Russell Investments

Report on the Actuarial Investigation as at 30 June 2014

The Defined Benefit Plan

Local Authorities Superannuation Fund

12 NOVEMBER 2014

TABLE OF CONTENTS

1 EXECUTIVE SUMMARY

Purpose

1.1 We are pleased to present our report on the triennial actuarial investigation of the Defined Benefit plan of the Local Authorities Superannuation Fund (the Fund). This report has been prepared for Vision Super, the Trustee of the Fund.

1.2 This actuarial investigation report covers the Defined Benefit plan within the Fund, which is a sub-fund as defined in Superannuation Prudential Standard 160 (SPS 160). The actuarial investigations for the City of Melbourne Plan and Parks Victoria Plan, which are also sub-funds as defined in SPS 160, are covered in separate reports.

1.3 The purpose of this report is:

(a) to meet the requirements of the Trust Deed and the relevant superannuation legislation;

(b) to examine the current financial position of the Defined Benefit plan;

(c) to provide advice to the Trustee on the funding arrangements;

(d) to provide advice to the Trustee on the self insurance arrangements;

(e) to provide actuarial certification in respect of the funding of pension entitlements; and

(f) to meet the requirements of APRA's SPS 160.

Data, Experience and Assumptions

1.4 The Defined Benefit plan membership is summarised in the following table:

Summary of Defined Benefit Plan Membership Data		
Active Members	**30 June 2014**	**31 December 2011**
Number	3,983	4,971
Average Age	55.2 years	54.1 years
Average Past Membership	26.9 years	24.6 years
Average Salary	$78,502	$70,727
Lifetime Pensioners		
Number	4,882	5,132
Average Age	79.0 years	79.1 years
Average Annual Pension	$8,862	$7,172
Fixed Term Pensioners		
Number	15^	15
Deferred Beneficiaries		
Number	1,910	2,212
Average Age	52.9 years	51.7 years
Average Account Balance	$180,571	$149,842

^ *includes one suspended pensioner*

1.5 As the Defined Benefit plan has been closed to new members since 31 December 1993, the defined benefit membership has continued to decline during the last two and a half years to 30 June 2014.

Financial Experience and Assumptions

1.6 The rate of return (net of tax and investment expenses) earned by the Defined Benefit plan for the period from 1 January 2012 to 30 June 2014 was 11.6% p.a. which was higher than the expected return of 7.5% p.a. in the 2011 investigation.

1.7 The full time equivalent salary of Defined Benefit plan members who remained members as at 30 June 2014 grew by 4.2% p.a. over the two and a half year period. This is similar to the assumed salary growth of 4.25% p.a..

1.8 In respect of pension liabilities, pension increases averaged 2.2% p.a. over the two and a half years to 30 June 2014 which was lower than the assumed inflation rate of 2.75% p.a..

1.9 Overall, the financial experience over the last two and a half years has been favourable which has led to an improvement of the Defined Benefit plan's financial position.

1.10 The financial assumptions used in this actuarial investigation are the same as used in the 31 December 2011 actuarial investigation and are summarised below:

(a) Net investment return: 7.5% p.a. (gross: 8.25%p.a.)

(b) Salary Inflation: 4.25% p.a.

(c) Price Inflation: 2.75% p.a.

Demographic Experience and Assumptions

1.11 Analysis of the demographic experience has been carried out for the period 1 January 2012 to 30 June 2014. In summary, the rate of exit of active members was lower than expected and a higher proportion of eligible members elected the deferred and pension options (which are typically of more value than the immediate lump sum options) than expected. Accordingly, the changes made to the assumptions were:

(a) A reduction in the rates of early retirement between ages 55 and 58. The lower rates of retirement at these ages is likely to continue because preservation ages are legislated to progressively increase to age 60 and superannuation currently becomes tax free at age 60.

(b) The proportion of members who resign prior to age 55 who are assumed to elect to receive a deferred benefit was increased from 70% to 80% to reflect experience. The deferred option is expected to be more valuable than the immediate lump sum option.

(c) The proportion of eligible deferred members assumed to elect a life time pension was increased from 30% to 40%. We continue to assume that 50% of eligible retiring members will elect to take the maximum allowable 50% of the benefit as a life time pension.

1.12 We also examined the mortality of life time pensioners and no changes to assumptions were made.

1.13 We increased the administration expense assumptions from 2.0% to 2.25% of active members' salaries. The assumed expenses in respect of pensioners remained unchanged at 2.0% of pensions in payment.

1.14 The changes to these assumptions have had a negative impact on the Defined Benefit plan's estimated financial position. The actual future experience will determine the ultimate cost to Authorities of the plan.

Funding position as at 30 June 2014

1.15 The three funding measures of the Defined Benefit plan's financial position as at a particular date are:

(a) Vested Benefit Index (VBI): a measure of the financial position if all members were to leave employment at the calculation date;

(b) Discounted Accrued Benefit Index (DABI): a measure of the financial position of benefits in respect of past service at the calculation date, but assuming an ongoing Fund;

(c) Minimum Requisite Benefit Index (MRBI): coverage of Superannuation Guarantee minimum requisite benefits.

1.16 The following table shows each of the three key indices as at 31 December 2011 and 30 June 2014 for the Defined Benefit plan.

Funding Position	30 June 2014	31 December 2011
Vested Benefit Index (VBI)	103%	77%
Discounted Accrued Benefit Index (DABI)	114%	84%
Minimum Requisite Benefit Index (MRBI)	159%	113%

1.17 The funding indices have improved significantly since the last triennial actuarial investigation largely because of the large additional contributions made by Authorities and the better than expected investment returns.

1.18 The Defined Benefit plan was in a satisfactory financial position as at 30 June 2014 as defined in SPS160 as having a VBI above 100%.

1.19 Using the methodology we provided, Vision Super has calculated the VBI as at 30 September 2014 to be 102.6%. The investment return from 1 October 2014 to 31 October

2014 has been calculated by Vision Super to be 1.04%. Therefore we expect that the Defined Benefit plan would have remained in a satisfactory financial position.

1.20 Section 6 of the report consider the funding indices of the Defined Benefit plan in more detail.

Adequacy of the funding

1.21 The current funding arrangements for the Defined Benefit plan comprise of the following:

(a) Outstanding contributions in respect of calls made at the previous actuarial investigations;

(b) Contributions equal to 9.5% of salary for employee members (from 30 June 2014 and then increasing with the Superannuation Guarantee rate);

(c) An additional contribution to cover the excess of the benefits paid as a consequence of retrenchment above the funded resignation or retirement benefit (whereby the funded resignation or retirement benefit is calculated as the minimum of (100% and the VBI) multiplied by the benefit) plus tax; plus

(d) Additional top up contributions that may be recommended in the future, if the Defined Benefit plan becomes in an unsatisfactory financial position.

1.22 The Defined Benefit plan funding seeks to:

(a) Maintain a VBI of over 100%, because under SPS 160 a plan to restore the VBI to 100% is required in prescribed circumstances;

(b) Ensure that the aggregate of the current assets, plus future member and Authority contributions are sufficient to pay all future member benefits (whereby an excess of assets on this basis is called a total liability surplus, or a shortfall is called a total liability deficit).

1.23 As at 31 December 2011 there was a total liability shortfall of $406 million (excluding contribution tax). Since that time, Vision Super has required Authorities to make additional contributions in respect of this shortfall. While Vision Super has implemented our contribution recommendations in full, we understand that the amount still outstanding from Authorities in respect of previous requests for contributions was of the order of $10 million as at 30 June 2014. Based on the advice of the Fund's auditors, this amount is included in the Defined Benefit plan's assets.

1.24 As at 30 June 2014 there was a total service liability surplus of $236 million. This means that if future experience is as expected, the assets and future contributions are more than are required and excess assets will exist when the last benefit is paid from the Defined Benefit plan.

1.25 A surplus has arisen primarily because the Authorities' contributions eliminated the previous deficit and the investment returns have been higher than expected.

1.26 Given that the VBI as at 30 June of 103.4% is not significantly above 100%, and that there is the possibility of volatile investment returns under the current investment strategy, the VBI could quickly fall below 100% if experience is worse than expected. We therefore have recommended that the current contributions remain unchanged. However, because of the total service liability surplus of $236 million, it is possible that alternative funding plans and investment strategies could be considered.

1.27 Section 7 of the Report considers funding in more detail, including examples of the sensitivity of the results to the assumptions and future experience.

Self Insurance

1.28 We have analysed the risk in respect of the self insurance of death and disablement benefits of the Defined Benefit plan in Section 8.

1.29 On the basis that self insured benefits are small relative to members' benefits (as the average age of active members is now over age 55) and the members are geographically spread across Victoria, the self insurance risk is not large. However, a catastrophe could have a materially adverse impact on the Defined Benefit plan funding.

1.30 We believe that it is reasonable for the Board to determine that self insurance remains appropriate for the Defined Benefit plan and based on our analysis we recommend that the self insurance reserve of $8.6 million be reduced to $6 million.

Material Risks

Investment Risk

1.31 The most significant risk facing the Defined Benefit plan funding is that investment returns will not be as high as expected which might result in additional contribution calls in the future. It is recommended that the funding position of the Defined Benefit plan continue to be considered in setting investment policy. This includes considering the liquidity requirements because in the long term full liquidity will be required.

1.32 Given that the Defined Benefit plan currently has an "actuarial surplus", reducing the allocation to growth assets may be more attractive to the Board as a means of reducing the risk of subsequent higher contributions as a result of future poor investment experience. We recommend that the Board consider whether de-risking the assets is appropriate which could be considered together with alternative funding plans.

1.33 The impact of reducing the allocation to growth assets would likely be to:

(a) reduce the expected investment return. This would immediately reduce the total service liability surplus because lower investment returns would be expected to be available in future to meet benefit payments. It would also reduce the VBI because the Vested Benefits of pensions are dependent upon the assumed investment return (i.e. the Vested Benefit for a pension is the present value of future pension payments calculated using the expected investment return);

(b) reduce the volatility of the investment return. This may reduce the risk of requiring additional contributions from the Authorities, or the amount of the additional contributions if they are required.

1.34 For example, if the expected investment return as at 30 June 2014 was 6.0% p.a., rather than 7.5% p.a., the VBI would have reduced to 98.9% and the total service liability surplus would have reduced to zero based on the current funding plan. Hence, while the assets would have been expected to be sufficient in the long term, additional contributions may have been required in the short term to return the VBI to 100%. Note that since 30 June 2014 the VBI has reduced so these outcomes would need to be recalculated if the Board was considering reducing investment risk.

1.35 In our opinion the current Shortfall Limit of 97.0% remains appropriate, noting that the investment strategy has not changed materially since the Shortfall Limit was set by the Board.

Calculation of Defined Benefit plan assets

1.36 We understand that in preparing the financial statements, Vision Super has determined the Defined Benefit plan assets by deducting the defined contribution assets (or liabilities) from the total Fund assets. This methodology might lead to issues of cross subsidies between the defined benefit and defined contribution plans. For example, the impact of estimating tax accruals or late valuation on the accumulation members' account balances could impact the Defined Benefit plan assets.

1.37 We have been advised that Vision Super has been considering ways to ensure that there are no cross subsidies between the defined benefit and defined contribution plans. As in the past actuarial investigations, we recommend that consideration be given to the Fund segregating the accounting process for the defined benefit and defined contribution plans.

1.38 A more complete discussion of the risks is included in Section 9.

Summary of Recommendations

1.39 The following funding plan is recommended, whereby the Authorities will pay:

(a) Contributions equal to 9.5% of salary for employee members, increasing with increases in the Superannuation Guarantee;

(b) An additional contribution to cover the excess of the benefits paid as a consequence of retrenchment above the funded resignation or retirement benefit (the funded resignation or retirement benefit is calculated as the minimum of (100% and the VBI) multiplied by the vested benefit), plus contribution tax;

(c) Outstanding contributions in respect of calls made at the previous actuarial investigations and

(d) Additional top up contributions that may be recommended in the future, if the Defined Benefit plan becomes in an unsatisfactory financial position.

1.40 We believe self insurance remains appropriate for the Defined Benefit plan and recommend a self insurance reserve of $6 million.

1.41 Given that the Defined Benefit plan currently has an “actuarial surplus”, reducing the allocation to growth assets may be more attractive to the Board as a means of reducing the risk of subsequent higher contributions as a result of poor investment experience. We recommend that the Board consider whether de-risking the assets is appropriate at this time which could be considered together with alternative funding plans.

1.42 It is recommended that the funding position of the Defined Benefit plan continue to be considered in setting investment policy. This includes considering the liquidity requirements because in the long term full liquidity will be required.

1.43 As in past actuarial investigations, we recommend that consideration be given to the Fund segregating the accounting process for the defined benefit and defined contribution plans.

Matthew Burgess
Fellow of the Institute of Actuaries of Australia

Gabrielle Baron
Fellow of the Institute of Actuaries of Australia
12 November 2014

Russell Employee Benefits ABN 70 099 865 013 AFSL 220705
Level 13, 8 Exhibition St
Melbourne VIC 3000

2 INTRODUCTION

2.1 This is the eleventh "triennial" actuarial investigation of the Local Authorities Superannuation Fund (the Fund) since the Local Authorities Superannuation Act (1988) (the Act) was proclaimed on 25 May 1988. The Act has been replaced and since 1 July 1998, the Fund has been governed by a Trust Deed.

2.2 The Fund is a "regulated fund" under the provisions of the Superannuation Industry (Supervision) Act 1993 ("SIS"). We understand that the Fund is treated as a complying superannuation fund for taxation purposes and is a taxed superannuation fund.

2.3 In accordance with Superannuation Prudential Standard 160 (SPS 160), "triennial" actuarial investigations are required at intervals of not more than three years. I completed the previous actuarial investigation as at 31 December 2011 in my report dated 25 June 2012. This actuarial investigation has been completed at the request of the Trustee of the Fund.

2.4 In accordance with SPS 160 and previously APRA's Modification Declaration No 23 (Mod 23), annual actuarial investigations are also required because the Defined Benefit plan provides life-time pensions. I completed the most recent report for this purpose as at 30 June 2013 in my report dated 6 September 2013.

2.5 This actuarial investigation report covers the Defined Benefit plan within the Fund, which is a sub-fund as defined in SPS 160. The actuarial investigations for the City of Melbourne Plan and Parks Victoria Plan, which are also sub-funds as defined in SPS 160, are covered in separate reports.

2.6 In accordance with Clause A.20.1, the Trust Deed requires each Authority to contribute to the Fund in respect of a particular employee the amount or rate of contributions determined by the Trustee after obtaining the advice of the actuary, including any unfunded liability amount. The Trustee also has some flexibility in adjusting benefits in accordance with Clause A.21 in the event that an Authority terminates contributions to the Fund.

2.7 The purpose of this report is:

- to meet the requirements of the Trust Deed and the relevant superannuation legislation;
- to examine the current financial position of the plan;
- to provide advice to the Trustee on the funding arrangements;
- to provide advice to the Trustee on the self insurance arrangements;
- to provide actuarial certification in respect of the funding of pension entitlements; and

- to meet the requirements of APRA's SPS 160.

2.8 This report satisfies the requirements of the following Professional Standards and Guidance of the Institute of Actuaries of Australia:

- Guidance Note 465
- Practice Guideline 499.01 to the extent relevant, noting that it needs updating to be consistent with SPS 160
- Professional Standard 400
- Professional Standard 402
- Professional Standard 404.

Actuarial Investigation as at 31 December 2011

2.9 The report on the actuarial investigation as at 31 December 2011 concluded that the experience of the Defined Benefit plan over the three year period to 31 December 2011 had been unfavourable. Based on revised assumptions there was an "actuarial shortfall" of $406 million in the Defined Benefit plan as at that date.

2.10 We recommended that the following funding plan be adopted:

(a) Payments for any outstanding unfunded liability from the 30 June 1997, 31 December 2002, or 31 December 2008 actuarial investigations that have already been invoiced; plus

(b) Contributions equal to 9.25% of salary for employee members; plus

(c) An additional contribution to cover the excess of the benefits paid as a consequence of retrenchment above the funded resignation or retirement benefit (the funded resignation or retirement benefit is calculated as the VBI multiplied by the benefit), plus contribution tax; plus

(d) Top up contributions of $406 million (plus contribution tax and interest from 31 December 2011) payable as at 1 July 2013. While Employers have been encouraged to pay their share of this amount by 1 July 2013, other funding options have been provided. The "actuarial shortfall" with interest to 1 July 2013 was $453 million (plus contribution tax); plus

(e) Additional top up contributions that may be required in the future so that the Defined Benefit plan is no longer in an unsatisfactory financial position.

Events since the 31 December 2011 Actuarial Investigation

2.11 We understand that the proposed funding plan in the 31 December 2011 actuarial investigation was approved by the Trustee Board and was communicated to the Authorities. The outstanding top up amount has been included as a contribution receivable in the 30 June 2014 financial statements. We understand that by the date of this report the vast majority of the top-up contributions had been paid by Authorities.

2.12 The Government has legislated to increase the Superannuation Guarantee Charge to 12% of Ordinary Times Earnings. While the Superannuation Charge has already been increased to reach 9.5% of Ordinary Time Earnings from 1 July 2014, no further increases are legislated to occur until 1 July 2021. The Superannuation Guarantee Charge is legislated to reach 12% from 1 July 2025. We understand Vision Super has determined that Authority contributions will increase from 9.25% of salaries to 12% of salaries, with increases in the Superannuation Charge and that Authorities are currently paying 9.5% of salaries to the Defined Benefit plan.

2.13 The Defined Benefit plan investment return for the period from 1 January 2012 to 30 June 2014 was 11.6% p.a., which is higher than expected and led to an improvement in the financial position of the Defined Benefit plan.

2.14 APRA issued Prudential Standard SPS 160 (SPS 160) relating to defined benefit matters which applied from 1 July 2013 on a mandatory basis. Key requirements of SPS 160 are:

(a) The Trustee must set a short-fall limit. The Trustee has adopted a limit of 97% for the Defined Benefit plan. This means that if the Vested Benefit Index (VBI) falls below this percentage then an interim actuarial investigation is required;

(b) That if the VBI falls below 97%, or below 100% at certain times such as when an actuarial investigation is being completed, then the Trustee must put in place a funding plan that is expected to restore the VBI to 100% within three years, irrespective of other funding measures; and

(c) In respect of self insurance of death and disablement benefits:

(i) The Trustee must establish a self insurance reserve. The Defined Benefit plan self insurance reserve was initially set at $8.6 million based on my advice (and this level is reviewed as part of this valuation);

(ii) Determine annually that self insurance is in the beneficiaries' best interests, and maintain a contingency plan to externally insure the benefits if the Trustee determines that it is not longer in the beneficiaries' best interests; and

(iii) Ensure regular actuarial oversight, which is one of the purposes of this actuarial investigation.

2.15 There have been no other legislative changes or changes to benefits that have materially impacted on the funding of the Defined Benefit plan.

Content of this Report

2.16 The remainder of this report is structured in the following manner:

- Section 3 describes the data provided for this investigation and the Defined Benefit plan's experience since 1 January 2012 compared with the actuarial assumptions used in the 2011 investigation.
- Section 4 considers the assets and investment policy of the Defined Benefit plan.
- Section 5 discusses the assumptions used to value the assets and liabilities of the Defined Benefit plan in this investigation and the actuarial funding method.
- Section 6 considers the financial position of the Defined Benefit plan at 30 June 2014.
- Section 7 considers the funding of the Defined Benefit plan.
- Section 8 considers the self-insurance arrangements for the Defined Benefit plan.
- Section 9 considers the material risks related to the Defined Benefit plan funding.
- Appendices A to F include supporting details of benefits, assets, accounts and actuarial assumptions;
- Appendix G contains the statements required under SPS 160.

2.17 The next triennial actuarial investigation is due as at 30 June 2017, with an annual actuarial investigation required as at 30 June 2015.

3 DATA AND EXPERIENCE

3.1 This section deals with the data used in the investigation and comments on the more significant factors bearing upon the financial experience of the Defined Benefit plan.

Membership

3.2 For the purposes of this investigation, we were supplied with information on active members of the Defined Benefit plan, deferred beneficiaries and pensioners as at 30 June 2014 together with details of exits during the period from 1 January 2012 to 30 June 2014. While we have relied upon the data provided, from our checking processes we believe that the data is sufficiently accurate for the purposes of this investigation.

3.3 A detailed summary of the movement in active and pensioner membership is set out in Appendix B. Briefly, the active membership of the Defined Benefit plan has decreased by 988 (or 19.9%) from 4,971 at 31 December 2011 to 3,983 at 30 June 2014. The number of lifetime pensioners has decreased by 250 (or 4.9%) from 5,132 to 4,882 over the same period.

Summary of Defined Benefit Plan Membership Data

Active Members	**30 June 2014**	**31 December 2011**
Number	3,983	4,971
Average Age	55.2 years	54.1 years
Average Past Membership	26.9 years	24.6 years
Average Salary	$78,502	$70,727
Lifetime Pensioners		
Number	4,882	5,132
Average Age	79.0 years	79.1 years
Average Annual Pension	$8,862	$7,172
Fixed Term Pensioners		
Number	15^	15
Deferred Beneficiaries		
Number	1,910	2,212
Average Age	52.9 years	51.7 years
Average Account Balance	$180,571	$149,842

^ *includes one suspended pensioner*

Salaries

3.4 We have analysed the salary experience of Defined Benefit plan members over the intervaluation period from 31 December 2011 to 30 June 2014. The data showed that the full time equivalent salary of Defined Benefit plan members who remained members as at 30 June 2014 grew by 4.2% p.a. over the period. This compares to growth of 5.1% p.a. over the three year period to the 31 December 2011 in the last actuarial investigation.

3.5 It is of interest to compare the average rate of salary increase with the increase in Australian Average Weekly Ordinary Time Earnings (AWOTE). Over the two and a half years to 30 June 2014, AWOTE increased by 3.6% p.a.. Overall, members received salary increases which are slightly higher than those of the wider community, bearing in mind that the 4.2% p.a. salary increase rate would also reflect some element of promotional increases in addition to the inflationary increases.

3.6 Our previous salary scale assumption assumes that the promotional effect ceases after age 35. It is noted that all active members were over age 35 as at 30 June 2014. Although our analysis of salary by member's age suggests that there is some promotional effect for members over age 35, we have decided to remove the salary scale on the basis that the effect of promotion is not expected to be material.

Demographic Experience of Active Members

3.7 The demographic experience of active members of the Defined Benefit plan over the two and a half year period to 30 June 2014 has been examined for each of the major types of exit.

3.8 The following table summarises the number of actual exits compared to the expected exits during the investigation period. “Expected” figures are based on the funding assumptions used in the 2011 investigation:

Actual And Expected Exits Over The Period From 1 January 2012 To 30 June 2014

	Actual	Expected
Resignation - Cash 20 - Deferred 55 - Pending 5	80	141
Retrenchments (< age 55)	25	
Retirements	854	1,029
Deaths	20	31
Disablements	17	44

3.9 The experience is further examined in the following table, with commentary in the following paragraphs, by giving the ratio of the actual number of exits to the "expected" number on the same basis:

Ratio Of Actual To Expected Numbers Over The Period From 1 January 2012 To 30 June 2014

Age Band	Resignation	Resignation & Retrenchment	Death	Disablement	Retirement
36-40	0.4	0.5	12.0	0.0	-
41-45	0.5	0.7	0.0	1.1	-
46-50	0.6	0.7	0.4	1.8	-
51-55	0.6	0.8	0.5	0.2	0.6
56-60	-	-	0.5	0.3	0.6
61-65	-	-	0.9	0.0	1.0
Total	0.6	0.7	0.6	0.4	0.8

3.10 The experience during the investigation period has been lower than expected in respect of all forms of exit from the Defined Benefit plan.

3.11 The number of exits over the intervaluation period has been sufficient to enable a valid demographic analysis to be carried out, although the death and disablement experience will vary over time due to relatively small numbers exiting for these reasons.

Resignation (and Deferred Election)

3.12 The table in 3.9 shows that the number of resignations over the period has been lower than expected. Overall, for each 10 resignations expected, 6 resignations actually occurred (the ratio of actual to expected resignations was 0.6 to one).

3.13 Members resigning from active service have the option to receive their benefit in cash or as a deferred benefit. As shown in table 3.8, out of the 80 resignations, 75 members have exercised an election to either receive the immediate lump sum benefit or deferred their benefits (with 5 pending exits yet to make an election). Of these 75 resignations (73%), 55 members who resigned elected the deferred option. Our analysis also showed that the proportion of the benefit amounts in respect of the deferred members was 80%.

3.14 In this investigation we have assumed that the deferred election rate is 80% which is higher than the assumed proportion of 70% adopted in the last investigation. Because members are eligible to receive the accrued retirement benefit upon deferral, this experience has had a negative impact on the Defined Benefit plan funding.

Resignation and Retrenchment

3.15 Under the current funding arrangements, additional funding by the Authority is required to cover the excess of the retrenchment benefit over the "funded" resignation benefit or retirement benefit.

3.16 Consequently, retrenchments under age 55 are effectively "resignations" from the perspective of the Defined Benefit plan's financial position and do not create any funding shortfall.

3.17 At the 2011 actuarial investigation, an explicit assumption was not made for the number of retrenchments. Instead the resignation decrements were kept at a higher level than justified by resignations alone, in order to implicitly allow for some retrenchments.

3.18 For this reason we have also included a combined "resignation and retrenchment" column in the table in 3.9 above. On this combined basis the actual to expected ratio averaged 0.7 to one which shows that the combined level of retrenchments and resignations was lower than the assumed level.

3.19 Members who resigned and deferred are entitled to the accrued retirement benefit (greater than the actuarial reserve held in respect of members) and therefore it is important not to understate the resignations. The level of recent experience is lower than previously experienced and these low rates may not be sustained in the long term given unemployment in Victoria increased during the intervaluation period. Therefore we have retained the resignation rates assumed in the previous investigation for this actuarial investigation.

Death

3.20 The death benefit payable in respect of a particular member would normally exceed the reserve held in respect of that member, often substantially at young ages. Thus it is important that the expected mortality rates do not understate the number of deaths.

3.21 During the two and a half year period to 30 June 2014, the ratio of actual to expected deaths was 0.6 to one. On the basis of the small number of deaths and the importance of not understating the number of deaths, we have retained the mortality rates from the 2011 investigation.

Disability

3.22 Like the death benefit, the disability benefit would normally exceed the reserve held in respect of a member. Ideally, the expected disability rates would exceed the actual rates. This is particularly important because no separate allowance is made for the Temporary Disablement benefit. It is also important to include some margin to allow for Incurred but not reported claims as the industry experience suggests an increasing number of emerging disability claims which take years to be reported.

3.23 The ratio of actual to expected disablements based on the experience of the past two and a half years was 0.4 to one. The recent experience has had a favourable impact on the Defined Benefit plan. On the basis of the small number of disablements and the importance of not understating the number of disablements, we have retained the rates from the 2011 investigation.

Retirements

3.24 The closer a member is to age 65, the closer the retirement benefit is to the "actuarial reserve" held in respect of that member. Hence a deviation of actual retirements from those expected will have a small effect on the financial status of the Defined Benefit plan.

3.25 Over the two and a half years to 30 June 2014, the ratio of actual to expected retirements was 0.8 to one which is consistent with the experience over the last three years to 31 December 2011 (with a ratio of 0.8 to one). The experience over the last two and a half years was well below expected at ages prior to age 60, and this experience is likely to continue because of legislated increases in preservation age to age 60 and superannuation currently becomes tax free at age 60. On the basis of the experience, we have decided to lower the retirement rates between ages 55 and 58. Based on the updated retirement decrements, the ratio of actual to expected retirements would be 0.9 to one for the two and a half years to 30 June 2014.

Pension Election

3.26 Members who joined the Defined Benefit plan prior to 25 May 1988 have a choice to convert up to 50% of their retirement benefit into an annual pension.

3.27 For the previous investigation we assumed that 50% of eligible active members elect a pension upon retirement by converting the maximum 50% of their benefits into a pension. Over the two and a half years to 30 June 2014, almost 60% of retiring members elected at least some pension. The recent experience is similar to the experience in the intervaluation period prior to the previous investigation. This result may be due to the investment uncertainty following the Global Financial Crisis which may encourage retirees to take a guaranteed pension option and this trend may not continue in the future. We also understand that not all members have taken the maximum 50%

pension allowed (although a majority do take the maximum). As a result, we have retained the assumption that 50% of eligible active members exercise this option by converting 50% of their benefit to a pension.

3.28 Our analysis shows that the number of deferred beneficiaries who took a pension upon retirement over the last two and a half years to 30 June 2014 was 45%. This is higher than the experience over the three years to 31 December 2011 during which 30% of members took the option. To reflect this trend, we have increased the proportion of eligible deferred beneficiaries taking a pension at retirement from 30% to 40%. We have not increased the assumption to 45% to match experience because the number of relevant members is reasonably small and the experience could vary significantly from period to period because of the particular circumstances of the members. Members who exercise this option are assumed to take 50% of their benefit as a pension.

Mortality Experience of Pensioners

3.29 The mortality experience of pensioners over the intervaluation period has been examined for males and females, and by type of pension. The key results are summarised in the following table. The “expected” figures are based on the assumptions that were used in the 31 December 2011 actuarial investigation. Given the limited experience, experience will vary from period to period. This is particularly the case for female disability pensioners, and less certainty can be placed on the analysis for this small group and they are not shown.

Ratio Of Actual To Expected Numbers For The Period From 1 January 2012 To 30 June 2014

	Retirement/Spouse Pensioners	Disability Pensioners
Male	81%	101%
Female	123%	N/A

3.30 As showed in the table above, the actual deaths among female retirement and spouse pensioners during the investigation period was higher than expected which is consistent with previous experience. Deaths among male retirement and spouse pensioners were however lower than expected. Over the last investigation period, the mortality experience for this group was close to expected, noting that the male pensioner mortality rates were reduced in the previous investigation to be equal to the lighter of the Australian Life tables 2005-2007 and the previous rates.

3.31 Mortality experience for disability pensioners was similar to expected over the two and a half years to 30 June 2014. In the last investigation, the number of deaths was higher than expected.

3.32 Overall, the actual number of deaths over the investigation period had been slightly higher than expected. The higher than expected deaths had a small positive effect on the financial position of the Defined Benefit plan.

3.33 We have decided to retain the same mortality assumptions for the pensioners based on the past experience.

Administration Expenses

3.34 In the 31 December 2011 investigation, the administration expense was assumed to be of the order of 2.0% of salaries plus 2.0% of pensions in payment. The actual expense over the three years has been higher than expected.

3.35 Vision Super has advised that the administration expense for the 2014/2015 financial year is expected to be about $7.5 million. Therefore we have increased the assumed level of expenses to 2.25% of salaries plus 2.0% of pensions in payment.

Investment Returns

3.36 The rate of return (net of tax and investment expenses) earned by the Defined Benefit plan for the period from 1 January 2012 to 30 June 2014 was 11.6% p.a..

3.37 Comparison of the 11.6% p.a. return for the intervaluation period with the average salary increase rate (from paragraph 3.4) of 4.2% p.a. shows a real return of approximately 7.4% p.a. which is significantly higher than the 3.25% p.a. real return assumed in the 2011 investigation.

3.38 In respect of pension liabilities, pension increases averaged 2.2% p.a., providing a real return of 9.4% p.a. which is significantly higher than 5.5% p.a. assumed in the 2011 investigation. There is no investment tax paid on investments used to provide pensions, so the real return is actually higher than this.

3.39 The real returns over the intervaluation period have had a material positive effect on the Defined Benefit plan's financial position.

4 ASSETS AND INVESTMENTS

Assets

4.1 Copies of the Fund's financial statements as at 30 June 2014 were supplied by Vision Super for the investigation together with details of the investment strategy at 30 June 2014. We were also provided a breakdown of the audited market value of assets by sub-plan. A summary of cash flows over the period 1 January 2012 to 30 June 2014 is set out in Appendix C.

4.2 The net market value of the Defined Benefit plan assets (including pensioners and deferred beneficiaries) as at 30 June 2014 used in the valuation was $2,354.9 million.

4.3 The asset value includes the remaining contributions receivable in respect of past calls for additional contributions by Vision Super. As at 30 June 2014 the Fund's financial statements show a contribution receivable of $10.8 million, most of which is in respect of the Defined Benefit plan.

4.4 Vision Super calculates the amount of the Defined Benefit plan assets by deducting all other relevant liabilities and reserves from the total Fund assets. We have adjusted the Defined Benefit plan assets provided in the accounts as at 30 June 2014 to allow for:

(a) the impact the June quarter tax adjustment would have had on the amount of 30 June 2014 accumulation liabilities;

(b) the impact the late valuation of assets would have had on the amount of 30 June 2014 accumulation liabilities; and

(c) the amount of cash at bank in relation to the accumulation members as at 30 June 2014.

4.5 The asset value has also been adjusted to include the transfer value of $0.1 million for a former City of Melbourne member who transferred to the Defined Benefit plan but whose assets had not yet been transferred at 30 June 2014.

4.6 We have relied upon the data provided by Vision Super.

4.7 For the purpose of this investigation, we have also excluded $6.0 million in respect of the Death and Disability reserve from the assets because we have not included an amount for incurred but not reported claims in the calculation of the funding position. The financial statements provided by Vision Super included a Death and Disability reserve of $8.6 million as at 30 June 2014. In Section 8 of this report we have recommended that the reserve be reduced to $6.0 million and have therefore included the additional $2.6 million ($8.6 million less $6.0 million) in the Defined

Benefit plan assets. We understand Vision Super has excluded the Operational Risk Financial Requirement from the Defined Benefit plan assets in the financial statements.

4.8 We believe that the most suitable approach for this investigation is to continue to adopt the market value of assets for all purposes. We note that the funding position of the Defined Benefit plan may be variable because of the current high volatility in asset valuations.

Asset Allocation

4.9 The Fund invests in a wide range of asset classes such as equity, property and fixed interest investments. Appendix E shows the Strategic Asset Allocation and the Actual Asset Allocation as at 30 June 2014.

4.10 The Strategic Allocation to Growth Assets as at 30 June 2014 was 68.6%, including Australian Equities, International Equities, Private Equity, Opportunistic Investments, Absolute Return Strategies and a portion of the Multi-Asset, Core Property, Floating Rate Debt and Infrastructure asset classes. This has decreased from 73.5% as at 31 December 2011.

4.11 Setting the Strategic Asset Allocation is a balance between:

(a) A high allocation to growth assets, which is expected to produce relatively high but more variable investment returns and therefore lower but more variable Authority contributions; and

(b) A low allocation to growth assets, which is expected to produce relatively low but less variable investment returns and therefore higher but less variable Authority contributions.

4.12 We believe that the 68.6% allocation to growth assets is among a range of allocations that could reasonably be used by the Defined Benefit plans.

4.13 The Defined Benefit plan has been closed to new members since 31 December 1993. Therefore, its liabilities will reduce significantly over the next ten years in real terms. If future investment returns are higher or lower than expected it is possible that a significant “actuarial surplus” or “actuarial shortfall” will again result. Therefore, it is recommended that the funding position of the Defined Benefit plan continues to be considered in setting investment policy.

4.14 Given that the Defined Benefit plan currently has an “actuarial surplus”, reducing the allocation to growth assets may be more attractive to the Board as a means of reducing the risk of subsequent higher contributions as a result of poor investment experience. We recommend that the Board consider whether de-risking the assets is appropriate at this time which could be considered together with alternative funding plans.

4.15 Section 7 considers further the future investment return that is expected to be required to provide Defined Benefit plan members' benefits based on the expected future contribution strategy.

Liquidity

4.16 The Strategic Allocation to illiquid assets is 21.75%. As at 30 June 2014, 28.9% of the investments are invested in illiquid asset classes which include Private Equity, Infrastructure, Direct Property, Floating Rate Debt, Opportunistic Investments and Multi-Asset.

4.17 Given the maturity of the Defined Benefit plan, Vision Super considers the liquidity requirements for expected benefit payments as part of its reviews of the Strategic Asset Allocation.

4.18 With our assistance, Vision Super completed such a review in early 2013. Stress testing showed that should a significant shock occur, the illiquid asset allocation could become a significant portion of the assets of the three defined benefit plans. Because the three defined benefit plans are closed to new members, liquidity modeling showed that the illiquid asset allocation of the three defined benefit plans will become even more sensitive to external events over time. Accordingly, we believe that it is appropriate to reduce the target allocation to illiquid assets over time.

4.19 We understand that the Board has determined that no further commitments are to be made to illiquid investments. We also understand that it is intended that the illiquid asset allocation will reduce to the Strategic Target of 21.75%. We note that while some of the illiquid assets are in fixed ended funds which will become liquid over time, others such as the Direct Property and Infrastructure investments will need to be sold or transferred from the defined benefit assets in the future.

4.20 In the long term, the defined benefit plans will require full liquidity. Therefore, we believe that Vision Super should continue to consider the time frame over which they will reduce the exposure to illiquid assets in the defined benefit plans to zero. We suggest that consideration of the liability run off under various scenarios should continue to form part of this consideration.

Unit Pricing

4.21 Within the Fund there are defined contribution members as well as defined benefit members. The assets and liabilities of the defined contribution members are equal, subject to timing differences, with daily unit pricing being used. There is no investment reserving. We have been advised that the assets of the defined contribution members are segregated from the defined benefit assets and Vision Super has in place processes to limit cross subsidies between defined contribution and defined benefit members.

4.22 However, we understand that in preparing the financial statements, Vision Super has determined the Defined Benefit plan assets by deducting the defined contribution assets (or liabilities) from the total Fund assets. To the extent that daily unit pricing may not reflect the underlying assets due to the timing of cash flows and allowance for tax and accruals, any variation will flow on to the Defined Benefit plan assets. This is particularly a concern as the defined contribution assets now form about 70% of the total fund assets and is increasing as a proportion of the total assets. There is also a risk that Defined Benefit plan assets may be under or overstated in the event of unit pricing errors.

4.23 We recommend that the Trustee should satisfy itself that no cross subsidies are occurring or could occur between the defined benefit and defined contribution plans. In order to limit the potential cross subsidies, as we have previously recommended, we understand that consideration is now being given to the Fund segregating the accounting process for defined benefit and defined contribution plans.

4.24 The Fund's Investment Governance Framework states that "the Defined Benefit Plan is separately managed from the other Funds' Investment Options for the purposes of rebalancing." This means that the Defined Benefit plan's asset allocation should not be materially impacted by the experience of the defined contribution plans.

Shortfall Limit

4.25 The Trustee has set a Shortfall Limit in accordance with SPS 160 of 97% for the Defined Benefit plan. This means that between actuarial investigations, a restoration plan to restore the VBI to 100% is required when the Defined Benefit plan's VBI reduces to below 97%.

4.26 A Shortfall Limit is defined in paragraph 10 of SPS 160 as:

"the extent to which an RSE licensee considers that a fund can be in an unsatisfactory financial position with the RSE licensee still being able to reasonably expect that, because of corrections in the temporary negative market fluctuations in the value of fund assets, the fund can be restored to a satisfactory financial position within one year."

4.27 Given the current and strategic asset allocation of the Defined Benefit plan, we believe that the current Shortfall Limit remains appropriate.

5 VALUATION ASSUMPTIONS AND FUNDING METHOD

5.1 An appropriate set of both financial and demographic assumptions must be determined before values can be placed on the Defined Benefit plan's liabilities and assets. The assumptions relating to benefit liabilities and assets are discussed under separate headings below.

Valuation of Benefit Liabilities

5.2 The assumptions for this actuarial investigation have been determined on a "best estimate" basis.

5.3 "Best estimate" describes assumptions which reflect "mean" estimates for the various factors, rather than choosing assumptions with explicit margins to cope with uncertainty about future experience. These "best estimate" assumptions might be described as being realistic. They are equally likely to prove to be conservative or to be optimistic and are less likely to be able to absorb fluctuations in future experience.

5.4 As the Defined Benefit plan is closed to new members and as a result has declining membership, "best estimate" assumptions continue to be relevant because using conservative assumptions would be expected to eventually result in excess assets. Best estimate assumptions are also required by the Actuaries Institute's Professional Standards.

5.5 Appendix D contains a summary of the assumptions used.

Key Financial Assumptions

5.6 Financial assumptions for investment earnings, salary inflation and pension increases are required to value the liabilities.

5.7 The factor of major significance in the investigation of the Defined Benefit plan's active member benefit liabilities is the differential between the assumed future rate of investment earnings and the assumed rate of salary growth due to inflation. (These factors are almost exactly compensating in their effect upon the present value of the employed members' Defined Benefit plan's future benefit liabilities - hence, the difference between the rates is important, rather than their absolute values.)

5.8 In addition to salary increases due to inflation, an allowance needs to be considered for salary increases for other reasons e.g. promotion, etc.

5.9 For valuing the current pensioner liabilities, the differential between investment earnings and the rate of price inflation is relevant because pensions are indexed semi-annually to the change in the Consumer Price Index (CPI). The historical long-term differential between the changes in CPI and AWE (salary inflation) has generally ranged between 0% and 2% p.a.

5.10 The “best estimate” financial assumptions adopted at the 31 December 2011 actuarial investigation were:

- 3.25% p.a. real investment return over salary inflation. This comprised a 7.5% p.a. net of tax investment return assumption and a 4.25% p.a. salary inflation assumption.

- 5.5% p.a. real investment return over price inflation. This comprised a 8.25% p.a. gross of tax investment return and a 2.75% p.a. CPI assumption.

Investment Return

5.11 In order to determine the best estimate assumptions for this investigation, we have considered the capital market assumptions of Russell and the Fund’s asset consultants, Frontier. A net investment return of 7.5% p.a. has been adopted for this investigation.

5.12 The assumed gross of tax investment return used in this investigation is 8.25% p.a.. The additional 0.75% p.a. investment return takes into account the fact that no investment tax is paid on assets backing pensioner liabilities.

5.13 The investment return assumption has remained unchanged from the 31 December 2011 investigation. The assumptions are net of investment management fees.

CPI Increases

5.14 Russell and Frontier’s CPI estimate is of the order of 2.0% - 3.0% p.a. which is consistent with the Reserve Bank’s target CPI range of 2.0% p.a. to 3.0% p.a.. We have retained the CPI assumption of 2.75% p.a. for the investigation.

Salary Inflation

5.15 The actual salary increases of Defined Benefit plan members have been a little higher than AWOTE (refer 3.4-3.5). As the average age of Defined Benefit plan members is now 55.2 years, significant benefit payments are expected in the next few years and the short term salary inflation assumption is important. The Board has confirmed that in the opinion of Directors the salary inflation assumption of 4.25% p.a. is consistent with Authorities’ expectation of the future salary growth and therefore has been retained for this investigation.

5.16 A salary increase assumption of 4.25% p.a. is 1.5% p.a. above the assumed 2.75% p.a. CPI, which is within the historical long term 0% to 2% p.a. differential. Given recent experience and the maturity of the Defined Benefit plan, this is appropriate.

5.17 Therefore, the "best estimate" financial assumptions adopted for the 30 June 2014 investigation are:

- 3.25% p.a. real investment return over salary inflation. This comprised a 7.5% p.a. net of tax investment return assumption and a 4.25% p.a. salary inflation assumption.
- 5.5% p.a. real investment return over price inflation. This comprised an 8.25% p.a. gross of tax investment return and a 2.75% p.a. CPI assumption.

5.18 The promotional salary scale adopted in the previous actuarial investigation assumed no promotional salary increases for members over age 35. Because the Defined Benefit plan has been closed for many years, the promotional salary scale has ceased to have a material impact on the results of the actuarial investigation. After considering the salary increases of members over the period since the previous actuarial investigation, we have not adopted a promotional salary scale in this actuarial investigation. Therefore, the inflationary salary increases of 4.25% p.a. are the only salary increases assumed.

5.19 The investments for fixed term pensions are matched to the liabilities by investing in fixed interest securities including CPI linked bonds. Based on current CPI indexed bond interest rates a real discount rate (i.e. discount rate above CPI) of 0.6% has been assumed. This discount rate includes a reduction of 0.75% to allow for investment management fees and administration costs.

Demographic Assumptions

5.20 The demographic assumptions that affect the Defined Benefit plan have been discussed in Section 3 in the light of the Defined Benefit plan's experience over the period 1 January 2012 to 30 June 2014. The recommended changes to the demographic assumptions are discussed in Section 3. Appendix D summarises the demographic assumptions adopted for this investigation.

Benefits

5.21 The benefits which have been valued are summarised in Appendix A. Members of the Defined Benefit plan on 25 May 1988 have certain guarantees or options in relation to benefits provided under the 1958 Act. As discussed in Section 3, we have assumed that 50% of eligible retirees, who joined the Defined Benefit plan prior to 25 May 1988, elect to take the pension option and 40% of eligible deferred beneficiaries elect to take the pension option. We have made no allowance for any other guarantees and options these members may be entitled to, as we continue to believe they are not likely to have a material impact on the results of this investigation.

Valuation of Assets

5.22 In the previous investigation we adopted the approach of market value of assets for all purposes. In Sections 4, 6 and 9 we note that the funding position of the Defined Benefit plan in the short term may be variable because of the current high volatility in asset valuations.

5.23 The market value of the Defined Benefit plan assets as at 30 June 2014 used in the investigation was $2,354.9 million. This asset value is the amount available for the Defined Benefit liabilities for the members, deferred beneficiaries and pensioners (including fixed term pensioners) of the Defined Benefit plan. It does not include any amount in respect of voluntary accumulation accounts held by Defined Benefit plan members.

Actuarial Funding Method

5.24 In recommending a funding plan which aims to be sufficient to fund the members' benefits in the long-term, it is necessary to project the operation of the Defined Benefit plan into the future, using the actuarial assumptions set out above.

5.25 Briefly the projection operates in the following manner:

(a) project total benefits and expenses expected to emerge in all future years in respect of current members, deferred beneficiaries and pensioners. The projection is based on the long-term actuarial assumptions including allowance for the contingencies under which benefits can be paid (retirement, death, disablement and resignation), salary and pension increases;

(b) discount these projected benefits to a present value at the assumed long-term investment return;

(c) in a similar manner to (a) and (b), project the ongoing employer contribution and member contributions over all future years for current members, and discount them to present values; and

(d) determine the additional funding required by the Authorities by comparing (b) with (c) plus the appropriate value of the assets at the investigation date.

5.26 This projection is known as the aggregate funding method, which is considered to be appropriate for a closed fund. The purpose of the calculation is to assess if the existing contribution rates and assets are sufficient to provide all future benefits on current assumptions.

5.27 Under SPS 160, APRA requires superannuation funds to put in place a plan that is expected to fully fund their vested benefits within three years if the fund's assets are less than the vested benefits at an actuarial investigation, also known as being in an "Unsatisfactory Financial

Position". A funding plan is also required when the VBI reduces to below the short-fall limit, currently 97%, between actuarial investigations.

5.28 The shortfall or surplus relative to vested benefits is likely to vary from the actuarial shortfall or surplus calculated using method set out in 5.26. It is possible that the recommended funding amount under this funding method may not be sufficient to be expected to maintain the Defined Benefit plan's Vested Benefits Index (VBI) to 100% within the timeframe required by APRA if it is below 100%. In this situation additional contributions would be recommended as required by APRA.

5.29 Additional contributions can be made to target a VBI of 100% but where these contributions are higher than any actuarial shortfall calculated using the aggregate funding method described above a surplus would be expected to result in the long term if experience is as expected. Vision Super may also be able to manage any such shortfalls or surpluses through a combination of changes to funding and investment strategy.

5.30 In the next section we review the financial position as at 30 June 2014 and in Section 7 we discuss the adequacy of the long term funding arrangements.

6 FINANCIAL POSITION OF DEFINED BENEFIT PLAN

6.1 The financial position of the Defined Benefit plan at the investigation date provides some insight into the progress towards fully funding members' benefits in the long-term.

6.2 A convenient means of assessing the financial position of the Defined Benefit plan involves the calculation of various indices of benefits compared to assets.

Vested Benefits Index

6.3 The first of the indices is the "Vested Benefits Index" (VBI). Vested Benefits are defined as the benefits that would be due and payable if all the members voluntarily terminated their service with their employers at the investigation date.

- For active members, the Vested Benefits are the resignation benefit or the early retirement benefit (if aged 55 or more). Upon resignation from LASF, a member has the choice of an immediate lump sum or a more valuable deferred benefit. Also, upon retirement certain members have the option of taking a pension. In calculating the vested benefits, we have allowed for the best estimate assumption regarding the take up of deferred benefits and pensions.

- For deferred beneficiaries, the vested benefit will be the present value of the liabilities, allowing for the pension take up rate.

- For pensioners, the vested benefit is the present value of expected future pension payments.

6.4 The Vested Benefits Index is calculated as follows:

$$\text{VBI} = \frac{\text{market value of assets}}{\text{total of vested benefits}}$$

6.5 The Vested Benefit Index as at 30 June 2014 is:

VBI AS AT 30 JUNE 2014	
Defined Benefit plan assets ($m)	**$2,354.9**
Vested Benefits ($m)	
Active Members	$1,488.3
Life-time Pensioners	$438.4
Fixed term Pensioners	$2.0
Deferred beneficiaries	$349.0
Total Vested Benefits	**$2,277.8**
Vested Benefit Index	103.4%

6.6 The calculated VBI for the Defined Benefit plan at 30 June 2014 is 103.4%. This compares with a VBI of 77% at the 31 December 2011 investigation.

6.7 The VBI for the Defined Benefit plan has increased since 31 December 2011 mainly due to the additional employer contributions invoiced in 2013 and the higher than expected investment returns during the period. In particular, Authorities were invoiced an additional $453 million (plus contribution tax) as recommended in the previous actuarial investigation.

6.8 Because the VBI was over 100% as at 30 June 2014, the Defined Benefit plan was not in an unsatisfactory financial position at that date.

Discounted Accrued Benefits Index

6.9 Discounted Accrued Benefits means the present value of the benefit payable in the future (based on the assumptions) accrued in respect of service to the investigation date. The method of apportioning active members' benefits to past service for the main Defined Benefit plan is as follows, effectively recognising the portion of future benefits arising due to service to date:

(a) Retirement, disablement and deferred resignation– the past service benefit (based on accrued lump sum multiples and accrued pensions where relevant) at the calculation date, with allowance for future salary growth to the assumed exit date.

(b) Death benefits – the total projected death benefit at the assumed exit date multiplied by the ratio of service to the calculation date divided by service to the retirement date.

(c) Immediate Resignation Benefit – the past service benefit at the calculation date (based on the multiples at the calculation date) with allowance for future salary growth up to the assumed resignation date.

6.10 The Discounted Accrued Benefits are not subject to a minimum of the Vested Benefits.

6.11 The index is more a measure of the Defined Benefit plan's on-going capacity to meet Accrued Benefits in the long run.

6.12 The "Discounted Accrued Benefits Index" (DABI) is calculated as follows:

$$\text{DABI} = \frac{\text{market value of assets}}{\text{total of discounted accrued benefits}}$$

6.13 The Discounted Accrued Benefit Index as at 30 June 2014 is:

DABI AS AT 30 JUNE 2014	
Defined Benefit plan assets ($m)	**$2,354.9**
Discounted Accrued Benefits ($m)	
Active Members	$1,272.5
Life-time Pensioners	$438.4
Fixed term Pensioners	$2.0
Deferred beneficiaries	$349.0
Total Discounted Accrued Benefits	**2,061.9**
Discounted Accrued Benefit Index	114.2%

6.14 The calculated DABI for the Defined Benefit plan at 30 June 2014, based on the "best estimate" assumptions, used in this investigation, is 114.2%. The DABI was estimated to be 84% at the 31 December 2011 investigation. The increase in DABI was mainly due to the additional employer contributions and better than expected investment return during the investigation period.

6.15 Because the DABI is more than 100%, it means current assets are expected to be sufficient to provide the benefits of members' accrued benefits based on service to 30 June 2014.

Minimum Requisite Benefits Index

6.16 We have also considered the asset coverage of members' Minimum Requisite Benefits.

6.17 The Minimum Requisite Benefits (MRBs) are the minimum amount of benefit that must be provided to enable Authorities to satisfy their Superannuation Guarantee obligations. The method to calculate the amount of MRBs for the active members is specified in my Benefit Certificate dated 19 August 2013.

6.18 The MRBs for Defined Benefit active members have been configured on the administration system. We have therefore used the MRB data provided by the administrator for the purposes of this valuation.

6.19 In relation to the determination of the MRBs for deferred beneficiaries and pensioners, DLA Piper has advised that the MRB should be crystallised when members cease to be an employee and there was no basis to adopt a higher benefit beyond their MRB entitlements.

6.20 In accordance with this legal advice, we have estimated the MRB for these members on the following basis:

(a) For deferred beneficiaries, their MRBs has been calculated as the following amounts (plus interest):

(i) For members who resigned prior to 1 July 2013, the immediate cash resignation benefit, as the MRB was defined as equal to this amount in the Benefit Certificate applicable at that time;

(ii) For members who resigned from and after 1 July 2013, the MRB is expected to be different to the immediate cash resignation benefit. We understand that the resignation benefits provided by Vision Super have already been subject to a minimum of the MRB, if this minimum applies. Hence we have assumed that the MRB is equal to the resignation benefit provided, which will overstate the estimated MRB where the actual MRB is less than the immediate resignation benefit. We do not think this will materially overstate the amount of the MRB.

(b) For the current pensioners who retired after 1992 (since the introduction of the Superannuation Guarantee legislation), their MRBs are expected to be less than their retirement benefits; whereas for those current pensioners who retired prior to 1992, their MRBs are assumed to be their retirement benefit. On retirement, all Defined Benefit plan members are required to take at least half of their benefit as a lump sum, which means that the portion of the pension that is funded by the MRB will often be low. Vision Super is unable to provide information regarding members' MRB at the time of retirement. For the last actuarial investigation, we estimated that the proportion of MRB benefits relative to the retirement pensions was of the order of 65% for all current pensioners. We have reviewed this assumption and believe that it remains appropriate.

6.21 The Minimum Requisite Benefit Index is calculated as follows:

$$\text{MRBI} = \frac{\text{market value of assets}}{\text{total of Minimum Requisite Benefits}}$$

6.22 The Minimum Requisite Benefit Index as at 30 June 2014 is:

MRBI AS AT 30 JUNE 2014	
Defined Benefit plan assets ($m)	**$2,354.9**
Minimum Requisite Benefits ($m)	
Active Members	$1,036.7
Lifetime Pensioners	$284.9
Fixed term Pensioners	$2.0
Deferred beneficiaries	$160.3
Total Minimum Requisite Benefits	**1,483.9**
Minimum Requisite Benefit Index	158.7%

6.23 As at 30 June 2014 we estimate that the ratio of the market value of assets to the amount of Minimum Requisite Benefits was approximately 159%. This compares with a MRBI of 113% at the 31 December 2011 investigation. The increase in MRBI was mainly due to the additional employer contributions and better than expected investment return during the investigation period.

6.24 In accordance with the legal advice from DLA Piper, this ratio has been calculated including the pension MRBs and the deferred MRBs in the total of MRBs (rather than a deduction from the market value of assets). This is consistent with what is expected in the APRA reporting forms.

6.25 If this ratio for the entire Fund falls to below 100%, the Fund becomes Technically Insolvent as defined in the SIS Regulations. If this occurs the Trustee must take certain steps to restore solvency. The Trustee needs to continue to monitor the “Notifiable Events” defined in the Funding and Solvency Certificate to identify if the Fund is at risk of becoming, or becomes, Technically Insolvent so appropriate action can be taken.

Other Measures of Financial Position

6.26 In accordance with Clause A.21.1(a) of the Trust Deed, an Authority requires the approval of the Board to terminate its contributions to the Defined Benefit plan. We assume this approval would not be provided unless any future funding risk is adequately managed. Also, in accordance with Clause A.21.1(b), such an Authority remains responsible for its share of any actuarial shortfall.

6.27 However, if an Authority does terminate its contributions, Clause A.21 of the Trust Deed states that:

> *"the Trustee, after obtaining the advice of the Actuary and subject to A.21.5, may adjust any benefit which is or may become payable to or in respect of any person whom the Trustee may consider is affected by that termination to the extent and in the manner the Trustee considers appropriate and equitable"*

6.28 Further it states in Clause A.21.5 that:

> *"…Unless otherwise agreed between the Trustee and the Employer, an adjustment made …must not increase the amount of any benefit which, in the opinion of the Trustee after obtaining the advice of the Actuary, has accrued in respect of a person immediately prior to the effective date of that adjustment in respect of the period up to that date or improve the basis upon which benefits accrue during or in respect of any period after that date."*

6.29 Therefore, in the case of the termination of contributions by one or more Authorities the Trustee has some flexibility in respect of the benefits provided, subject to superannuation law, and there is no alternative measure of financial position that needs to be calculated in respect of this situation.

6.30 On retrenchment, members' are entitled to an accrued retirement benefit. For members over age 55 this is equal to their vested benefit (i.e. retirement benefit) but for members under age 55 it will be higher than their vested benefit. For active members retrenchments benefits as at 30 June 2014 were $1,512 million. For pensioners and deferred beneficiaries there are no retrenchment benefits and their value is equal to the amount of the vested benefits. As at 30 June 2014, the ratio of the market value of assets to the amount of retrenchment benefits was 102.3%. The corresponding index as at 31 December 2011 investigation was 75%. This increase in the index was mainly due to the additional employer contributions invoiced in 2013 and higher than expected investment returns during the period.

6.31 An additional contribution is required from the relevant Authority in respect of each retrenchment under the current funding plan so that there is no additional financial strain on the Defined Benefit plan.

6.32 The liabilities of pensioners used to determine all of the funding measures have been calculated using the funding assumptions and assuming the liabilities will be met by continuing to make pension payments until all pensioners have died. It should be noted that if the current pension liabilities were to be transferred to a life insurance office, the assets required to be transferred could be significantly higher than the amount of the vested benefits calculated in this investigation because the assumptions used for this purpose would need to be calculated consistently with the capital adequacy requirements of life insurance offices. The increase in pension liability on this basis as at 30 June 2014 is approximately $250 million, which would result in a 10% lower VBI (i.e. reducing the 103% VBI to 93%).

6.33 The value of the pension liabilities included in the funding indices does not include an amount in respect of future administration expenses. If it is assumed that administration expenses will be 2% of pension payments, the VBI would reduce by approximately 0.4% if the amount was included in Vested Benefits.

6.34 In Appendix E the Defined Benefit plan's asset allocation is shown and there is currently a 28.9% allocation to illiquid assets. The funding indices have been calculated based on the valuation of these assets at market value from the 30 June 2014 financial statements. In the unlikely event that these assets had to be quickly liquidated it is possible that this could occur at discounted values resulting in lower funding ratios. For example, a 20% discount on forced sale of illiquid assets would reduce the funding indices by approximately 6%.

6.35 The Authorities have ten years to make each of the three lump sum contributions requested by Vision Super (as at 30 June 1997, 31 December 2002 and 30 June 2011). Under the current funding plan, they have fifteen years to make the contributions requested as at 30 June 2013. Outstanding amounts are included in the market value of assets as contributions receivable. If these amounts are not paid the funding position would be worse than set out in this report. We have been advised by Vision Super that the amount not received by 30 June 2014 was less than 1% of the market value of the Defined Benefit plan assets.

6.36 The VBI and DABI would increase (or decrease) if a lower (or higher) proportion of employee members were assumed to defer upon resignation or take a pension upon retirement. If it was assumed that 100% of eligible members elected the pension option and 100% of resigning members elected the deferred option, the impact on the VBI and the DABI would be a reduction of 3% and 1% respectively.

6.37 There was no material deferred tax asset in the Fund as at 30 June 2014. Therefore, the funding is not significantly dependent upon being able to utilize such an amount.

Probability of making Pension Payments

6.38 In order to satisfy the requirements of SPS 160 to provide an opinion of whether at 30 June 2014 “there is a high degree of probability that the fund will be able to pay the pensions as required under the fund’s governing rules”, without any clear priorities for benefits being specified in the Fund Trust Deed, we looked to the following points in relation to contributions:

(a) As envisaged by Circular 12/97 (issued by the Board under the 1988 Act), any future funding shortfall arising from pension liabilities can be funded under the Unfunded Liability Amount provisions in the Trust Deed.

(b) Under Part A.21 of the Fund’s Trust Deed, participating employers are generally able to terminate their contributions to the Fund at any time. However:

(i) Under clause A.21.1(b), a participating employer in Division C (the Defined Benefit plan) with an “Unfunded Liability Amount” is not able to terminate contributions. The “Unfunded Liability Amount” is the amount identified in respect of each participating employer using the methodology set out in Circular 12/97.

(ii) A participating employer without an “Unfunded Liability Amount” is able to terminate contributions to the Fund under clause A.21.1(a) after giving 60 days notice and obtaining the Trustee’s approval. Presumably, the Trustee would not give approval to terminate if there is an unfunded liability or material future funding risk.

(c) The Participating Employer Agreement signed by each defined benefit employer imposes a contractual obligation on that employer, in addition to the contribution requirements in the Trust Deed. The Agreement also provides that employers with Unfunded Liability Amounts cannot terminate contributions and that those who do not have an Unfunded Liability Amount must follow clause A.21.1(a) of the Trust Deed.

(d) The combination of the Trust Deed provisions and the Participating Employer Agreements essentially mean that an employer cannot unilaterally cease contributions to the Fund unless it ceases to exist:

(i) Under the terms of the Participating Employer Agreement, if such an employer does cease to exist, the terms of the Agreement are binding on that employer’s successor at law and that employer’s “Unfunded Liability Amount” obligation (if any) must be assumed by any successor body.

(ii) If there was no direct successor, the Trustee could initiate action to identify a relevant successor (possibly the State Government as most, if not all, of these employers would be engaged in the provision of essential public services which the state is constitutionally bound to provide). Such a situation is expected to be very rare.

6.39 Legal advice has been obtained by the Fund from DLA Piper that confirms the Employers cannot avoid their contribution responsibilities. We have relied upon the legal advice.

6.40 When forming a statement of opinion in accordance with Guidance Note 465, the assets and future contributions from which future pension payments are assumed to be met need to be identified. Under normal circumstances, it is considered inappropriate to take future employer contributions into account when determining the assets available to cover pension payments. However, paragraph 25(a) of Guidance Note 465 provides allowance for future contributions to be taken into account in limited circumstances, in order to form a positive opinion.

6.41 We believe that the historical circumstances of Vision Super's funding arrangements fall within the scope of the 'limited circumstances' referred to in paragraph 25(a) of Guidance Note 465.

6.42 For most of its history, Vision Super was a public sector fund and was operated on a pay-as-you-go basis rather than on a fully funded basis. It has only been a Regulated fund under SIS since 1 July 1998 and employers remain public sector employers.

6.43 Changes to the Fund benefit design and funding policy in 1988 included a process to eventually achieve full funding of the accrued benefit liabilities, including the pension liabilities.

6.44 To achieve this full funding target over time, the contractual contribution arrangements outlined above were instigated.

6.45 In conclusion, this analysis allows us to confirm that in our opinion there is a high degree of probability that the Defined Benefit plan will be able to pay the pensions required under the Trust Deed.

7 ASSESSING THE ADEQUACY OF THE FUNDING ARRANGEMENTS

The Present Funding Arrangements

7.1 The Authority funding arrangements for the Defined Benefit plan recommended in the previous triennial actuarial investigation comprise the following components:

(a) contributions in respect of each Authority's share of any funding short fall that arises. This has included:

- $321 million unfunded liability at 30 June 1997, plus contribution tax; and
- $127 million unfunded liability as at 31 December 2002, plus contribution tax;
- $71 million unfunded liability as at 31 December 2008, plus contribution tax (this amount plus interest was invoiced at 30 June 2011);
- $406 million unfunded liability as at 31 December 2011, plus contribution tax and interest from 31 December 2011. This was $453 million (plus contribution tax) as at 30 June 2013.

(b) An additional contribution to cover the excess of the benefits paid as a consequence of retrenchment above the funded resignation or retirement benefit (the funded resignation or retirement benefit is calculated as the VBI, capped at 100%, multiplied by the benefit), plus contribution tax; plus

(c) An ongoing Authority contribution rate based on current members' salaries, needed to fund the balance of benefits for current members and pensioners initially set at 9.25% of salaries; plus

(d) Additional top up contributions that may be required in the future so that Defined Benefit plan is no longer in an unsatisfactory financial position.

7.2 Component (c) of the funding arrangements was revised to 9.5% of salaries from 1 July 2014 because of the increase in the Superannuation Guarantee Charge to 9.5% effective from that date. Vision Super has advised that Authorities' contributions to the Defined Benefit plan will continue to increase with legislated increases in the Superannuation Guarantee Charge. These increases have been allowed for in this report.

7.3 The final component of this funding plan is consistent with the funding requirements of SPS 160 because it refers to additional top-up contributions to restore the VBI to 100%. SPS 160 requires restoration plans to be developed to restore the VBI to 100% within three years, when prescribed circumstances apply. The prescribed circumstances are a VBI below the Trustee adopted shortfall limit (i.e. currently 97%) at any time or below 100% at the date of an actuarial investigation or while an actuarial investigation is being undertaken.

Assessment at 30 June 2014

7.4 Our calculations at 30 June 2014 using the "best estimate" funding assumptions show that the present funding arrangements are adequate to meet the expected Defined Benefit plan liabilities.

7.5 As at 30 June 2014 there was an actuarial surplus of $236 million. This means that the current value of assets plus expected future contributions is more than the value of expected future benefits and expenses by $236 million, assuming that the Authorities contribute at a rate in line with the currently legislated Superannuation Guarantee Charge as a percentage of salaries (i.e. currently 9.5% of salaries but increasing in the future). Full details of these calculations are set out in Appendix F.

7.6 The increase in actuarial surplus is mainly due to the additional employer contributions and a strong investment return over the two and a half years to 30 June 2014. The impact of the changes in assumptions was relatively small, having an impact of less than $15 million on the total liability actuarial surplus.

7.7 The existing funding arrangements are expected to be adequate if the current assumptions are borne out in practice.

7.8 Nevertheless, it needs to be recognised that the ultimate cost of benefits for members of the Defined Benefit plan will depend on the actual future experience of all the relevant factors (investment earnings, salary growth, pensioner mortality, turnover rates, etc.). Therefore, the contribution arrangements will need to be varied as the actual experience unfolds.

Sensitivity of Funding Arrangements to Future Assumptions

7.9 As outlined in Section 5, factors that affect the future experience of the Defined Benefit plan are split into two broad categories. They are the financial assumptions and the demographic assumptions. The assumptions are more sensitive to changes in the financial assumptions and the sensitivity of the "actuarial surplus" to the financial assumptions is considered below.

7.10 As well as calculating the sensitivity to the financial assumptions we have also calculated the sensitivity to the following demographic assumptions:

(a) All eligible members elect the maximum pension or deferred benefit. There have been an increasing number of members who have elected a pension over the last few years. The value of the pension is generally greater than the lump sum benefit. A higher pension election will therefore increase the funding cost.

Upon resignation, the Defined Benefit plan members have the option to defer their benefits until age 55 to be entitled to a higher benefit. The value of the deferred benefit is generally greater than the immediate cash benefit. The funding cost is likely to be higher if more members elect this option in the future.

(b) We have also considered the likelihood of pensioners living longer than expected by lowering the mortality rate by 10%.

7.11 To quantify the potential impact of variations in financial and demographic experience the following table shows the impact of changing some of the assumptions on the “actuarial surplus” as at 30 June 2014.

Impact of Changes in Key Assumptions		
	Actuarial Surplus $ Million	
Best estimate assumptions	236	
Higher investment return (+1.5% pa)	426	(+190)
Lower investment return (-1.5% pa)	0	(-236)
Higher salary inflation rate (+1.0% pa)	149	(-87)
Lower salary inflation rate (-1.0% pa)	315	(+79)
Higher pension indexation (+1.0% pa)	169	(-67)
Lower pension indexation (-1.0% pa)	294	(+58)
100% of entitled members elect deferred and pension option	201	(-35)
Pensioner mortality 10% lighter	219	(-17)

7.12 The table shows that a variation in the financial assumptions has a very significant impact on the actuarial surplus or shortfall. It is possible that the actual rate may vary from our best estimate assumption by significantly more than 1% and the impact would be greater than what was shown in this sensitivity analysis.

7.13 Note that the variations selected in the sensitivity analysis do not indicate upper or lower bounds of all possible outcomes.

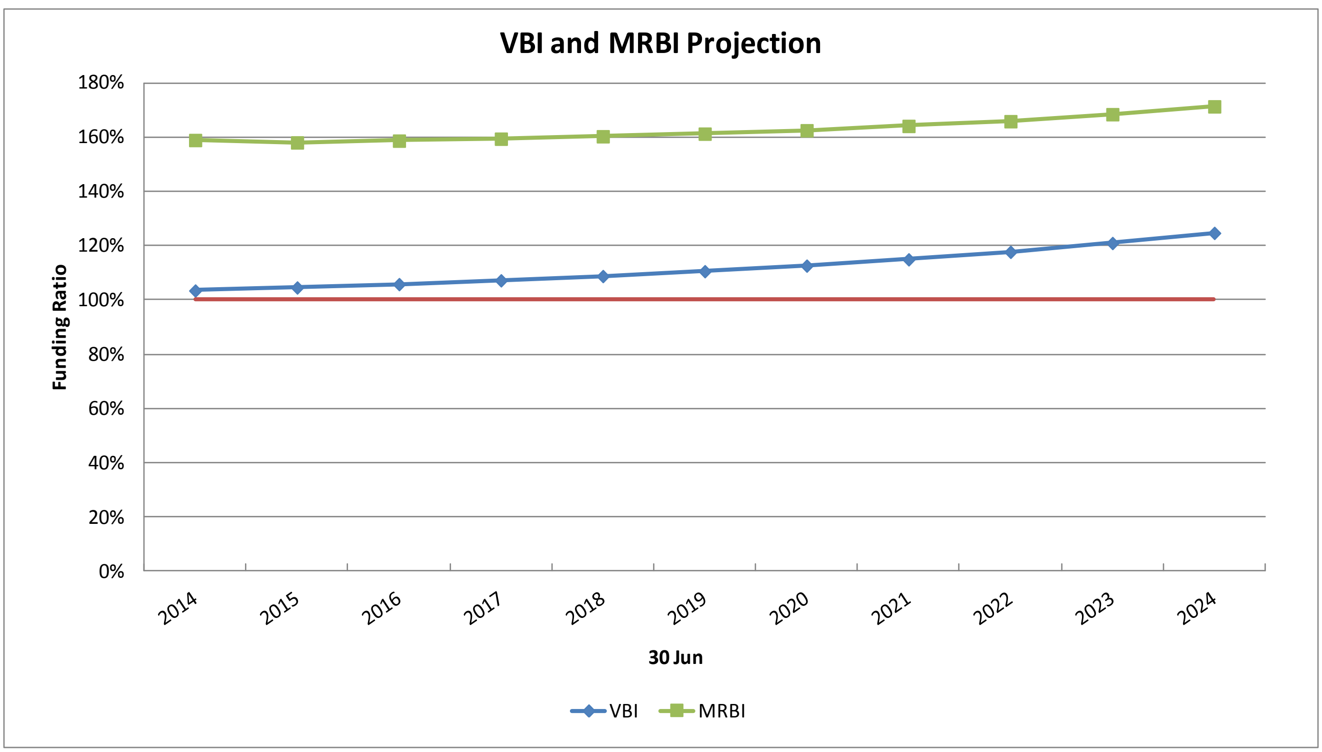
7.14 There is also a risk that the demographic experience may differ from our assumption which would lead to a lower or higher funding cost.

This table also shows that with the $236 million total service liability surplus as at 30 June 2014, a net of tax investment return of 6.0% p.a. was expected to be sufficient to fund all liabilities. However, if the investment strategy was changed so that the expected net return reduced to 6.0% p.a., the VBI as at 30 June 2014 would have reduced to 98.9%. This is because the vested benefit for pensioners is dependent upon the discount rate, and increases if the discount rate reduces, because it is equal to the present value of the future pension payments. The return required to fully fund benefit is very sensitive to the amount of the initial surplus and maturity of the Defined Benefit plan.

Projection of VBI Funding Levels

7.15 The adequacy of the funding arrangements can also be considered by projecting the Defined Benefit plan's future funding levels. This projection is based on the "best estimate" funding assumptions discussed in Section 5 and Appendix D and assumes that the Authorities' contributions will increase with increases in the Superannuation Guarantee Charge in the future.

7.16 The following projection shows that the vested benefits (VBI) and Minimum Requisite Benefits (MRBI) of the Defined Benefit plan are expected to increase gradually over the next 10 years under the current funding arrangement because of the total service liability surplus.



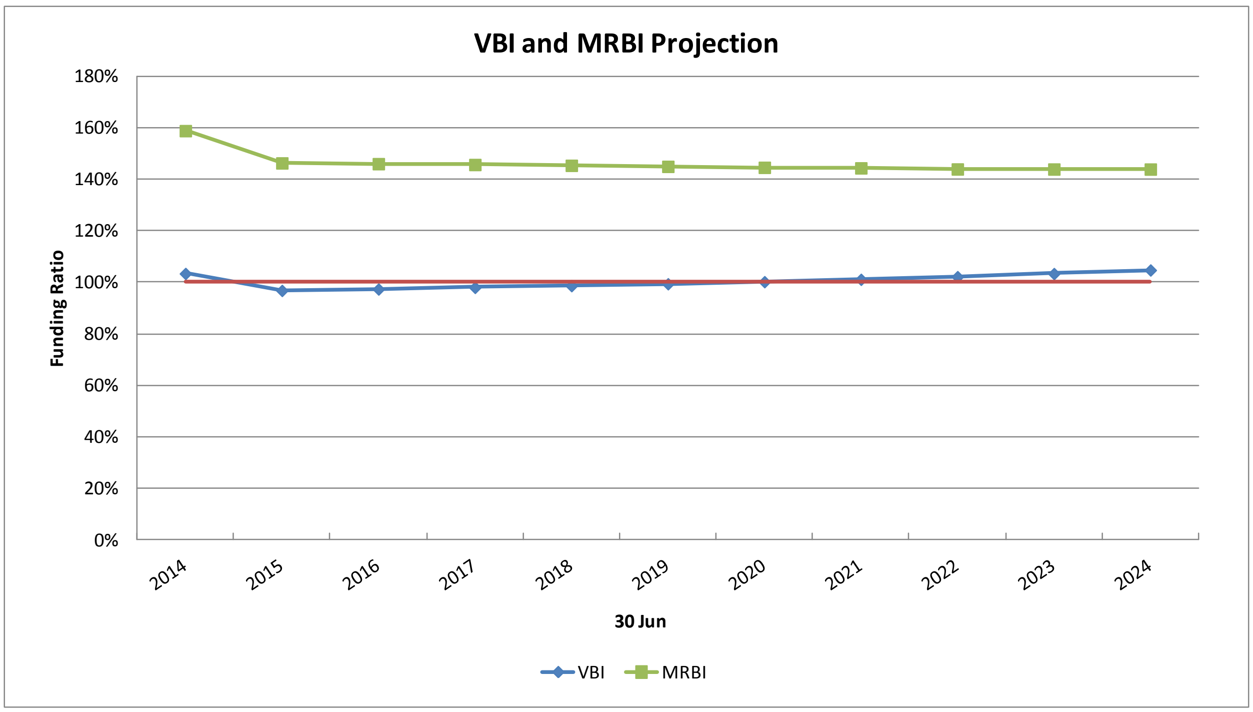
7.17 The chart shows the VBI is expected to stay above 100% over the next ten years and hence no additional contribution is expected to be required from the Authorities to meet the funding requirement under SPS 160.

7.18 The chart also shows that the MRBI of the Defined Benefit plan is expected to stay above 100% over the next ten years.

Other Funding Issues

7.19 The Defined Benefit plan is mature and its funding is very sensitive to future experience. As shown in Section 7.11,a lower than expected investment return would significantly reduce the “actuarial surplus”.

7.20 The chart below shows the impact on the VBI and the MRBI if the return is 0% for the year to 30 June 2015 and all other experience is as expected. A best estimate return of 7.5% p.a. is assumed from 1 July 2015.



7.21 If the return is 0% in 2014/15, the VBI is expected to fall below 100% (i.e. an unsatisfactory financial position) and stay under 100% until 2020. Additional employer contributions would be required to restore the fund’s VBI to 100% within three years if this occurred. For example, an additional contribution of $23 million (plus contribution tax) as at 30 June 2015 would be expected to be sufficient.

7.22 On the other hand, if experience is favourable an even larger “actuarial surplus” could result. The Board would need to consider how to treat such an “actuarial surplus”. It is possible that such a surplus could be so significant that providing Authorities an indefinite contribution holiday would not use all of it. We understand that if this occurs any residual assets would eventually be distributed to relevant Authorities in accordance with Clause A.15 of the Trust Deed. The Board may also wish to consider adopting a more defensive investment strategy in order to reduce the investment risk, which is discussed further below.

Recommended Funding plan

7.23 Section A.20.1 of the Trust Deed states:

“each Employer must contribute to the Fund in respect of a particular Employee at any particular time the amount or rate of contributions determined by the Trustee after obtaining the advice of the Actuary, including the Unfunded Liability Amount….”

7.24 The VBI was 103.4% as at 30 June 2014 (refer Section 6.5). Given that this rate is not significantly above 100%, and given the current investment strategy, the VBI could quickly fall below 100% if experience is worse than expected. We therefore have recommended that the current contributions remain unchanged.

7.25 In summary, we recommend that the current funding plan continue, whereby the Authorities will pay:

(a) Outstanding amounts in respect of the prior funding calls from the 1997, 2002, 2008 and 2011 actuarial investigations;

(b) Contributions equal to 9.5% of salary for employee members, increasing with changes in the Superannuation Guarantee Charge;

(c) An additional contribution to cover the excess of the benefits paid as a consequence of retrenchment above the funded resignation or retirement benefit (the funded resignation or retirement benefit is calculated as the minimum of (100% and VBI) multiplied by the vested benefit), plus contribution tax;

(d) Additional top up contributions that may be required in the future if the plan is in an unsatisfactory financial position.

7.26 However, given the $236 million total liability surplus, these contributions are expected to be more than sufficient if future experience is as expected. Hence, Vision Super could consider whether it is appropriate to reduce the investment risk in the current investment strategy which could be considered together with alternative funding plans.

7.27 It is very important to understand that each of the components of the funding arrangements is very dependent on the actual future experience of the Defined Benefit plan. Consequently all contribution components are subject to regular review by the Trustee using actuarial advice and could vary from the current recommendations at any time in the future.

Events subsequent to 30 June 2014

7.28 Vision Super has advised that the Defined Benefit plan Vested Benefit, calculated using a method we have provided, was 102.6% as at 30 September 2014. Since 1 October 2014 the investment return to 31 October 2014 has been 1.04%. While experience since 30 June 2014 has been a little worse than expected, it is not materially enough below expectations to require a change in our recommendations.

7.29 We are not aware of any other events subsequent to 30 June 2014 that would materially impact upon the results of the actuarial investigation of the Defined Benefit plan.

8 INSURANCE

Self Insurance Arrangements

8.1 The Defined Benefit plan provides death and disablement benefits that are significantly higher than the resignation/retirement benefits. The Fund self insures this risk. In our opinion it is reasonable for the Board to conclude that this continues to be appropriate in light of the Defined Benefit plan's size, experience, present membership and benefit levels.

8.2 The death and disablement benefits are funded by the Authorities' contributions to the Defined Benefit plan. It is ultimately the Authorities that bear the financial risk if the amount of death and disablement benefits paid is significantly higher than expected.

8.3 Section 3.9 showed that over the two and a half years to 30 June 2014 there were 0.6 deaths for every death expected and 0.4 disablements for every disablement expected. On average, the total death and disablement benefits paid (past and future service) over the two and a half years was approximately $6.2 million per annum compared to expected benefits of approximately $12.4 million per annum. These amounts include both the past service (already funded) portion of the death and disablement benefit as well as the self insured future service portion. We believe the funding arrangements adequately allow for expected death and disablements.

8.4 The following table summarises the Defined Benefit plan's exposure to future service death and disablement risk as at 30 June 2014.

Statistics as at 30 June 2014	
Net Assets Available[1] (Defined Benefits plan assets available to meet benefits)	$1,573.3m
Expected Annual Future Service death and disablement benefits to be paid for 2014/15[2]	$2.2m
Total Future Service death benefits[3]	$489.8m
Average Future Service death benefit	$123,000
Maximum Future Service death or disablement benefit of any Member	$982,500

1. Active Defined Benefit plan assets excluding assets in respect of pensioners and deferred beneficiaries.

2. Based on assumptions adopted in this investigation.

3. The amount of future service death benefits shown is the amount of death benefit which is in excess of the accrued retirement benefit. Future service disablement benefits are similar.

8.5 Because of the large number of members and relatively small average amount of future service death and disablement benefits, it is unlikely that the actual future service death and disablement benefits would be double the expected number in any year. If this occurred in the 2014/15 year, additional benefits of approximately $2.2 million would be expected to be paid. This represents 0.1% of the Defined Benefit plan's available assets so would not alone place a significant additional financial strain on its funding.

8.6 The following table shows the distribution of the future service death benefits. The death benefit has been used because it is generally slightly higher than the disablement benefit.

Distribution of Future Service Benefits as at 30 June 2014				
	Total Future Service Benefits $ million	% of Total Future Service Benefits	Number of Members	% of Total Defined Benefit Membership
Nil	-	-	-	-
$1 - $99,999	97.3	20%	2,064	52%
$100,000 – $249,999	237.7	49%	1,467	37%
$250,000 - $499,999	133.7	27%	416	10%
$500,000 or more	21.1	4%	35	1%
TOTAL – all active members	**489.8**	**100%**	**3,982**	**100%**
Oldest 10% of members	12.8	3%		
Youngest 10% of members	110.4	23%		
Highest salaried 10% of members	106.0	22%		
Largest 10% of future service benefits	140.9	29%		

8.7 This table shows that:

(a) 99% of members have future service death and disablement benefits of $500,000 or below and that the aggregate for these members' benefits is 96% of the total amount;

(b) the average future service benefit is approximately $123,000; and

(c) there is no small sub group of members that expose the Defined Benefit plan to significant additional risk in respect of future service death and disablement benefits.

8.8 The Defined Benefit plan's membership is spread throughout Victoria, reflecting the distribution of Authorities. There is a relatively low concentration of risk.

8.9 There is a very remote possibility of a catastrophe occurring that may result in around 100 death or disablements benefits. If this occurred, and assuming the average future service death or disablement benefit was $123,000 for each member, the total claim amount would be approximately $12.3 million. This represents 0.8% of net available assets and is therefore considered a manageable risk. A larger catastrophe is even more unlikely, but would have a more material impact on funding.

Incurred but not Reported Claims

8.10 Currently, the Defined Benefit plan holds an insurance reserve in respect death and disability claims which have incurred but are still pending payment or have not yet been reported (IBNR). The amount of the reserve is excluded from the Defined Benefit plan assets for the purpose of assessing the financial position and adequacy of funding arrangement.

8.11 In my letter of advice in 2013, we recommended that an insurance reserve of $8.6 million was appropriate.

8.12 As part of this investigation, we have estimated the reserve required to cover pending and IBNR claims as at 30 June 2014 based on updated data from 1 January 2008 to 30 June 2014.

8.13 For death claims, the average lag between the date of death and the payment date is about 6 months based on historical claim data and hence we have allowed for 6 months of notional premium in the provision and allowance for pending and IBNR payments, which is about $0.6 million in total.

8.14 We note that for about 40% of the disability claims, the injury date was not available and only the date ceased employment was provided. Vision Super has advised that injury dates are generally available only for the members who were on WorkCover. Members may be on Workcover for several years prior to making a claim with the Fund. For those without an injury date, we have assumed that the lag between the injury date and the exit date was one year.

8.15 In estimating the pending and IBNR claims for the disability benefits, we assume that the claims emerging in the future will follow a certain run-off pattern based on past experience i.e. payments will emerge in a similar way in each injury year. For the most recent years, where few claims have yet been paid, we also used the expected claims to assist in estimating the claims that are still to emerge.

8.16 The table below summarises the run off pattern for disability claims, showing the lag between the injury dates and payment dates based on the historical claims data:

Lag (in months) between the injury date and payment date		
Lag (in months)	**Number Of claims**	**Proportion**
Less than 12	10	18.4%
12 to 24	34	44.7%
24 to 36	13	15.2%
36 to 48	6	5.3%
48 to 60	7	10.1%
Over 60	9	6.4%
Total	**79**	**100.0%**

8.17 We have estimated that the pending and IBNR claims for disability benefits to be in the order of $4.6 million.

8.18 Due to the uncertainly of the claims and the limitation of the data, we have also included a small margin in the reserve for the IBNR claims. If future death and disablement claims are higher (or lower) than expected then the shortfall (or excess) in the reserve would be funded from other Defined Benefit plan assets, and ultimately the Authorities.

8.19 Hence, we have determined that the appropriate insurance reserve to cover the pending and IBNR claims for the Defined Benefit plan as at 30 June 2014 was $6 million. The amount has reduced by $2.6 million compared to the previous advice in 2013 and we have included this additional $2.6 million in the Defined Benefit assets for the purpose of this investigation to reflect the reduction in the insurance reserve.

8.20 Because the Defined Benefit plan has been closed to new members for many years, the number of active members is reducing and their average age is increasing. Both of these factors mean that the risk in respect of self insured death and disablement benefits is expected to reduce over time. Unless we advise otherwise, in our opinion, it would be sufficient to review the amount of the reserve at the next triennial actuarial investigation.

9 MATERIAL RISKS

9.1 The funding of the Defined Benefit plan is dependent upon future experience. I have briefly considered below the material risks in respect of funding. If experience is materially adverse the Authorities will be required to make additional contributions

Technical Insolvency

9.2 As the MRBI is currently 158.7% as at 30 June 2014, there is a low risk that the Defined Benefit plan could become Technically Insolvent in the short term.

Investment Risk

9.3 The most significant risk facing the Defined Benefit plans is that investment returns will not be as high as expected. There is also a risk a surplus could arise that could be difficult to utilize if not managed carefully. These risks occur because the income generated from the existing assets are not matched to the expected future benefit payments.

9.4 A change to the assumed investment return could also have a material impact on Authority contribution requirements in the short term, but would not be expected to impact the ultimate cost of funding benefits. This also applies for other assumptions.

9.5 As per current practice, the Trustee should continue to consider the liabilities and the funding position when determining the Defined Benefit plans' investment strategy.

Salary and Price Inflation Risk

9.6 Salary increases or price inflation exceeding expectations will have a negative impact on funding.

9.7 It is the excess of the investment return above the rates of salary and price inflation increases that is most important because the assets increase with the investment return and the liabilities with salary or price inflation.

Catastrophe Risk

9.8 The Defined Benefit plans self insure the death and disability benefits and are therefore subject to the risk of higher than expected claims. The self insurance risk is considered in section 8.

9.9 While the risk is low, particularly given the geographic spread of members, a high number of death or disability (or terminal medical condition) benefits caused by a single event could put significant strain on the funding.

Pensioner Longevity Risk

9.10 At 30 June 2014 there were 4,882 life time pensioners in the Fund. There is a risk that pensioners may live longer than expected and this would have a negative impact on the funding position.

9.11 Increased pensioner longevity risk is less significant than investment risk and salary risk. The impact of a 10% reduction in pensioner mortality is shown in Section 7.11.

9.12 As at 30 June 2014 the assets held in respect of the 15 fixed term pensioners was $0.9 million and the liabilities were valued at $2.0 million. This means there is a $1.1 million funding shortfall. In our funding considerations the fixed term pensioners are included as part of the Defined Benefit plan and Vision Super has confirmed that the Defined Benefit plan's assets will be available to meet these liabilities.

Liquidity Risk

9.13 In Section 4 liquidity risk is discussed. Also, Section 6.34 considered the potential impact on funding of having to liquidate investments at a discount.

9.14 A review of the cash flows and sensitivity of the liquidity position to adverse scenarios is completed for Vision Super periodically. We understand that Vision Super considers the long term liquidity requirements in setting its strategic asset allocation and plans to reduce exposure to illiquid assets in the Defined Benefit plan to zero in the long term given the maturity of the plan. This is appropriate.

Assets Risk

9.15 We understand that in preparing the financial statements, Vision Super has determined the Defined Benefit plan assets by deducting the defined contribution assets (or liabilities) from the total Fund assets. Because the Defined Benefit plan assets are now well under 50% of the Fund assets and reducing, there is a risk that using this approach could lead to an under or over statement of the Defined Benefit plan assets because if the defined contribution assets do not reflect the underlying value of relevant members' benefits by only a small percentage, the impact on the Defined Benefit plan is leveraged. The defined benefit contribution assets may be different to the underlying value of relevant members' benefits because:

(a) Accrual items. For example, unit prices used to calculate members' benefit may be based on estimated tax accruals that are trued up from time to time.

(b) Valuation lags. For example, Private Equity valuations may be included in the value of assets in the financial statements that were not reflected in unit prices as at 30 June 2014 because valuations are typically notified some time after the valuation date.

9.16 While in this actuarial investigation we have adjusted the value of assets used for these factors based on information from Vision Super, the differences are likely to become more material as the Defined Benefit plan reduces as a proportion of the Fund. There is a risk that an error can occur.

9.17 As in the previous triennial actuarial investigation, we recommend that in the long term Vision Super should continue to review its processes. In particular, it should take what steps it considers necessary to satisfy itself that no cross subsidies are occurring, or could occur, between the defined benefit and defined contribution plans. Also, we suggest that in order to limit the potential cross subsidies, consideration should be given to the Fund segregating the accounting process for defined benefit and defined contribution plans. We understand that Vision Super is already considering this approach because of the recommendations in our previous reports.

Retrenchments Risk

9.18 The retrenchment benefit is larger than the resignation benefit for many members. A significant number of retrenchments would have a negative impact on funding and liquidity unless additional contributions are required to fund the shortfall when a member is retrenched. Depending upon the VBI, this can also be appropriate when a member over or under 55 is retrenched even if it is not a retrenchment benefit being paid from the Defined Benefit plan.

9.19 This risk has greatly reduced over time because:

(a) the average age of members is now over age 55. From this age members are entitled to the accrued retirement benefit upon retirement, which is equal to the retrenchment benefit so that there is no additional funding strain; and

(b) the funding assumptions now assume 80% of resigning members elect a deferred benefit. The deferred benefit is also equal to the amount of the retrenchment benefit so that there is no additional funding strain.

9.20 The current funding plan includes top-up contributions by the Authorities to manage this risk.

Legislation Risk

9.21 There is a risk that legislation changes could impact on funding. For example:

(a) Changes to legislation may impact investment returns or other aspects of experience; and

(b) Changes to tax may impact funding.

Other

9.22 Operational risks (eg. unit pricing, segregation of defined benefit assets and administration) are not considered in this report.

9.23 There are many other risks in respect of the funding of the Defined Benefit plans but we have not included those that we do not consider to be currently material.

APPENDIX A - SUMMARY OF BENEFITS AND CONDITIONS

The benefits are set out in the Fund's Trust Deed. The Fund has been governed by the Trust Deed originally dated 26 June 1998 on and from 1 July 1998. The Trust Deed has subsequently been amended numerous times. This report is based on a copy of the Trust Deed including amendments up to 1 July 2014.

Membership

The Defined Benefit plan was closed to new members on 31 December 1993. From that date, new employees have joined Vision Super Saver, which provides accumulation style benefits.

The benefits and conditions described below relate to Defined Benefit plan members only.

Contributions

Members contribute at a rate of 6% of salary. Their contributions cease after 40 years of service. Authorities pay the balance required to provide the benefits.

Retirement Benefit

A lump sum benefit calculated as a percentage of final salary for each year (part years counting pro rata) of membership to retirement. The percentage is 21% for membership completed prior to 1 July 1993 and 18.5% for membership completed after 30 June 1993. A maximum of 40 years of membership counts towards the retirement benefit. Members may retire from age 55 and benefits cease to accrue at age 65.

Death Benefit

For members under 60 years of age, a lump sum of 21% of final salary for each year of actual and prospective membership to age 60. For members aged 60 or over, a lump sum of 21% of final salary for each year of actual membership. A maximum of 40 years of membership counts toward the death benefit.

Members with a medical classification of Grade B, C or D are entitled to a lower death benefit.

Total and Permanent Disablement Benefit

For members under 60 years of age, a lump sum equal to a percentage of final salary for each year of actual and prospective membership to age 60. The percentage is 21% for actual membership completed prior to 1 July 1993, 18.5% for actual membership completed after 30 June 1993, and 21% for prospective membership between the date of disablement and age 60. For members aged 60 or more, the benefit is a lump sum equal to the retirement benefit. A maximum of 40 years of membership counts towards the total and permanent disablement benefit.

"Disablement" generally means a continuous or recurring impairment of health of a member which renders him or her unable to perform his or her duties, or any other duties for which he or she is suited by education, training or experience, or would be suited as a result of retraining.

Members with a medical classification of Grade B, C or D are entitled to a lower disability benefit.

Ill-Health and Retrenchment Benefits

The accrued retirement benefit (i.e. counting membership to date of ill health or retrenchment).

There is also a Temporary Disability benefit.

Resignation Benefit

A lump sum of either:

(a) an immediate benefit equal to the sum of:

- 15% of final salary for each year (if any) of membership prior to 1 July 1993, excluding any portion of the last five years relating to pre 1 July 1993 membership;
- 13.5% of final salary for each year (if any) of membership after 30 June 1993, excluding the last five years;
- 9% of final salary for the last five years of membership; or

(b) a deferred benefit payable from age 55 equal to the accrued retirement benefit at the date of leaving, increased with the relevant investment return to payment after age 55.

Part of the immediate resignation benefit may be subject to preservation regulations.

"Old Benefit" Entitlements

Members who joined prior to 25 May 1988 have the option of taking up to 50% of their lump sum retirement benefits as a pension, based on prescribed conversion factors. The conversion factors reduce from 13.6 at age 55 to 12.6 at age 60 and 12.0 at age 65. This option also applies to members who joined prior to 25 May 1988 and elect to defer their benefit upon resignation until after age 55.

Certain other minimum benefits apply in respect of previous entitlements for certain groups of members.

Minimum Requisite Benefit

All benefits are subject to a minimum of the Minimum Requisite Benefit specified in the Benefit Certificate.

APPENDIX B - MEMBERSHIP MOVEMENTS

Defined Benefit Plan

Membership as at 1 January 2012		4,971
Transfers/Rejoiners		8
Exits		
▪ Retirement	854	
▪ Retrenchment	25	
▪ Death	20	
▪ Total and Permanent Disablement	17	
▪ Resignation	80	
Total exits		(996)
Membership as at 30 June 2014		3,983

Pensioners

Pensioners as at 1 January 2012		5,132
Adjustments*		27
New pensioners		
▪ Retirement of active members	367	
▪ Disablement of active members	5	
▪ Spouses of deceased pensioners	115	
▪ Children of deceased pensioners	0	
Total new pensioners		487
Pensions ceasing		
▪ Death	754	
▪ Other	10	
Total pensions ceasing		764
Pensioners as at 30 June 2014		4,882

*These were pensioners who were receiving a pension at 31 December 2011 but were not included in the 31 December 2011 actuarial investigation.

APPENDIX C - SUMMARY OF TOTAL FUND CASH FLOWS FROM 1 JANUARY 2012 TO 30 JUNE 2014

		($ ‘000)
Market Value at 1 January 2012		4,317,284
Plus		
Net Investment Revenue		1,391,322
Contribution Revenue		2,549,801
Other Revenue		16,751
		3,957,874
Less		
Benefits paid		1,172,691
Administration Expenses		56,899
Superannuation Contribution Surcharge		22
Insurance Premium		37,255
Taxation Provision		181,228
		1,448,095
Market Value at 30 June 2014		6,827,063
Comprised of:	Defined Benefit Plan*	2,354,881
	City of Melbourne*	60,941
	Parks Victoria including Ports	33,269
	Accumulation Accounts & Reserves	4,377,972

* adjusted for transfer value in respect of a former City of Melbourne plan member who transferred to the Defined Benefit plan.

APPENDIX D - SUMMARY OF VALUATION ASSUMPTIONS

Financial Assumptions

The most significant financial assumptions are:

- active members:
  - investment returns (net of tax; expenses) — 7.5% p.a.
  - salary inflation growth — 4.25% p.a.
- pensioners:
  - investment returns (gross of tax; expenses) — 8.25% p.a.
  - CPI increases — 2.75% p.a.
- administration expenses: — 2.25% of salaries and 2.0% of pension

For Fixed term pensions a real investment return of 0.6%p.a. has been assumed.

Other Assumptions

Active Members

The table below illustrates the decrement rates assumed for active members. The decrement rates represent the percentage of members leaving the plan each year by each cause.

Year of Age	Deaths %	Disablements %	Resignations %	Retirements %
20	0.03	-	13.42	-
30	0.02	0.01	6.48	-
40	0.05	0.05	3.77	-
50	0.14	0.27	2.44	-
60	0.43	0.82	-	15.0
64	0.66	0.00	-	15.0

Pensioners – Defined Benefit plan

The table below illustrates the rates of mortality assumed for pensioners. The figures represent the percentages dying in the years of age shown.

Year of Age	Retirement /Spouse Male %	Disability Male %	Retirement /Spouse Female %	Disability Female %
60	0.62	1.26	0.37	0.58
65	1.07	1.95	0.63	0.99
70	1.92	3.00	1.08	1.68
75	3.31	4.56	1.85	2.84
80	5.76	6.84	3.16	4.74
85	9.28	10.06	5.33	7.72
90	14.27	14.39	8.82	12.18

Deferred Benefit Option on Resignation – Defined Benefit plan

It has been assumed that 80% of those who resign will take the deferred benefit option. Deferred benefits are assumed to be accessed at age 60.

Pension Option – Defined Benefit plan

It has been assumed that 50% of active members and 40% of deferred beneficiaries who joined the Defined Benefit plan prior to 25 May 1988 will elect to take the pension option upon retirement. Members who take this option are assumed to take 50% of their benefit as a pension.

APPENDIX E - ASSET ALLOCATION

Asset Class	Actual Asset Allocation 30 June 2014 (%)	Strategic Asset Allocation 30 June 2014 (%)
Australian Equity	25.2	25.0
International Equity	21.5	20.0
Private Equity	7.5	2.0
Infrastructure	10.4	9.0
Absolute Return Strategies	3.2	6.0
Direct Property	4.9	9.0
Opportunistic Investments	3.6	0.0
Multi-Asset	3.6	7.0
Floating Rate Debt	3.3	7.0
Fixed Interest	11.1	10.0
Cash	5.7	5.0
Total	**100.0**	**100.0**
Allocation to Illiquid Assets	28.9%	21.8%
Allocation to Growth Assets	72.4%	68.6%

APPENDIX F - TOTAL SERVICE LIABILITY SURPLUS/(DEFICIT)

		($million)
Present Value of Active Member Liabilities		1,527.9
▪ Retirement	1,360.8	
▪ Death	41.2	
▪ Disablement	52.3	
▪ Resignation	73.6	
plus Deferred Beneficiary Liability		349.2
plus Present Value of Life Time Pensions		438.4
plus Present Value of fixed Term Pensions		2.0
less Family Offset and Surcharge Account balances		(8.1)
plus Present Value of Future Expenses		49.9
plus Allowance for tax on Contributions		14.5
Total Benefit Liability		**2,373.8**
Compared to:		
Assets		2,354.9
plus Value of ongoing member contributions (6%)		96.1
plus Value of ongoing Authority contributions (SG)		158.7
Total Assets		**2,609.7**
Surplus of Total Assets over Total Benefit Liability		235.9

APPENDIX G - REQUIREMENTS UNDER PRUDENTIAL STANDARD SPS 160

Defined Benefit Plan – Division C (LASF)

As the Actuary to the Fund, I hereby confirm that in my opinion:

a) At 30 June 2014, the value of the assets of the Defined Benefit plan, excluding the amount held to meet the Operational Risk Financial Requirement (ORFR), was $2,354.9 million.

b) The projected likely future financial position of the LASF Defined Benefit plan during the three years following the valuation date and based on my best estimate assumptions is as follows.

Date	Assets ($m)	Vested Benefits ($m)	Vested Benefits Index (%)
30 June 2014	$2,355	$2,278	103.4%
30 June 2015	$2,357	$2,254	104.6%
30 June 2016	$2,358	$2,229	105.8%
30 June 2017	$2,357	$2,198	107.2%

The projected financial position is shown only for the defined benefit members of the Defined Benefit plan. The account balances of all accumulation members are fully funded and expected to remain fully funded during the three year projection period. The City of Melbourne and Parks Victoria plans are not included.

c) In my opinion, the value of the assets of the Defined Benefit plan at 30 June 2014, excluding the amount held to meet the ORFR, was adequate to meet the liabilities in respect of the accrued benefits of members of the sub-fund (measured as the actuarial value of members' accrued entitlements using the valuation assumptions). I consider that the assumptions and valuation methods set out in this report are appropriate for determining the accrued benefit liability.

d) At 30 June 2014 the Defined Benefit plan was in a satisfactory financial position, as defined in SPS 160. In my opinion the financial position is likely to have remained in a satisfactory financial position at the date of signing this report. In my opinion the Defined Benefit plan does not need to be treated as being in an unsatisfactory financial position. The shortfall limit does not need to be reviewed.

e) At 30 June 2014 the value of the liabilities of the Defined Benefit plan in respect of minimum benefits of the members of the sub-fund is $1,483.9 million. Minimum benefits are as defined in Regulation 5.04 of the Superannuation Industry (Supervision) Regulations.

f) Funding and Solvency Certificates for the Fund covering the period from 30 June 2013 to 30 June 2014 have been obtained. The Fund was solvent, as defined in the Superannuation Industry (Supervision) Regulations, at 30 June 2014. In my opinion, I expect that the solvency of the Fund will be able to be certified in any other Funding and Solvency Certificate required under the Regulations during the three year period to 30 June 2017.

g) It is recommended that the Employer makes contributions at the rates set out below for the period to 30 June 2017:

   a. Any outstanding unfunded liability from the 30 June 1997, 31 December 2002, 31 December 2008 and 31 December 2011 actuarial investigations; plus

   b. An additional contribution to cover the excess of the benefits paid as a consequence of retrenchment above the funded resignation or retirement benefit (the funded resignation or retirement benefit is calculated as the minimum of (100% and VBI) multiplied by the vested benefit), plus contribution tax; plus

   c. 9.5% of members' salaries, increasing with increases in the Superannuation Guarantee Charge; plus

   d. Additional top up contributions that may be recommended in the future, if the Defined Benefit plan becomes in an unsatisfactory financial position.

h) In my opinion, as at 30 June 2014 there is a high degree of probability that the Defined Benefit plan will be able to pay the defined benefit pensions as required under the sub-fund's governing rules.

Matthew Burgess

Matthew Burgess
Fellow of the Institute of Actuaries of Australia

Gabrielle Baron
Fellow of the Institute of Actuaries of Australia
12 November 2014

Russell Employee Benefits ABN 70 099 865 013 AFSL 220705
Level 13, 8 Exhibition Street
Melbourne VIC 3000