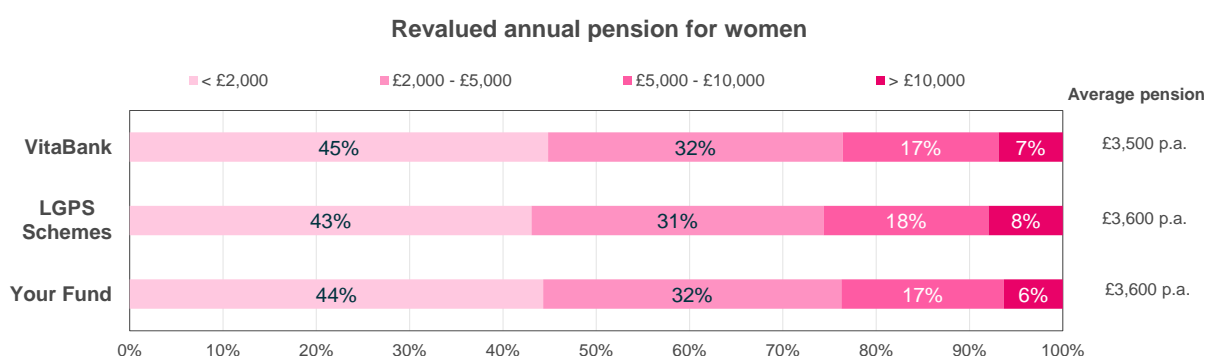
The relative affluence of your fund is pensioner membership was analysed, using revalued final salary as the affluence indicator for men and pension as the affluence indicator for women.

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The male pensioners in your fund have:

- a lower average salary at exit/retirement (revalued to current terms) than the average for VitaBank as a whole; and
- a slightly lower average salary at exit/retirement (revalued to current terms) than the average for your LGPS peer group.



The female pensioners in your fund have:

- a higher average pension than the average for VitaBank as a whole; and
- a similar average pension to the average for your LGPS peer group.

All else being equal, we would expect members of funds with lower affluence measures to have a lower average life expectancy than those in occupational pension schemes in general.

Similar analysis is carried out for active and deferred members.

Your lifestyle 'DNA'

In determining life expectancy, it is not just how much income an individual has, but how they spend it which is important. Having information on the postcode of the individuals in VitaBank means that we are able to explore how lifestyle varies between different individuals. The members' postcodes enable us to enrich the database with geo-demographic information available in a variety of marketing databases purchased from third party providers.

For example, one particular market research database classifies each of the UK's 1.7m postcodes into 57 different geo-demographic categories based upon information such as:

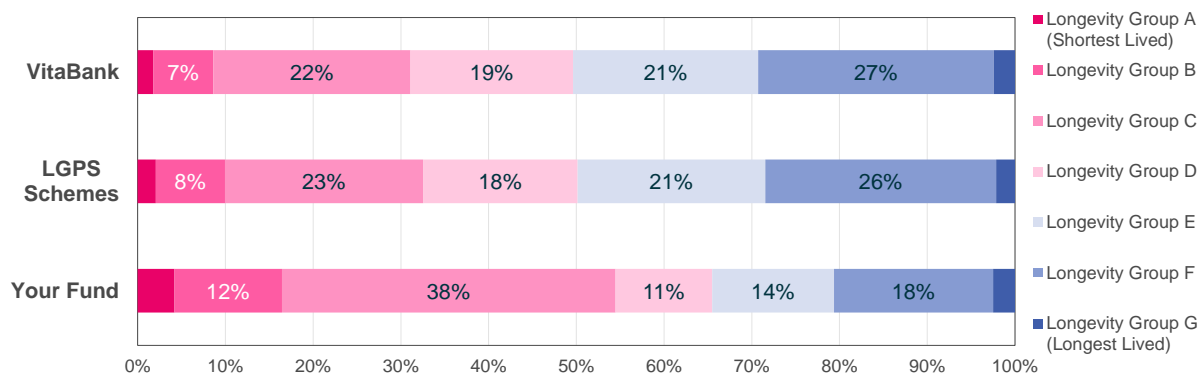
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- type of property, (e.g. Urban terraced house);
- lifestyle information on the residents including:
 - which newspaper an individual is most likely to read
 - most likely hobbies, holiday habits etc.
 - financial sophistication

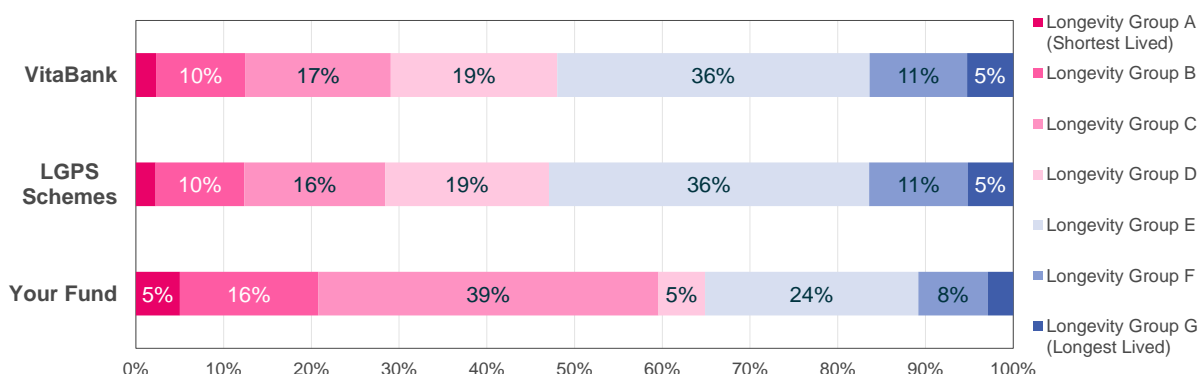
Owing to the considerable volumes of data within VitaBank we are then able to see how life expectancy varies between these different geo-demographic types. We have combined this information to create 7 lifestyle longevity groups. On average there is a difference of around 6.0 years between the shortest and longest lived group. However, not all of this difference will be due purely to lifestyle differences as some of the characteristics used to identify the varieties of geo-demographic types relate to affluence (for example, type of property). We are able to use powerful statistical techniques, known as multi-variate analysis, to isolate the individual effects of different characteristics such as geo-demographics and affluence.

The charts below consider the split of your membership, between the 7 longevity groups for those pensioners and dependants for whom you have supplied postcodes (99%).

Men



Women



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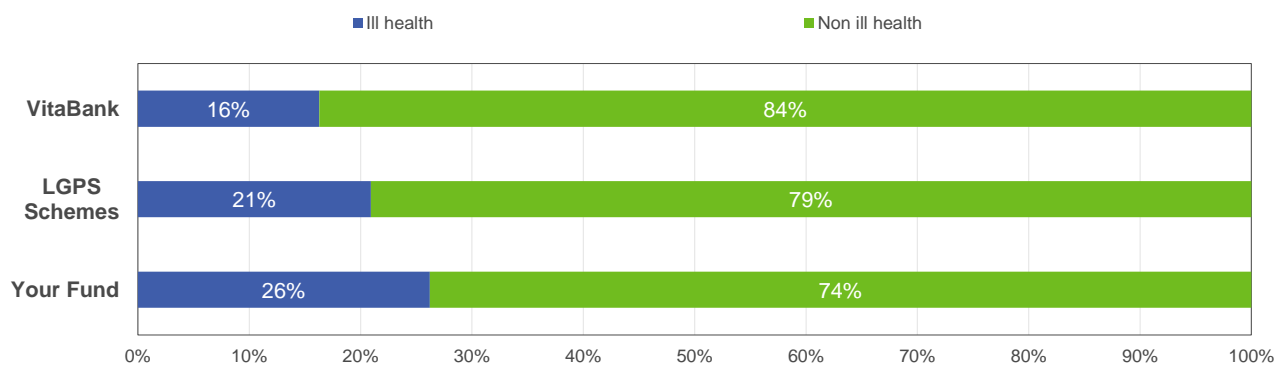
We see that, amongst those members for whom postcodes are known, your:

- men and women live, on average, in postcodes associated with shorter life expectancy than typically seen within VitaBank; and
- men and women live, on average, in postcodes associated with shorter life expectancy than typically seen within LGPS Schemes.

Your retirement health 'DNA'

Intuitively, you might expect that life expectancy is greater for those who retire in normal health in comparison with those who retire on grounds of ill-health. Evidence based on analysis of VitaBank deaths supports this, although in recent history the 'gap' between the 'sick' and 'healthy' appears to be closing.

The chart below considers the split of your pensioner membership, excluding widow(er)s, between those who retired on grounds of ill-health or in 'normal' health where this information has been provided

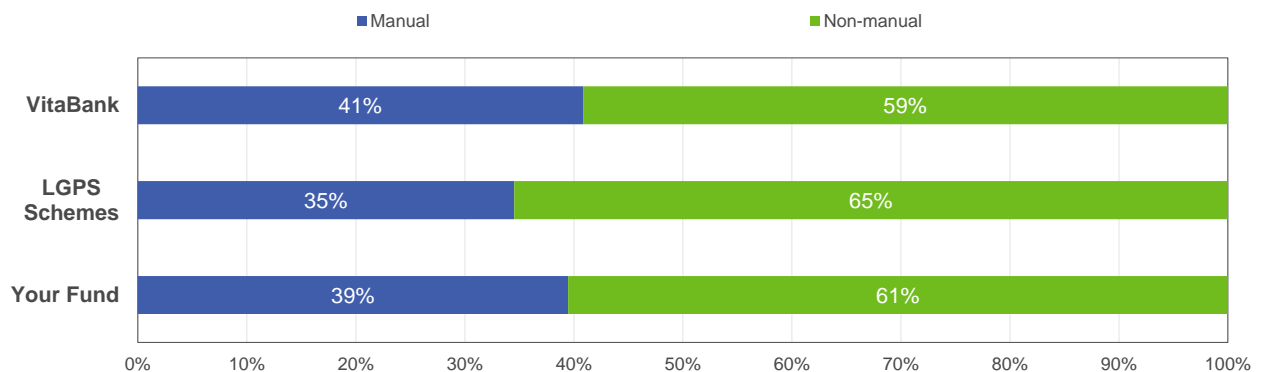


We can see that within your fund:

- there is (amongst those for whom retirement type is known) a higher proportion of ill health retirees than within VitaBank; and
- there is a higher proportion of ill health retirees than within your LGPS peer group.

Your occupational 'DNA'

The chart below considers the split of your pensioner membership, including ill health retirees but excluding widow(er)s, between those formerly employed in manual roles and those formerly employed on non-manual roles, known for all members.



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We can see that within your fund:

- there is (amongst those for whom former employment type is known) a slightly lower proportion of former manual employees than within VitaBank; and
- there is a higher proportion of former manual employees than within your LGPS peer group.

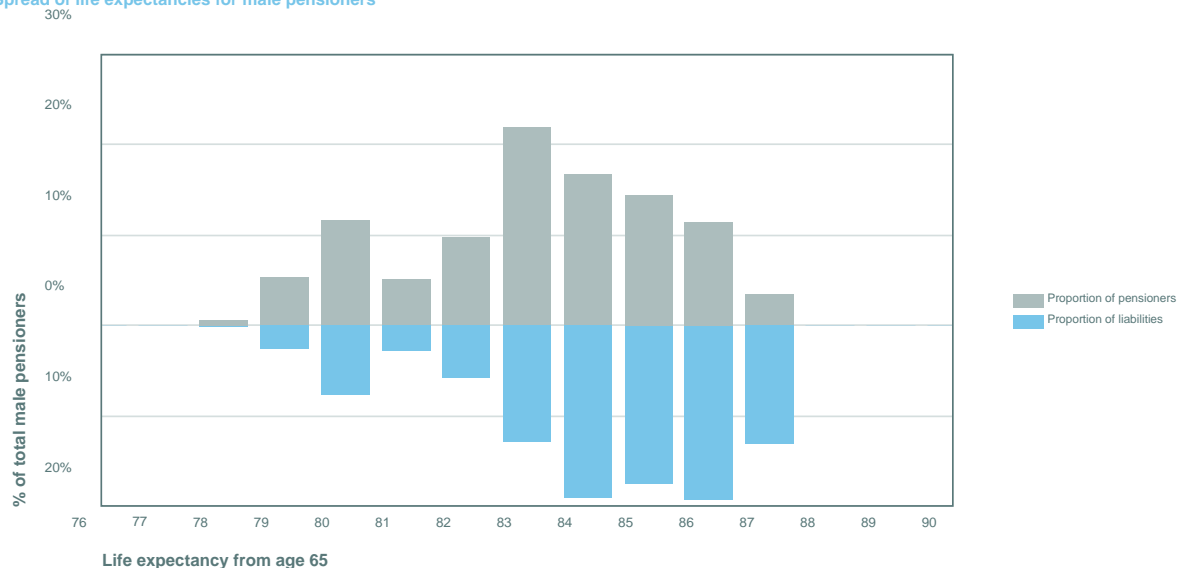
All else being equal, we would expect members of funds with a higher proportion of former manual employees to have a lower average life expectancy than those in occupational pension schemes in general.

Concentration of Longevity Risk

This 'DNA' analysis was applied to the membership of the Fund which identified a 9 year difference in life expectancy between the shortest and longest lived male pensioners (at age 65). Club Vita have used this analysis to pin-point the 'best estimate' mortality assumption for each member of the Fund which can then be relied on for funding purposes.

The chart below (focusing on male pensioners) shows the wide range of life expectancies predicted by your Club Vita analysis. The top half shows the spread of expectancies from 65 (to the nearest year) for male pensioners. Put simply, certain types of member are expected to live much longer than others.

Spread of life expectancies for male pensioners



It is clear that the traditional approach of using a single assumption simply does not reflect the reality of your fund, and is a huge oversimplification for many purposes.

The bottom half of the chart weights the results by each member's liability – hence the larger bars for high life expectancies, which relate to more affluent individuals with larger pensions. In fact, across the whole fund:

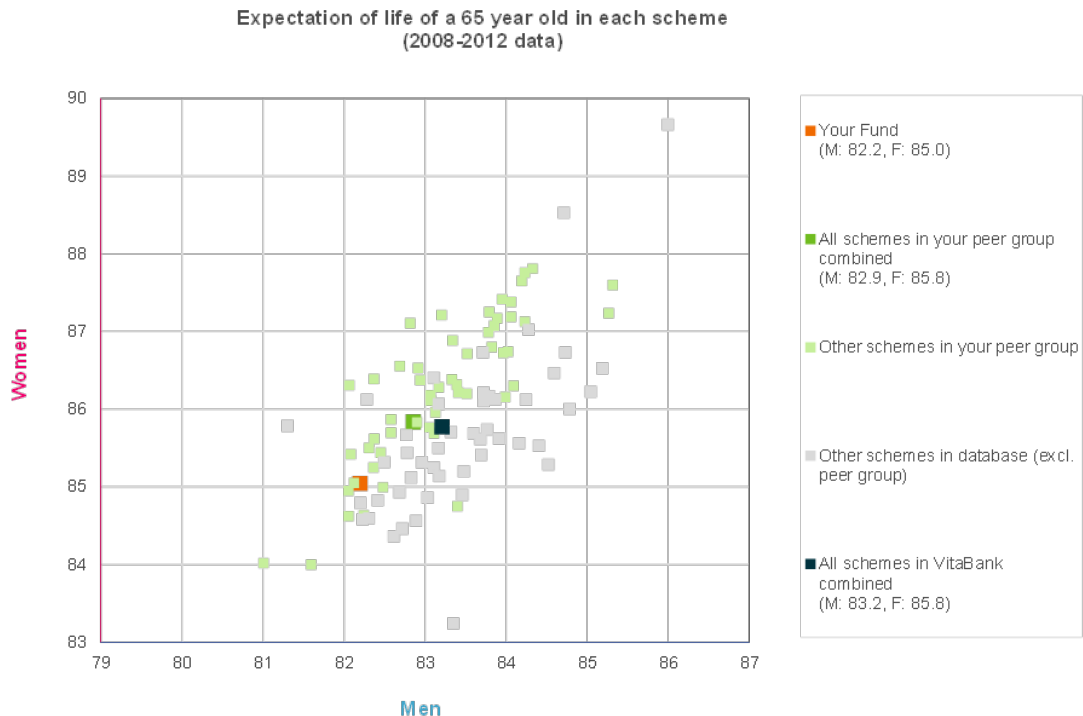
- 50% of the liabilities are concentrated on 12.9% of members;
- 10% of liabilities are concentrated on just 1.2% of members (i.e. 353 individuals);
- The "bottom" 50% of members account for less than 9.2% of liabilities.

This means that the survivorship of the members with highest lifespans will have a disproportionate effect on the finances of the fund.

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Summary

The graph below shows how the life expectancy of Falkirk Council Pension Fund members compares to the other LGPS Funds subscribing to Club Vita, labelled as “your peer group” in the graph below.



Implications for Funding

The Club Vita analysis has revealed that the assumption made for current longevity (before making any allowance for how longevity might change in the future) at the 2011 actuarial valuation, over-estimated how long the Fund's pensioners were likely to live for. In numerical terms, if we adopted the assumptions for current longevity based on Club Vita's detailed analysis of our specific member population, your funding level would improve by **c6%** and the deficit would reduce by **c£130m**. This information will be incorporated into the 2014 funding valuation which is currently underway.

Future Longevity Uncertainty

Club Vita's reports also highlighted the uncertainty around the assumption that the Fund makes for how longevity will change in the future. They illustrated a not unreasonable scenario that would result in a reduction in your funding level. How long pensioners live for is not a static number – as experience data becomes available some uncertainty is removed. Annual reports from Club Vita and will help the Fund understand how the longevity of the Fund pensioners is changing and the impact on funding level and other aspects of managing the Fund.

Catherine McFadyen

Catherine McFadyen, FFA

For and on behalf of Hymans Robertson LLP

3 September 2014