Government Actuary's Department

Local Government Pension Scheme Scotland

Review of the actuarial valuations of funds as at 31 March 2017 pursuant to Section 13 of the Public Service Pensions Act 2013

13 November 2019

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Contents

At GAD, we seek to achieve a high standard in all our work. We are accredited under the Institute and Faculty of Actuaries' Quality Assurance Scheme. Our website describes **the standards** we apply.

1 Executive Summary

1.1 The Government Actuary has been appointed by Scottish Ministers to report under section 13 of the Public Service Pensions Act 2013 in connection with the actuarial valuations of the 15 funds[1] in the Local Government Pension Scheme (Scotland) ('LGPS Scotland' or 'the Scheme').

1.2 Section 13 requires the Government Actuary to report on compliance, consistency, solvency and long-term cost efficiency in respect of the actuarial valuation of the Scheme.

1.3 This is the first formal section 13 report. We produced a 'Dry Run' in respect of the 2014 valuations[2].

1.4 This report is based on the actuarial valuations of the funds together with other data provided by the funds and their actuaries. We are grateful to these stakeholders for their assistance in preparing this report.

Overall Comments

1.5 In aggregate, LGPS Scotland is in a strong financial position. The aggregate funding level on prudent local bases has improved from 94% at 2014 to 102% at 2017; 6 out of the 11 open funds are fully funded on their prudent local bases.

1.6 There has been significant progress since the 2014 valuations, which we welcome:

- the 5 closed funds were a concern in the Dry Run, but subsequently completed or planned mergers will leave only two closed funds
- a consistent definition of Primary and Secondary Contribution Rates has been agreed between the three firms of actuarial advisors that undertake local valuations, going a long way towards improving consistency of valuation reporting

1.7 For the open funds, we have looked at a range of metrics to identify potential issues in respect of solvency and long-term cost efficiency. Each fund's score under each measure is colour coded (red, amber or green). All 11 open funds tested had green flags on all solvency and long-term cost efficiency metrics.

1.8 Based on the criteria above, the Scheme is in a strong financial position, and has made significant progress towards meeting all the aims of Section 13 since the Dry Run. To further improve transparency and comparability, it would be helpful for administering authorities and other stakeholders to be able to make meaningful comparisons between the actuarial valuations. Consequently, this report makes recommendations on consistency affecting all the funds.

1.9 We set out below our findings on each of the four aims and our recommendations.

[1] Excluding the Tayside Transport Fund, which merged with the Tayside Pension Fund in June 2017.

[2] LGPS Scotland: Section 13 Dry Run Report GAD August 2017

Compliance

1.10 Our review indicated that fund valuations were compliant with relevant regulations on the basis described in Chapter 4 of this report.

Consistency

1.11 There has been a big improvement in the consistency of presentation of disclosures such as employer contribution rates in the 2017 valuations, compared with the 2014 valuations.

1.12 However, the information is sometimes presented in different places in the different reports. As part of the LGPS England and Wales Section 13 report[3] as at 31 March 2016, we recommended that the Scheme Advisory Board for England and Wales should consider how best to implement a standard way of presenting relevant disclosures in all valuation reports to better facilitate comparisons. We repeat this recommendation here.

Recommendation 1: We recommend SPPA should consider the standard way of presenting relevant disclosures adopted for LGPS England and Wales valuation reports as at 31 March 2019, with a view to making a recommendation on standard way of presenting relevant disclosures for LGPS Scotland to Scottish Ministers in advance of the next valuation.

1.13 Even when information is presented consistently in fund valuation reports, differences in the underlying methodology and assumptions mean it is sometimes not possible to make like for like comparisons. The LGPS England and Wales Scheme Advisory Board has developed a basis for standardised funding calculations to enable cross comparison of funds.

Recommendation 2: We recommend that SPPA should developed a basis for standardised calculations, in addition to the funding calculations, to enable cross comparison of funds, and funds should report results on this standardised basis. The standardised basis would be to allow comparison only, not to suggest an appropriate funding basis.

1.14 An LGPS Scotland basis for standardised funding calculations will be a useful tool to enable cross comparison of funds, but it is not a substitute for carrying out the valuations consistently. We encourage all stakeholders to move towards assumptions differing from one fund to another only where local conditions justify it.

Solvency

1.15 We have no concerns over the solvency of the funds.

1.16 For open funds, solvency is dependent on employers being able to pay contributions as required, knowing these contributions may increase or decrease significantly in future. Because local funding bases are prudent (rather than best estimate), it is more likely than not that current contribution are more than sufficient to cover the benefits, and

[3] https://www.gov.uk/government/publications/local-government-pension-scheme-review-of-the-actuarial-valuations-of-funds-as-at-31-march-2016

future contributions can be lower. However, the funds are exposed to risks (such as future investment returns being lower than expected), and there is a chance that contributions remain at their current levels or even increase further in the long-term. In the short term, there is always a risk that contributions will increase or decrease following actuarial valuations.

1.17 Aberdeen City Council Transport Fund (a closed fund) retains the specific risks associated with the fund liabilities being backed only by private sector employers. The administering authority and the employer have made substantial progress in reducing this risk by paying additional deficit-reduction contributions. They have also agreed to merge with the Strathclyde No 3 Pension Fund, which brings a second employer into the fund (both employers are subsidiaries of the same company). Aberdeen City Council, the administering authority, has confirmed it would accept the liabilities of the Aberdeen City Council Transport Fund if the transport fund employers were all to withdraw without having fully secured the members' benefits.

Long-term cost efficiency

1.18 We have no concerns over the long-term cost efficiency of the funds.

1.19 We consider the rate of employer contributions has been set at an appropriate level to ensure long-term cost efficiency if that rate is sufficient to provide for the cost of current benefit accrual, with an appropriate adjustment to the rate for any surplus or deficit in the fund.

1.20 We would not normally expect to see employer contribution rates decreasing (reducing the burden on current taxpayers) at the same time as seeing the deficit recovery plan end point being extended further into the future (increasing the burden on future taxpayers). This is not an issue for many LGPS Scotland funds, because most are in surplus. But where a fund is in deficit and is considering reducing contributions, we suggest they consider maintaining the deficit recovery end point (or moving it forwards, bringing it nearer in time), rather than moving it backwards.

2 Introduction

2.1 This report is addressed to Scottish Ministers as the responsible authority for the purposes of subsection (4) of section 13 of the Public Service Pensions Act 2013 ("the Act"). Scottish Ministers appointed GAD to prepare this report. The report sets out the results of our review of the 2017 funding valuations of the Local Government Pension Scheme (Scotland) (LGPS Scotland). This report will be of relevance to administering authorities and other employers, actuaries performing valuations for the funds within the LGPS Scotland, the LGPS Scotland Scheme Advisory Board (SAB), HM Treasury (HMT) and the Chartered Institute of Public Finance & Accountancy (CIPFA), as well as other LGPS Scotland stakeholders. In this introduction we provide:

- background information on the LGPS Scotland and fund valuations
- background information on this review and section 13 of the Act
- details of the structure of this report, including the appendices
- discussion of the metrics and flags that we have used in this report, noting the improvement in outcomes compared with the previous review
- commentary on the role of the actuary and other stakeholders, noting that nothing in this report should be taken as criticism of administering authorities, their actuary, or other stakeholders
- discussion of the data and assumptions underpinning this review
- a note of our engagement with stakeholders
- a statement of compliance and limitations

The Local Government Pension Scheme and fund valuations

2.3 LGPS Scotland is a funded scheme. Periodic assessments are needed to ensure the fund has sufficient assets to meet its liabilities. Employer contribution rates may change, depending on the results of valuations. Scheme regulations set out when valuations are to be carried out.

2.4 Each LGPS pension fund is required to appoint its own fund actuary, who carries out the fund's valuation. The fund actuary uses a number of assumptions to value the liabilities of the fund. Liabilities are split between those that relate to the past (the past service cost), and those that relate to the future (the future service cost). The results of the valuation may lead to changes in employer contribution rates to meet both future and past service costs.

GAD's review and section 13

2.5 Section 13 applies for the first time for LGPS Scotland to the valuations as at 31 March 2017.

2.6 Subsection (4) of section 13 requires the Government Actuary as the person appointed by Scottish Ministers to report on whether four main aims are achieved, namely:

- compliance: whether the fund's valuation is in accordance with the scheme regulations
- consistency: whether the fund's valuation has been carried out in a way which is not inconsistent with the other fund valuations within LGPS Scotland
- solvency: whether the rate of employer contributions is set at an appropriate level to ensure the solvency of the pension fund
- long-term cost-efficiency: whether the rate of employer contributions is set at an appropriate level to ensure the long-term cost-efficiency of the scheme, so far as relating to the pension fund

2.7 Section 13 subsection (6) states that if any of the aims of subsection (4) are not achieved:

a) the report may recommend remedial steps;

b) the scheme manager must—

   i. take such remedial steps as the scheme manager considers appropriate, and

   ii. publish details of those steps and the reasons for taking them;

c) the responsible authority may—

   i. require the scheme manager to report on progress in taking remedial steps;

   ii. direct the scheme manager to take such remedial steps as the responsible authority considers appropriate.

2.8 We produced a 'Dry Run' of this report in respect of the 2014 valuations[4].

[4] LGPS Scotland: Section 13 Dry Run Report GAD August 2017

Structure of this report

2.9 In the remaining chapters in this report, we first provide some context in a funding analysis, then consider each of the four aims of section 13:

- chapter 3 funding analysis
- chapter 4 compliance
- chapter 5 consistency
- chapter 6 solvency
- chapter 7 long-term cost-efficiency

2.10 Appendices are contained in a separate document, and cover:

- appendix A: compliance
- appendix B: consistency
- appendix C: solvency
- appendix D: long-term cost-efficiency
- appendix E: data provided
- appendix F: assumptions
- appendix G: Section 13 of the Public Service Pensions Act 2013
- appendix H: extracts from other relevant regulations
- appendix I: allocation of Scottish local authorities to administering authorities

Metrics and flags

2.11 We have looked at a range of metrics to identify potential issues in respect of solvency and long-term cost-efficiency. Each fund's score under each measure is colour coded or flagged, where:

GREEN	indicates that there are no material issues that may contribute to a recommendation for remedial action in order to ensure solvency or long-term cost efficiency
AMBER	indicates a potential issue should be recognised, but in isolation would not usually contribute to a recommendation for remedial action in order to ensure solvency or long-term cost efficiency
RED	indicates a potentially material issue that may contribute to a recommendation for remedial action in order to ensure solvency or long-term cost efficiency

2.12 We have based the trigger points for these flags on a combination of absolute measures and measures relative to the bulk of the funds in scope.

Results

2.13 The 5 closed funds as at the valuation date would have raised concerns in respect of the solvency metrics. However, completed or planned mergers now leave only two closed funds, both of which have appropriate arrangements in place to ensure solvency. All 11 of the open funds had green flags on all solvency and long-term cost-efficiency metrics.

2.14 A green flag (that is, the absence of a red or amber flag) does not necessarily indicate that no risk is present. Similarly, where we do not suggest any specific remedial action, it does not mean scheme managers should not consider actions.

Limitations

2.15 We recognise the use of data and models has limitations. For instance, the data we have from valuation submissions and publicly available financial information is likely to be significantly less detailed than the data available to funds. We have designed our risk assessment framework to broadly assess scheme risks and indicate where we may want to engage further with schemes.

2.16 Because of the nature of this exercise, we have considered only those post valuation events that may already have been taken into account in the valuation disclosures.

2.17 We provide further detail in the solvency and long-term cost-efficiency chapters and appendices.

Exclusions

2.18 At the valuation date (31 March 2017) there were 16 funds. In July 2017, the Tayside Transport Fund merged with the Tayside Pension Fund. We have considered only the position of the merged fund. That was also the approach taken in the funding valuation.

2.19 In calculating the solvency and long-term cost efficiency metrics, we have considered only the 11 open funds.

The role of the actuary and other stakeholders

2.20 The following key has been used to identify the actuarial advisers for each fund:

Barnett Waddingham
Hymans Robertson
Mercer

2.21 Local valuation outputs depend on the local circumstances of each fund, the administering authorities' Funding Strategy Statements, and the actuary's work on the valuation.

2.22 We have reported where the review raised concerns in relation to the aims of section 13. It is not our role to express an opinion as to whether any concerns raised are driven by the local circumstances of a fund, or the actions of authorities, their actuary, or other stakeholders. Nothing in this report should be taken as criticism of authorities, their actuary, or other stakeholders.

Data and assumptions

2.23 Our metrics are based on publicly available data and data provided to GAD by or on behalf of administering authorities. Further details are in Appendix E.

2.24 To make meaningful comparison of valuation results, we have referred to results restated on two bases:

- the standard basis established by the LGPS England and Wales SAB (standard SAB basis), as calculated by us
- a market consistent, best estimate basis derived by us

2.25 Further details of both these bases are set out in Appendix F.

2.26 The market consistent basis is GAD's best estimate as at 31 March 2017, based on our views of likely future returns on each asset class across the Scheme. Future asset returns are uncertain and there is a wide range of reasonable views on what future asset returns will be and therefore the best estimate discount rates should be. We acknowledge there are other reasonable best estimate bases, possibly giving materially different results.

2.27 This use of these standard bases does not imply the bases are suitable to be used for funding purposes:

- The SAB standard basis is not market consistent, and
- The market consistent basis is a best estimate (while regulations and CIPFA guidance call for prudence to be adopted). Our best estimate is based on the average investment strategy for the overall scheme, and so will not be pertinent to any given fund's particular investment strategy. Further, it does not take into account any anticipated changes in investment strategy that may be planned or in train.

2.28 The local valuations and our calculations underlying this report are based on specific sets of assumptions about the future. Some of our solvency measures are stress tests. They are not intended to indicate a worst-case scenario.

Engagement with stakeholders

2.29 In preparing this report, we are grateful for helpful discussions with and cooperation from:

- the Scottish Public Pensions Agency
- fund administrators
- actuarial advisors
- LGPS Scotland Scheme Advisory Board

2.30 We note that this report is GAD's alone and the stakeholders above are not responsible for the content.

2.31 We are committed to preparing a section 13 report that makes practical recommendations to advance the aims in the legislation. We will continue to work with stakeholders to advance these aims and expect that our approach to section 13 will continue to evolve to reflect ever-changing circumstances and feedback we receive.

Compliance and limitations

2.32 This work has been carried out in accordance with the applicable Technical Actuarial Standard: TAS 100 issued by the Financial Reporting Council (FRC). The FRC sets technical standards for actuarial work in the UK.

2.33 GAD has no liability to any person or third party for any act or omission taken, either in whole or in part, on the basis of this report. No decisions should be taken on the basis of this report alone without having received proper advice. GAD is not responsible for any such decisions taken.

2.34 We understand and assume that there is no regulatory authority assumed by or conferred on the Government Actuary in preparing this or any future section 13 report, and neither does the appointment to report under section 13 give the Government Actuary any statutory power to enforce actions on scheme managers (or others).

3 Funding analysis

FUNDING ANALYSIS

- **This chapter provides the reader with some context in terms of the size of fund liabilities, funding levels and investment strategies.**
- **The liabilities are dominated by Strathclyde No 1 and Lothian funds. Closed funds represent a small proportion of total liabilities.**
- **Investment strategy for open funds is mainly return seeking. Closed funds have on average around 75% of their assets in defensive classes.**

3.1 Scottish local government consists of 32 local authorities. These participate in the LGPS Scotland through eleven administering authorities. The local authorities are allocated across these administering authorities as shown in Appendix I.

3.2 Chart 3.1 shows the proportion of scheme liabilities relating to each fund. Total liabilities on funds' own valuation bases is £42bn. Assets at the valuation date were £43bn.

3.3 Strathclyde No 1 and Lothian Pension Funds together represent just over 60% of total liabilities. Closed funds represent less than 1.1% of total liabilities.

Chart 3.1: Relative size of liabilities on local bases by fund

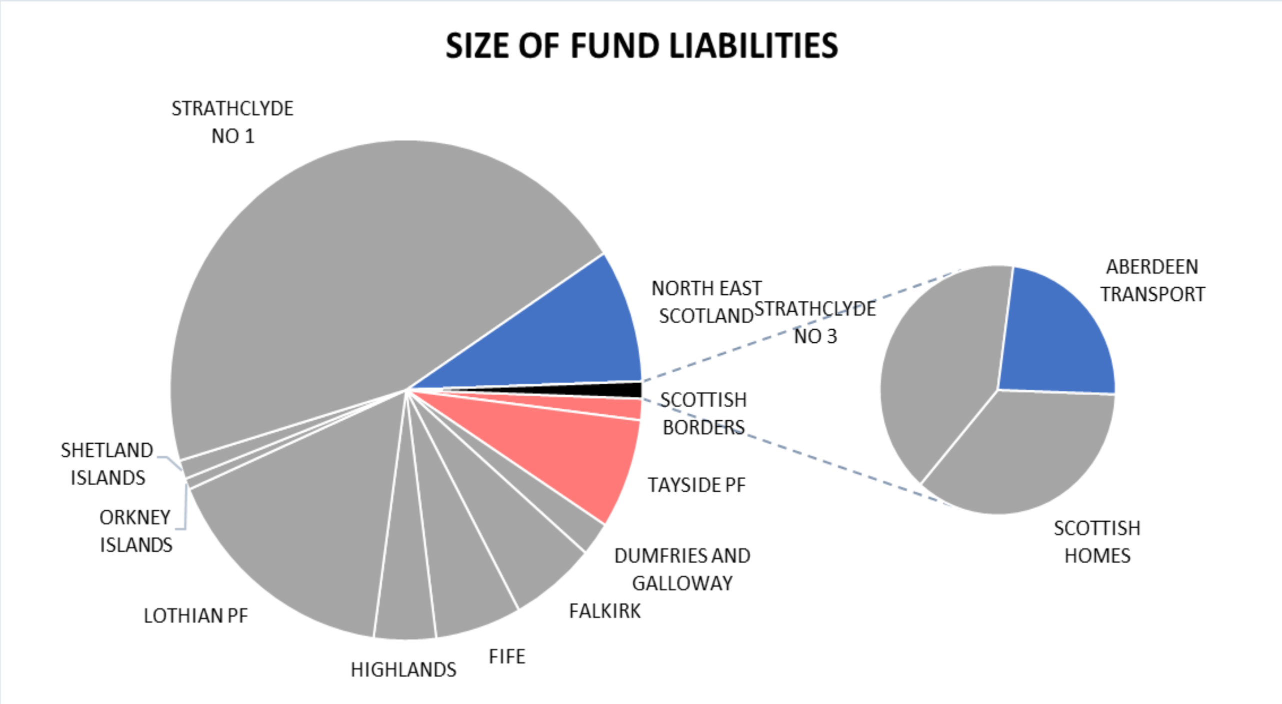
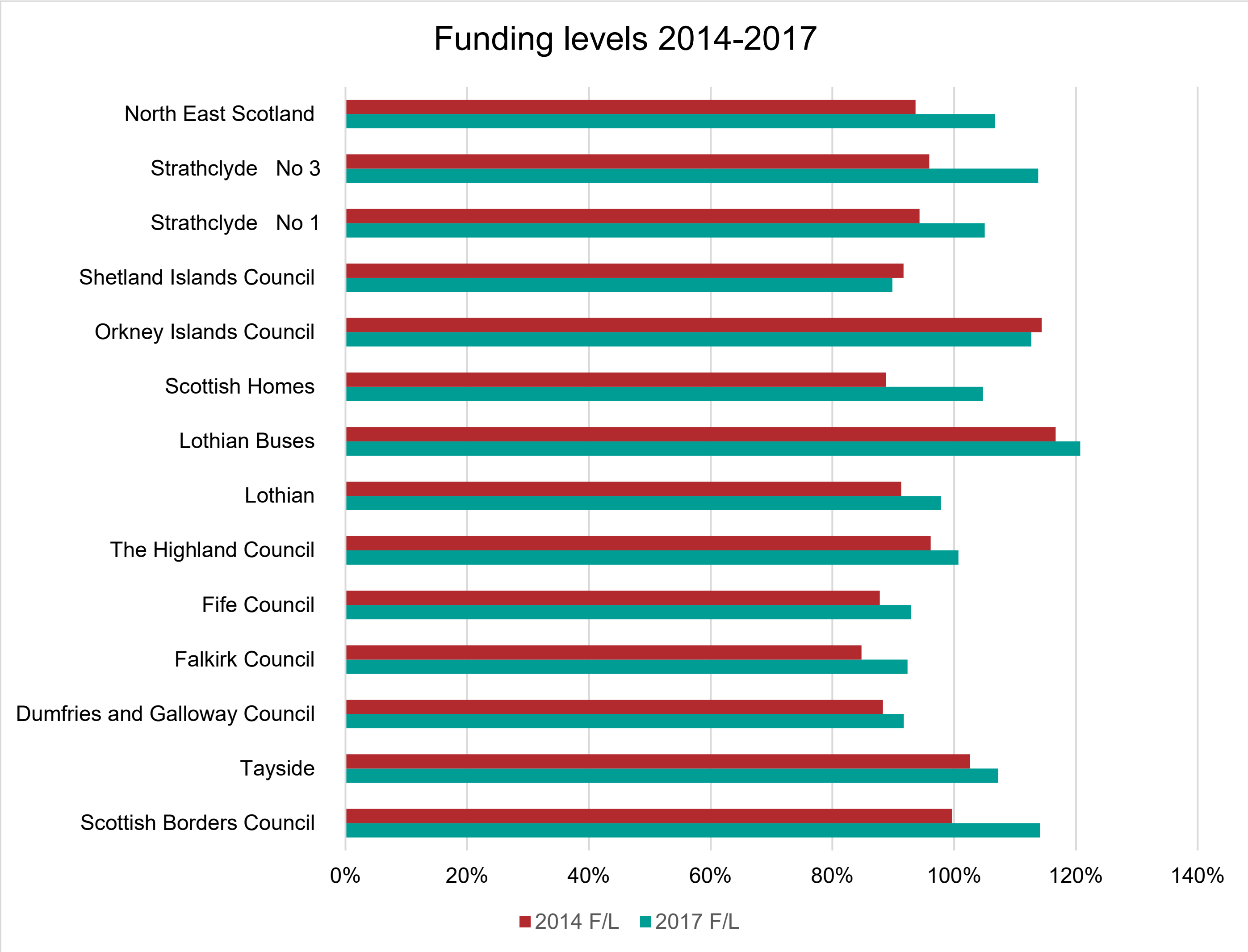


Chart 3.2: Actual assets, funding levels and liabilities on local bases by fund

Fund	Assets £m	Liability (local basis) £m	2017 F/L %
Strathclyde No 1	19,699	18,761	105
Lothian	6,598	6,744	98
North East Scotland	3,815	3,576	107
Tayside	3,162	2,950	107
Fife	2,259	2,431	93
Falkirk	2,219	2,403	92
Highland	1,768	1,755	101
Dumfries and Galloway	837	913	92
Scottish Borders	654	573	114
Lothian Buses	488	404	121
Shetland Islands	450	501	90
Orkney Islands	335	298	113
Strathclyde No 3	211	185	114
Scottish Homes	171	163	105
Aberdeen City Transport	100	107	94
Total	42,766		

3.4 All but two of the funds have improved their funding level on their local funding assumptions basis. Chart 3.2 shows how the funding levels have changed between 2014 and 2017. The total scheme assets have increased by over £12bn.

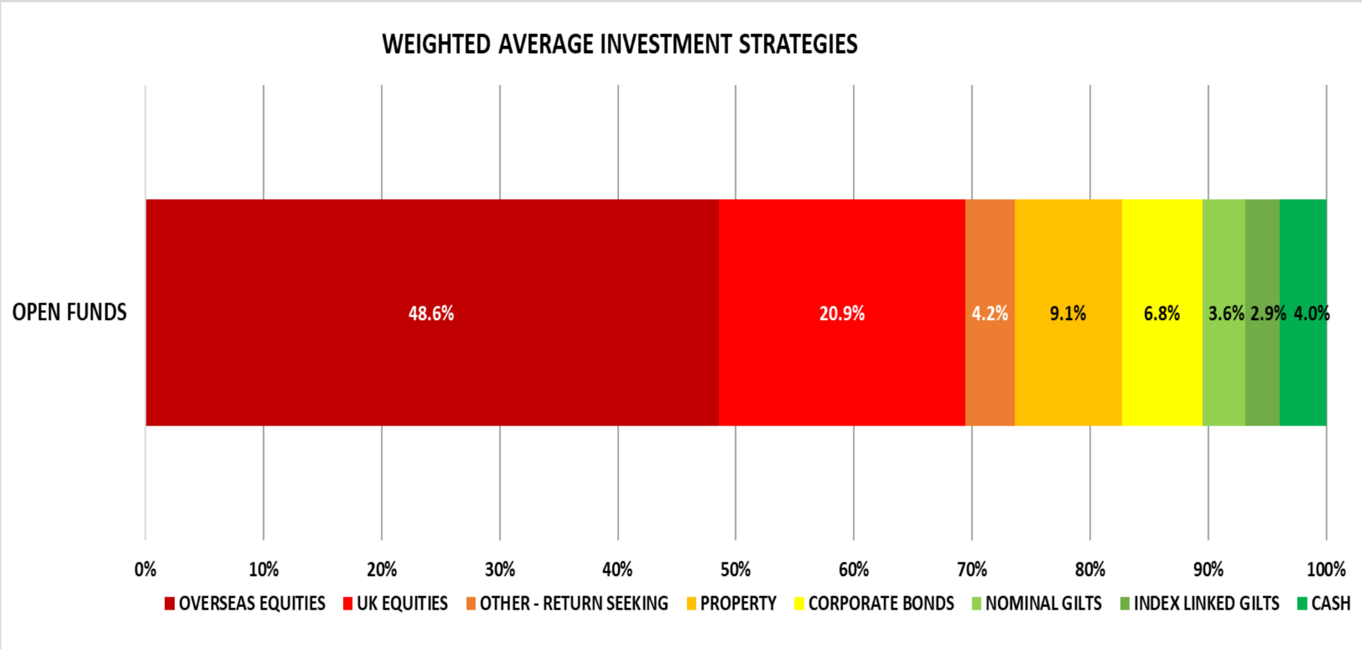
Chart 3.3 Funding level: 2017 compared to 2014



(Showing Combined Tayside Transport and Tayside Pension)

3.5 Chart 3.3 shows that for the open funds the average investment strategy consists of almost 80% return seeking assets (if we include property holdings). This is consistent with an open fund with a high proportion of active members and low covenant risk.

Chart 3.3: Open funds' weighted average investment strategy



3.6 The closed funds are mainly invested in defensive assets.

3.7 Chart 3.4 below shows the primary contribution rates and secondary contribution rates to be paid by the employers on average over the whole of each fund. Most reports provided the secondary contribution rate expressed as percentage of pay, which greatly assists comparison across the schemes.

Chart 3.4: Primary and secondary contribution rates

Fund	Actuary	Primary Contribution Rate	Secondary Contribution Rate			Actual pensionable payroll as at 31/3/17 £m
			2018/19	*2019/20*	*2020/21*	
Strathclyde No 1 Fund	Hymans Robertson	27.10%	-7.50%	-7.50%	-7.50%	1,924
Lothian	Hymans Robertson	31.80%	-£76m	-£76m	-£75m	669
North East Scotland	Mercer	22.00%	-2.6%	-2.6%	-2.6%	472
Tayside	Barnett Waddingham	21.50%	-4.4% -£19m	-4.4% -£19m	-4.4% -£20m	409
Fife Council	Hymans Robertson	20.50%	+£11m	+£11m	+£12m	292
Falkirk Council	Hymans Robertson	18.70%	+£8.5m	+£10m	+ £12m	287
The Highland Council	Hymans Robertson	17.80%	+£4m	+£4m	+£4m	205
Dumfries and Galloway Council	Hymans Robertson	21.80%	-£99k	-£102k	-£105k	92
Scottish Borders Council	Barnett Waddingham	20.60%	-2.6%	-2.6%	-2.6%	75
Shetland Islands Council	Hymans Robertson	22.10%	-1.5%	-1.5%	-1.5%	61
Orkney Islands Council	Hymans Robertson	20.70%	-2.5%	-3.1%	-3.7%	37
Strathclyde No 3 Fund	Hymans Robertson	53.30%	-53.3%	-53.3%	-53.3%	3
Aberdeen City Council Transport Fund	Mercer	58.50%	-25.5%	-25.5%	-25.5%	2

4 Compliance

KEY COMPLIANCE FINDINGS

- **All reports checked contained a statement of compliance**
- **All reports checked contained full confirmation of each of the requirements in regulation 60.**

We conclude the aims of section 13 were fully achieved under the heading of compliance.

4.1 Section 13 requires that GAD must report on whether the actuarial valuations of the funds have been completed in accordance with the scheme regulations, in particular regulation 60.

4.2 There is a great deal of consistency between the actuarial methodologies and the presentation of the actuarial valuation reports for funds the same firm of actuarial advisors advises (see chapter on Consistency). Accordingly, GAD has selected one fund as a representative example from each of the firms of actuarial advisors, and has assessed whether these reports have been completed in accordance with Regulation 60[5].

4.3 We found the actuarial valuation reports for each of the selected funds have been completed in accordance with Regulation 60. We have therefore concluded that the compliance criteria of section 13 have been achieved. Note this is not a legal opinion.

4.4 In reviewing compliance, we focused on the actuarial valuation reports produced under Regulation 60. We have not systematically reviewed other documents relating to the valuation, such as, for example, Funding Strategy Statements prepared under Regulation 56.

4.6 The comments we make in subsequent chapters on consistency, solvency and long-term cost-efficiency do not imply we believe the valuations are not compliant with the regulations. These comments relate only to whether the valuations appear to achieve the aims of section 13.

[5] The statutory instrument governing the actuarial valuations for the LGPS Scotland as at 31 March 2017 was Regulation 60 of the Local Government Pension Scheme (Scotland) Regulations 2014 (SSI 2014 No. 164). These regulations have subsequently been superseded and revoked.

5 Consistency

KEY CONSISTENCY FINDINGS

There has been an improvement in relation to disclosure of contribution rates.

We recommend the SPPA considers how best to implement a standard way of presenting relevant disclosures.

The discount rates show a marked difference for funds advised by different actuarial advisors that are not apparently due to local differences.

We recommend that the SPPA should developed a basis for standardised funding calculations to enable cross comparison of funds.

5.1 Section 13 requires that GAD must report on whether the actuarial valuation has been carried out in a way which is not inconsistent with other valuations.

5.2 In this chapter:

- we provide some background on the legislation, and previous valuations
- we discuss two types of consistency: ‘presentational’ and ‘evidential’
- we consider presentational consistency in more detail, looking at the presentation of employer contribution rates and the analysis of the change in these rates since the previous valuation
- we consider evidential consistency in more detail, looking at liability values and discount rates
- we conclude and make recommendations

Background: legislation and previous valuations

5.3 The precursor to the Public Service Pension Act 2013 was the Hutton review. The 'Independent Public Service Pensions Commission: Final Report - 10 March 2011'[6] made the following recommendation:

'Ex.13 Transparency and effective oversight of public service schemes is required for public service workers and taxpayers to have confidence in the system and improve the quality of debate about the future of public service pensions. Currently there is inconsistency in what scheme data and assessments, such as valuations, are published and such information is often difficult to access. This lack of transparency prevents comparisons and hinders analysis.'

'Recommendation 6: All public service pension schemes should regularly publish data which, as far as possible, is produced to common standards and methodologies and is then collated centrally. This information should be of a quality that allows simple comparisons to be made across Government, between schemes and between individual Local Government Pension Scheme (LGPS) Funds.'

5.4 Section 13(4)(b) of the Public Service Pension Act 2013 requires us to report on whether actuarial valuations have been carried out in a way which is not inconsistent with other valuations completed under the scheme regulations.

5.5 We consider consistency relates to the ability to compare two actuarial valuation reports and draw appropriate conclusions. This relates to how key information is presented as well as whether the outcomes can be compared. We consider it is wholly appropriate for assumptions to be set relative to local conditions, but that this should be clearly explained and permit such comparisons to be made.

5.6 Note that Regulation 60 of the 2014 Regulations does not include a requirement that the actuarial valuations are carried out in a way which is not inconsistent with other valuations completed under the scheme regulations. However, section 13 of the 2013 Act does require us to comment whether they have been carried out in this way.

5.7 We found several improvements in consistency of contribution rate disclosure since the Dry Run.

'Presentational' and 'Evidential' consistency

5.8 Readers of the actuarial valuations face two difficulties in making meaningful comparisons between the reports:

- **Presentational**: Information may be presented in different ways in different reports (for example, funding levels), and sometimes information is contained in some reports but not others (for example, life expectancies), so readers may have some difficulties in locating the information they wish to compare. We call this presentational inconsistency.

[6] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/207720/hutton_final_100311.pdf

- **Evidential**: Even when the reader has located the relevant information (for example, funding levels), differences in the underlying methodology and assumptions mean that it is not possible to make a like for like comparison. We call this evidential inconsistency. We believe that local circumstances may merit different assumptions (for example, financial assumptions are affected by the current and future planned investment strategy, different financial circumstances leading to different levels of prudence adopted). However, there appears to be a strong link between the discount rate and the firm of actuarial advisors, rather than the differences reflecting the local circumstances of the funds.

5.9 Under both aspects there is a great deal of consistency when comparing any two reports produced by the same firm of actuarial advisors, but comparisons between reports of different firms of actuaries are more difficult.

Presentational Consistency

5.10 We have taken a report produced by each firm of actuarial advisors to assess whether the information disclosed is consistent across all three advisors. The chosen funds are:

- Strathclyde Pension Fund No 1 Fund: Hymans Robertson
- Tayside Pension Fund: Barnett Waddingham
- North East Scotland Pension Fund: Mercer

5.11 All three funds provide most key information we expect from an actuarial valuation report. Each report also contains a section that summarises the changes to the funding position since the 2014 reports, and these are presented in very similar ways making for easy comparison.

Contribution Rates

5.12 Contribution rates include the following components:

- primary contribution rate
- secondary contribution rate
- member contribution rate

5.13 The primary contribution rates are easily found in the valuation reports for each fund, and, as they are all expressed as a percentage of pay, are easily comparable. The Strathclyde No 1 report does not give the overall member contribution rate, while the other two reports do.

5.14 Secondary contribution rates are more complex. Table 5.1 summarises the information about secondary contribution rates that the valuation reports give for the different firms of actuarial advisors.

Table 5.1: Secondary Contribution Rates

Fund	WHOLE FUND SECONDARY CONTRIBUTION RATES		
	2018	**2019**	**2020**
Tayside **(Barnett Waddingham)**	-£18,671k or -4.4% of pensionable pay	-£19,379k or -4.4% of pensionable pay	-£20,113k or -4.4% of pensionable pay
Strathclyde Pension Fund No 1 **(Hymans Robertson)**	-7.5% of pensionable pay	-7.5% of pensionable pay	-7.5% of pensionable pay
North East Scotland **(Mercer)**	-2.6% of pensionable pay	-2.6% of pensionable pay	-2.6% of pensionable pay

5.15 It is easy to compare the secondary contribution rates across these three reports, because they are expressed as a percentage of pay (Tayside also provided the secondary contribution rate expressed as monetary amount).

Change in contribution rates since the previous valuation

5.16 We note that regulations have changed with Common Contributions being replaced by Primary and Secondary contribution rates for employers. This makes comparison with the previous valuation difficult. Ideally, in future, we would expect to see a comparison of recommended primary and secondary contribution rates with those from the previous valuation.

Table 5.2 Comparison with prior valuation contribution rates

Fund	Comparison Provided
Tayside **(Barnett Waddingham)**	Analysis of the change in primary contribution rates, but no comparison of total employer rates
Strathclyde Pension Fund No 1 **(Hymans Robertson)**	Quote the 2014 common contribution rate[7] alongside a comment that the change in regulatory regime and guidance on contribution rates means that a direct comparison to the whole fund rate at 2017 is not appropriate.
North East Scotland **(Mercer)**	Breakdown of the primary employer contribution rate compared with the previous valuation

5.17 Thus, a comparison with aggregate employer rates is provided in some cases. Others provide a comparison of primary rates only. We believe such a comparison is useful to enable the reader to understand the total level of contributions being paid into the fund.

5.18 Overall, there has been an improvement in consistency of presentation of disclosures in the 2017 valuations, compared with the 2014 valuations. However, the information is sometimes presented in different places in the reports. We make a recommendation below on a standard way of presenting relevant disclosures in all valuation reports to better facilitate comparisons.

Evidential Consistency

5.19 We have considered whether the local fund valuations have been carried out in a way which is not inconsistent with each other. There are significant inconsistencies in the methodologies and assumptions adopted. These inconsistencies make it difficult for users to compare reports, and in our view do not serve any clear purpose.

5.20 In the paragraphs that follow we:

- Look at the range of difference in the value assigned to the liabilities between the local basis and the standard SAB basis, which illustrates the impact of inconsistencies in the local bases
- Consider the discount rate in detail, to illustrate the apparent inconsistences

[7] The common contribution rate (CCR) has been replaced by primary and secondary contribution rates in legislation. In some cases, the CCR bore no relationship to actual contributions paid by employers.

Value assigned to the liabilities

5.21 The value assigned to liabilities in each actuarial valuation report has been calculated on assumptions set locally, and in some cases the value of assets used in the valuation is different to the market value of fund assets. Differing levels of prudence are to be expected and may be reflective of local variations in risk appetite, but care needs be taken when comparing results.

5.22 In order to enable a cross comparison of funds, we have calculated the liabilities on a standardised basis. We have calculated a standardised funding level as the market value of assets divided by the liabilities on the standardised basis. Chart 5.4 shows a comparison of local basis funding level with the standardised basis funding level. We have expressed the latter funding level relative to the LGPS Scotland whole scheme funding level on the standardised basis. For example, Orkney Islands' funding level on the standard basis is 17% higher than the overall funding level for the scheme on the same basis.

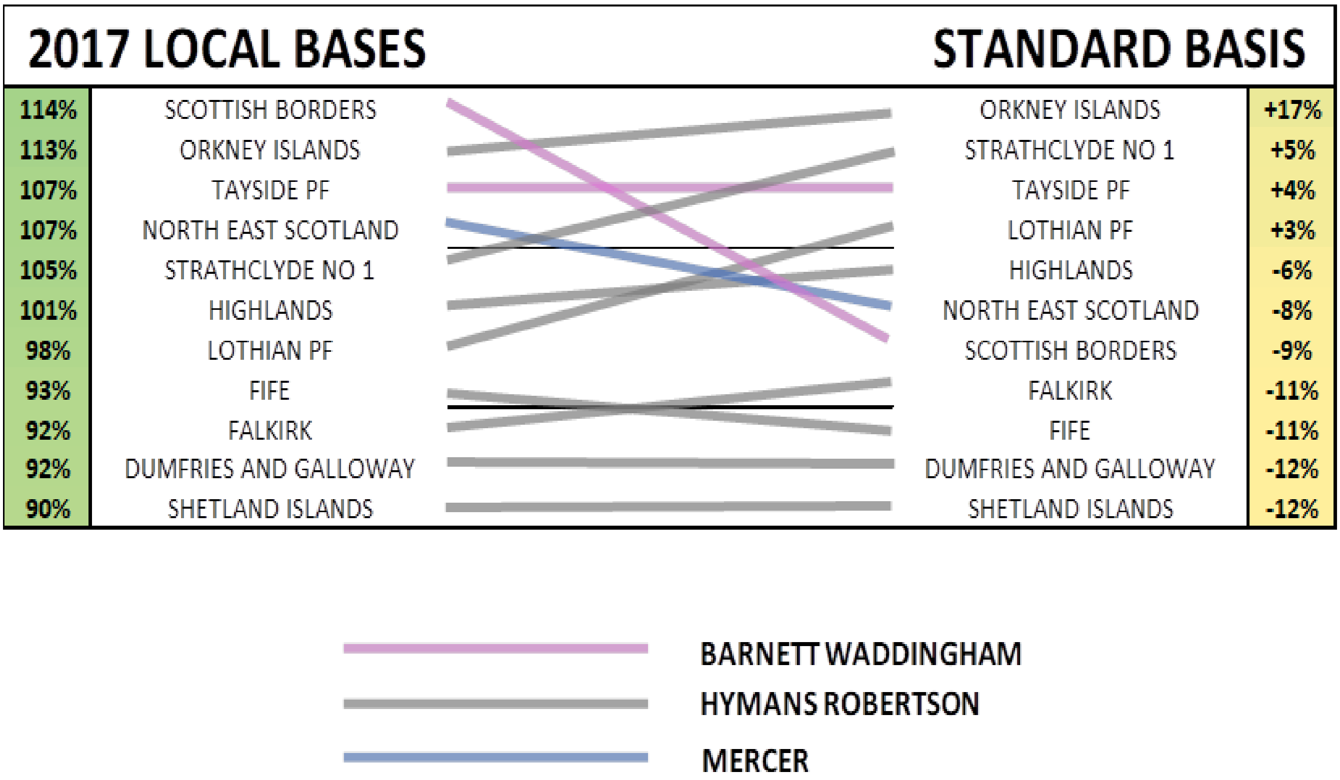
5.23 This presentation allows a clear ranking, and easy comparison, of funding levels. The change in rank for a fund between the left and right sides of the table is due to the relative gap between the local valuation basis and the standard basis, compared to the other funds. The level of prudence adopted in setting assumptions is one of the main reasons for the range of differences between the local basis and the standard basis.

5.24 The table implicitly indicates the variation in levels of prudence adopted in each valuation, and therefore the difficulty in drawing conclusions based on liability values.

For example, Strathclyde No 1 ranks second on the standard basis, but fifth on the local basis, suggesting the local basis is relatively more prudent than the funds ranked above it, other than Orkney Islands.

This shows the difficulty for the reader in drawing comparisons between reports.

Chart 5.4: Standardising Local Valuation Results



5.25 It would be useful for readers to be able to make meaningful comparisons between funding levels without performing complicated calculations. We make a recommendation below on standardised disclosures which is intended to assist when comparing funds.

Assumptions adopted

5.26 We compared the discount rates used in the funds' valuations to consider whether variations in that assumption are justified in terms of local conditions.

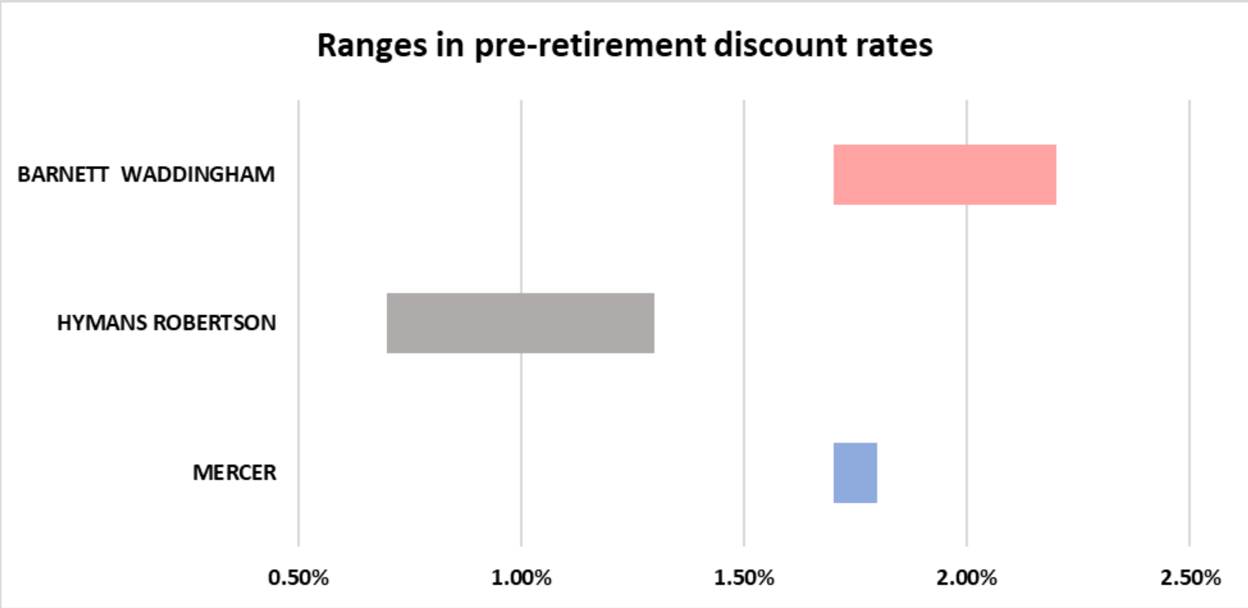
Discount Rates

5.27 We would expect some fund by fund variation due to asset strategy and different levels of risk appetite; hence we do not consider the fact that funds adopt different discount rates to be a cause for concern. Future asset returns are highly uncertain, and hence there is a wide range of reasonable assumptions that may be adopted. The actuary has to have regard to the fund's Funding Strategy Statement.

5.28 We are not stating that any particular set of assumptions adopted is not reasonable. However, it does appear that they are not consistent with each other.

5.29 Chart 5.5 below illustrates one aspect of this difference in assumptions applied by the three firms of actuarial advisors. The funds advised by Hymans Robertson tended to use the lowest real discount rate, that advised by Mercer sits in the middle of the range, while the funds advised by Barnett Waddingham have the highest real discount rates used for assessing past service liability values[8].

Chart 5.5: Ranges in discount rates (net of CPI assumption) for open funds



There appears to be a strong link between the discount rate and the firm of actuarial advisors. If discount rates differed from one fund to another only where local conditions justified it, we would not expect to see this link with the firm of actuarial advisors. In this regard, we consider the aim of section 13 under consistency may not be achieved.

5.30 In our Section 13 report on the England and Wales scheme[9], we investigated consistency in more detail than in this report. That report found a range of different assumptions (mortality improvements, salary increases, and commutation, as well as discount rate) that exhibited a marked difference for funds advised by the different firms of actuarial advisors. The analysis above shows a similar picture in Scotland in respect of the discount rate. We have not analysed assumptions other than the discount rate in respect of LGPS Scotland, but it may be that they would exhibit similar inconsistencies.

5.31 The recommendations we make below are intended to assist readers in making cross comparison of funds, but they are not a substitute for carrying out the valuations consistently. We encourage all stakeholders to move towards assumptions differing from one fund to another only where local conditions justify it.

[8] The discount rates in chart 5.5 are for past service liabilities only. For setting future service contribution rates, Hymans Robertson use a stochastic approach[8]. Mercer follow a deterministic method but add eg 0.5% to the discount rate for setting contribution rates.

[9] https://www.gov.uk/government/publications/local-government-pension-scheme-review-of-the-actuarial-valuations-of-funds-as-at-31-march-2016

5.32 We acknowledge, given there are multiple funds advised by three different actuarial advisors, that there is difficulty ensuring consistency of methodologies and assumptions used in the actuarial valuations. Consistency is, however, one of the four aims of section 13 and we consider that, to improve consistency, stakeholders should work together to overcome some of these difficulties.

Conclusion and Recommendations

5.33 Section 13 requires valuations to be carried out in a way that is not inconsistent with other LGPS fund valuations. We interpret this in a presentational and evidential way. We consider the criterion has not been achieved if a user is not able to draw comparisons between the results from two valuation reports.

5.34 As part of the LGPS England and Wales Section 13 report, we recommended that the Scheme Advisory Board for England and Wales should consider how best to implement a standard way of presenting disclosures of key information in all valuation reports to better facilitate comparisons.

> **Recommendation 1: We recommend SPPA should consider the standard way of presenting disclosures of key information adopted for LGPS England and Wales valuation reports as at 31 March 2019, with a view to making a recommendation on standard way of presenting relevant disclosures for LGPS Scotland to Scottish Ministers in advance of the next valuation.**

5.35 Even if the information is presented consistently in fund valuation reports, differences in the underlying methodology and assumptions mean that it is not possible to make a like for like comparisons. The LGPS England and Wales Scheme Advisory Board has developed a basis for standardised funding calculations to enable cross comparison of funds.

> **Recommendation 2: We recommend that SPPA should develop a basis for standardised calculations, in addition to the funding calculations, to enable cross comparison of funds, and funds should report results on this standardised basis. The standardised basis would be to allow comparison only, not to suggest an appropriate funding basis.**

6 Solvency

KEY SOLVENCY FINDINGS

Most funds in LGPS Scotland meet the conditions required to be able to demonstrate solvency. In general, funding levels have improved significantly across the scheme since the dry run.

All 11 open funds tested had green flags on all solvency measures.

LGPS Scotland funds have a high proportion of assets invested in return seeking assets, and contribution rates may need to increase if asset values fall for a sustained period. Although we did not conclude that the aims of section 13 were not achieved, we believe fund managers should be aware of this risk.

6.1 Under section 13(4)(c) of the Act the Government Actuary must report on whether the rate of employer contributions to the fund is set at an appropriate level to ensure the solvency[10] of the pension fund.

6.2 In this chapter we:

- provide a definition of solvency
- provide some background on solvency issues, and the measures and flags we have used in considering them
- set out flagged solvency risks for open funds
- discuss the solvency risks for the remaining closed funds

Definition of Solvency

6.3 We do not believe solvency means that a pension fund should be 100% funded at all times. Rather, in line with the definition in CIPFA's Funding Strategy Statement Guidance[11] which we adopt for the purposes of section 13, we consider that the rate of employer contributions has been set at an appropriate level to ensure solvency of the pension fund if:

[10] The explanatory notes to the Act state that solvency means that the rate of employer contributions should be set at *"such a level as to ensure that the scheme's liabilities can be met as they arise"*.

[11] http://www.cipfa.org/policy-and-guidance/publications/p/preparing-and-maintaining-a-funding-strategy-statement-in-the-lgps-2016-edition

- the rate of employer contributions is set to target a funding level for the whole fund (assets divided by liabilities) of 100% over an appropriate time period and using appropriate actuarial assumptions

and, either:

- employers collectively have the financial capacity to increase employer contributions, and/or the fund is able to realise contingent assets should future circumstances require, in order to continue to target a funding level of 100%

or

- there is an appropriate plan in place should there be, or there is expected in future to be, no or a limited number of fund employers and/or a material reduction in the capacity of fund employers to increase contributions as might be needed

Open Funds

6.4 The aggregate funding level on prudent local bases has improved from 94% at 2014 to 102% at 2017; 6 out of the 11 open funds are fully funded on their prudent local bases.

6.5 In the table below we give the results of the solvency measures we have used for each of the individual funds.

6.6 The SAB basis is a useful measure to compare the relative funding position of each fund, but it is not a market related basis, and is therefore not directly appropriate for funding purposes. Our definition of solvency does not require a fund to be 100% funded on any given basis at all times. Rather, this measure gives an indication of the extent of remedial action that may be required to ensure solvency.

Table 6.1 – Results of solvency measures

Pension fund	Open fund	Funding Level relative to overall average	Asset shock
Scottish Borders	Yes	-9%	6.3%
Tayside Pension Fund	Yes	+4%	5.7%
Dumfries and Galloway	Yes	-12%	6.4%
Falkirk	Yes	-11%	4.3%
Fife	Yes	-11%	5.0%
The Highland Council	Yes	-6%	5.6%
Lothian Pension	Yes	+3%	6.7%
Orkney Islands Council	Yes	+17%	6.3%
Shetland Islands Council	Yes	-12%	5.5%
Strathclyde No 1	Yes	+5%	6.9%
North East Scotland	Yes	-8%	6.1%

Asset shock

6.7 Asset shock considers the scenario of a sustained reduction in the value of return seeking assets. For example, this could be a market correction in which asset values do not immediately recover, and therefore cannot be absorbed by a change in assumptions. In this scenario we model the additional contributions that would be required to meet the emerging deficit (as opposed to the total contributions required following the shock – that is, we are looking at where there is a risk of large changes to the contribution rate, rather than a risk of the total contribution rate exceeding some threshold).

6.8 A shock which generates high additional contributions as a proportion of pensionable pay generates a flag. However, all funds remained in surplus on the best estimate basis following the asset shock, and so received a green flag on this measure. Funds should still be aware of the risks and potential impact on contribution rates. More detail is given in Appendix C.

6.9 Based on the asset liability analysis we undertook for our report on the England and Wales scheme, in the medium to longer term, employer contributions are expected to fall. This reflects reducing deficit repair contributions and expected asset outperformance from growth assets. However there remains a risk that contributions could become materially higher than current levels.

Closed Funds

6.10 Funds closed to new members typically have decreasing payrolls, and funds which may be large relative to that payroll. This may lead to reduced scope for employers to be able to meet variations in contributions. This in turn means that they may require outside funding in the future, which in turn may be uncertain, for example if there is no specific commitment from a guarantor.

6.11 There are currently only three remaining closed funds in the LGPS Scotland: Scottish Homes Pension Fund, Strathclyde No. 3 and Aberdeen City Council Transport Fund

6.12 This follows recent mergers: Tayside Transport Fund with Tayside Pension Fund and Lothian Buses Pension Fund with Lothian Pension Fund. Both these mergers represent major advances in managing the solvency risks within the LGPS Scotland scheme.

6.13 Strathclyde No. 3 Pension Fund has agreed to merge into Aberdeen City Council Transport Fund. The merger is expected to complete at the end of 2019.

Scottish Homes Pension Fund

6.14 Scottish Homes Pension Fund has no remaining active members. The liabilities are guaranteed by the Scottish Government. We therefore consider it is not subject to any solvency risk.

Strathclyde No. 3 Pension Fund

6.15 As set out in the No. 3 Fund’s Funding Strategy Statement, had any exit payments ultimately been insufficient to meet the liabilities of the fund, then recourse would have been to the Strathclyde No.1 Fund and its employers. Following the merger now underway, the Fund will have no connection to the Strathclyde No 1 Pension Fund and its employers.

6.16 The Funding Strategy Statement did not explicitly identify which parties would be responsible for the liabilities if the employer defaulted at exit. However, the merger with Aberdeen City Council Transport Fund resolves this issue from the perspective of the No. 3 Fund, and no further action is needed.

Aberdeen City Council Transport Fund

6.17 From our engagement with the Aberdeen City Council Transport Fund, we understand:

- Aberdeen City Council Transport Fund is a separate fund from North East Scotland Pension Fund (NESPF) with the same administering authority, Aberdeen City Council.

- the administering authority has confirmed it would accept the liabilities of the Aberdeen City Council Transport Fund if the transport fund employers were all to withdraw without having fully secured the members' benefits.

6.18 Strathclyde No.3 Pension Fund will merge with Aberdeen City Council Transport fund at the end of 2019. The merger is currently underway. Aberdeen City Council will assume responsibility for the merged fund.

6.19 There are two employers associated with the merged fund: First Aberdeen and First Glasgow, both subsidiaries of First Group. We understand revised admission agreements for both First Aberdeen and First Glasgow are due to be signed imminently (at the time of writing). Included in the agreements is a guarantee at group level. We further understand there will be a separate agreement signed imminently to provide a cross guarantee between First Aberdeen and First Glasgow.

6.20 The revised admission agreement and the cross guarantee strengthen the employer covenant as the First Group ultimately stands behind the fund, not just the individual subsidiaries.

6.21 From our engagement we understand the fund plans to use the merger as an opportunity to give greater clarity on the fund's approach to the treatment of employer exit plans, exit payment defaults and orphan liabilities. We would welcome that initiative.

6.22 It would be helpful if the fund's position in case of employer default and the treatment of orphan liabilities could be documented in the Funding Strategy Statement to provide greater clarity and so that all parties are aware of and agree their responsibilities.

7 Long-term cost-efficiency

KEY LONG-TERM COST EFFICIENCY FINDINGS

All open funds had green flags on all long-term cost efficiency measures,

We suggest all funds review their funding strategy statement to ensure handling of surplus/deficit is fair to both current and future taxpayers.

7.1 Under section 13(4)(c) of the Act, the Government Actuary must report on whether the rate of employer contributions to the pension fund is set at an appropriate level to ensure the long-term cost-efficiency[12] of the scheme, so far as relating to the pension fund.

7.2 In this chapter:

- we provide a definition of long-term cost-efficiency
- we provide some background on long-term cost-efficiency issues, and the measures and flags we have used in considering them

Definition of Long-term cost-efficiency

7.3 For the purposes of section 13, we adopt the definition in CIPFA's Funding Strategy Statement Guidance[13]. We consider the rate of employer contributions to have been set at an appropriate level to ensure long-term cost-efficiency if the rate of employer contributions is sufficient to provide for the cost of current benefit accrual, with an appropriate adjustment to that rate for any surplus or deficit in the fund.

Long-term cost efficiency measures

7.4 Long-term cost-efficiency relates to not deferring payments too far into the future so that they affect future generations of taxpayers disproportionately.

[12] Explanatory notes to the Act state that: "Long-term cost-efficiency implies that the rate must not be set at a level that gives rise to additional costs. For example, deferring costs to the future would be likely to result in those costs being greater overall than if they were provided for at the time."

[13] http://www.cipfa.org/policy-and-guidance/publications/p/preparing-and-maintaining-a-funding-strategy-statement-in-the-lgps-2016-edition

7.5 The following table set out the measure we use to assess long-term cost efficiency for the open funds. Further details are in appendix D.

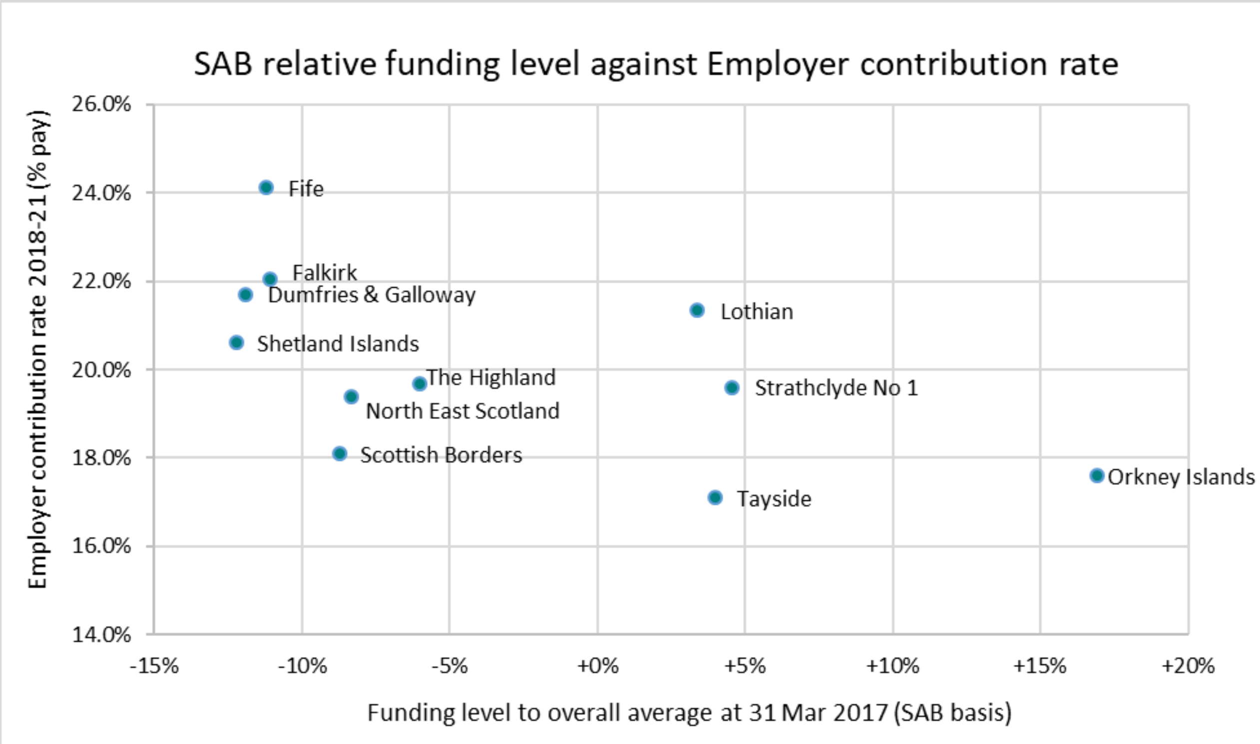
Table 7.1 – Results of long-term efficiency measures

		Relative considerations			Absolute considerations	
Pension fund	Maturity	Deficit period	Required return	Surplus retention	Return scope	Deficit reconciliation
Scottish Borders	7.0	Surplus	3.5%	Green	1.6%	Surplus
Tayside Pension	6.0	Surplus	2.9%	Green	2.1%	Surplus
Dumfries and Galloway	7.4	Surplus	3.1%	Green	2.1%	-0.1%
Falkirk	6.3	Surplus	3.0%	Green	1.5%	2.2%
Fife	6.3	Surplus	2.8%	Green	2.1%	2.3%
The Highland	6.6	Surplus	3.1%	Green	1.8%	Surplus
Lothian	6.8	Surplus	2.3%	Green	2.8%	1.4%
Orkney Islands	5.7	Surplus	2.5%	Green	2.7%	Surplus
Shetland Islands	6.2	Surplus	3.2%	Green	2.1%	0.4%
Strathclyde No 1	7.1	Surplus	2.5%	Green	2.4%	Surplus
North East Scotland	6.4	Surplus	3.2%	Green	1.9%	Surplus

7.6 All 11 open funds have green flags on all measures.

7.7 It is interesting to consider the current total employer contribution rate alongside the best estimate funding level for each of the open funds. Chart D.2 shows the distribution of these data pairs.

Table 7.2 – Results of solvency measures



7.8 Other things being equal, we might expect lower contributions to be associated with higher funding levels. This pattern can be seen in the chart above. However, there is a wide range of contribution rates being paid by funds with similar fund levels: for example, for the four funds with funding level 10 percent below the average for the whole LGPS Scotland, employer contribution rates vary from 20.6% of pay to 24.1% pay. This variation could be due, to an extent, to different funding strategies, to attitudes to risk, and to payroll sizes relative to liabilities.

Deficit Reconciliation

7.9 We would not normally expect to see employer contribution rates decreasing (reducing the burden on current taxpayers) at the same time as the deficit recovery end point being extended further into the future (increasing the burden on future taxpayers). This is not an issue for many LGPS Scotland funds, because they are in surplus. But where funds are in deficit and are considering reducing contributions, we suggest that they consider maintaining the deficit recovery end point (or moving it forwards), rather than moving it backwards.

7.10 LGPS Scotland introduced a new CARE benefit structure with effect from 1 April 2015. For members who were 10 years or less from Normal Retirement Age on 1 April 2012, an underpin was provided based on the existing final salary scheme. In December 2018, the Court of Appeal found that similar transitional provisions in the pension schemes for firefighters and the judiciary resulted in unlawful age discrimination. The Government believes that the difference in treatment will need to be remedied across all affected public service pension schemes, including LGPS[14].

7.11 The remedy will increase the cost of benefits accrued my members since 2015, but the form of remedy may not be clear at the time the 2020 valuations are carried out. Administering authority, with their actuaries, will need to consider how they approach (and reflect in their Funding Strategy Statement) the risk and potential extra costs around this matter.

[14] Public Service Pensions: Written statement - HCWS1725 15 July 2019 https://www.parliament.uk/business/publications/written-questions-answers-statements/written-statement/Commons/2019-07-15/HCWS1725/