Russell Investments

Report on the Actuarial Investigation as at 31 December 2011

The Defined Benefit Plan

Local Authorities Superannuation Fund

25 JUNE 2012

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1 EXECUTIVE SUMMARY

Purpose

1.1 This report has been prepared for Vision Super, the Trustee of the Local Authorities Superannuation Fund (the Fund).

1.2 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.

1.3 In accordance with the Superannuation Industry (Superannuation) Act 1993, actuarial investigations are required at intervals of not more than three years. The previous actuarial investigation was conducted as at 31 December 2008 and my report was prepared in two parts dated 13 May 2009. Because the Fund provides pensions, annual actuarial investigations are also completed.

1.4 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 Fund;
- to provide advice to the Trustee on the funding arrangements;
- to provide actuarial certification in respect of the funding of pension entitlements; and
- to meet the reporting requirements of SIS Regulation 9.31.

1.5 The main body of the report covers the actuarial investigation of the Defined Benefit plan. The actuarial investigations of the City of Melbourne plan and the Parks Victoria plan (including the former Ports plan members) are covered in Appendix I and J respectively. The Executive Summary provides a summary of the actuarial investigation for the Defined Benefit plan.

Current Funding Arrangements

1.6 The current funding arrangements for the Defined Benefit plan comprise three components:

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

- $321 million unfunded liability at 30 June 1997, plus contribution tax;
- $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).

(b) an additional contribution to cover the increase in liability arising from retrenchment benefits paid after 30 June 1997, plus contribution tax, either payable at the time of retrenchment or by increasing the Authority's contributions under (a) above; and

(c) an ongoing contribution rate, presently 9.25% of current members' salaries, needed to fund the balance of benefits for current members and pensioners.

Data and Experience

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

Summary of Defined Benefit Plan Membership Data		
Active Members	31 December 2008	31 December 2011
Number	6,212	4,971
Average Age	52.5 years	54.1 years
Average Past Membership	21.8 years	24.6 years
Average Salary	$60,638	$70,727
Lifetime Pensioners		
Number	5,556	5,132
Average Age	78.9 years	79.1 years
Average Annual Pension	$5,778	$7,172
Fixed Term Pensioners		
Number	15	15
Deferred Beneficiaries		
Number	2,420	2,212
Average Age	50.2 years	51.7 years
Average Balance	$128,183	$149,842

1.8 As the fund has been closed to new members since 31 December 1993, the defined benefit membership has continued to decline during the last three years to 31 December 2011.

Financial Experience

1.9 The rate of return (net of tax and investment expenses) earned by the Defined Benefit plan for the period from 1 January 2009 to 31 December 2011 was 3.0% p.a. which was lower than the expected return of 8.5%p.a. in the 2008 investigation.

1.10 The full time equivalent salary of Defined Benefit plan members who remained members as at 31 December 2011 grew by 5.1% p.a. over the three year period. This is a little higher than the assumed salary growth of 4.25%p.a..

1.11 In respect of pension liabilities, pension increases averaged 2.7% p.a. over the three years to 31 December 2011 which was broadly in line with the assumed inflation rate of 2.75% p.a..

1.12 Overall, the financial experience over the last three years has been unfavourable which has led to a deterioration of the Fund’s position.

Demographic Experience

1.13 Analysis of the demographic experience has been carried out for the period 1 January 2009 to 31 December 2011. The table below summarises the ratio of the actual number of exits to the “expected” number. “Expected” figures are based on the funding assumptions used in the 2008 investigation.

Ratio Of Actual To Expected Numbers Over The Period From 1 January 2009 To 31 December 2011

	Resignation	Resignation & Retrenchment	Death	Disablement	Retirement
1/1/2009 – 31/12/2011	0.6	0.7	0.5	0.5	0.8

1.14 As shown in the table above, the actual exits have been consistently lower for all decrements.

1.15 The table below summarises the pensioners mortality analysis over the three years to 31 December 2011:

Ratio Of Actual To Expected Numbers For The Period From 1 January 2009 To 31 December 2011		
	Retirement/Spouse Pensioners	Disability Pensioners
Male	102%	117%
Female	126%	N/A

1.16 As shown in the table above, the actual deaths among pensioners have been higher than the assumed mortality rates over the three years to 31 December 2011.

1.17 Our analysis also showed an increasing trend for members to take-up the pension option and deferred option.

Assumptions and Funding Method

1.18 The assumptions used in this actuarial investigation 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.

1.19 The expected investment return was reduced from 8.5%p.a. to 7.5%p.a. while the salary and price inflation were unchanged from the 2008 investigation. These assumptions have been set with consideration of the views of the Board.

1.20 Based on experience, the following changes to the assumptions have also been made:

- The proportion of members assumed to defer their benefits upon resignation has been increased from 60% to 70%;
- The pension take-up rate has been increased from 35% to 50% for eligible active members and from 0% to 30% for eligible deferred beneficiaries;
- Pensioner mortality rates for males have been reduced slightly, at some ages, to be no higher than the Australian Life Table 2005-2007;

- The assumed level of administration expense has been increased to 2.0% of salaries plus 2.0% of pensions in payment.

1.21 The changes to these assumptions will have a negative impact on the fund's financial position.

1.22 The funding method used in this investigation is the Aggregate Funding Method which is explained in more detail in Section 5.

Funding position as at 31 December 2011

1.23 The following table shows each of the three key indices as at 31 December 2008 and 31 December 2011 for the Defined Benefit plan.

Funding Position	31 December 2008	31 December 2011
Vested Benefit Index (VBI)	104%*	77%
Discounted Accrued Benefit Index (DABI)	100%	84%
Minimum Requisite Benefit Index (MRBI)	106%^	113%

**Based on the old approach where members are assumed to take the immediate lump sum option upon resignation*
^ Based on the vested benefits for deferred beneficiaries and pensioners.

1.24 The funding indices have deteriorated since the last triennial actuarial investigation largely because of poor investment returns and changes to the assumptions.

1.25 There has been a change in the methodology for the vested benefit calculations which is explained in paragraphs 6.4 – 6.6. Professional Standard 400 from the Actuaries Institute now requires the vested benefit to reflect the benefit options assumed to be chosen upon resignation and retirement for funding purposes. In 2008, consistently with the financial statements, the vested benefits were calculated based on the immediate lump sum option.

1.26 In the 2008 investigation, the MRB calculations for deferred beneficiaries and pensioners were based on the vested benefits. The methodology for calculating the MRB for deferred beneficiaries and pensioners have been modified in this investigation following the legal advice from DLA Piper. The change is explained in paragraphs 6.21 and 6.22.

Adequacy of the funding

1.27 As at 31 December 2011 there was an actuarial shortfall of $406 million (excluding contribution tax). This means that the current value of assets plus expected future contributions is less than the value of expected future benefits and expenses by $406 million, assuming that the Authorities continue to contribute at 9.25% of salaries. Full details of these calculations are set out in Appendix F.

1.28 The increase in actuarial shortfall is mainly caused by the poor investment return over the three years to 31 December 2011 and the assumed lower return in the future.

Recommendations

1.29 The following funding plan has been proposed, whereby the Authorities will pay:

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

(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 multiplied by the benefit), plus contribution tax;

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

(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.

1.30 We recommend that this proposed funding plan be adopted.

1.31 This funding plan is expected to increase the VBI to approximately 95% as at 1 July 2013 (assuming the entire amount of the additional contribution is in the Fund assets at that date) and is not expected to restore the VBI to 100% within three years. We note that the funding plan may need to be revised if draft Prudential Standard (SPS 160) is finalized, and it continues to require funding plans that expect to achieve 100% coverage of vested benefits within three years, unless an adjustment or exclusion from this requirement is provided by APRA for the Defined Benefit plan.

1.32 We recommend that the funding plan be reviewed immediately if the Board believes there is a significant risk that APRA will not allow such an adjustment or exclusion. Otherwise, a second additional contribution is likely to be required in the short term to target a VBI of 100% within three years.

Material Risks

Technical Insolvency Risk

1.33 Because the MRBI is only 113% there is a risk that the Defined Benefit plan could become Technically Insolvent. The risk is expected to reduce from 1 July 2013 if significant contributions are made by Authorities in respect of the “actuarial shortfall”.

1.34 However, we understand that under the proposed funding plan, although Authorities would be able to spread their contributions over 15 years, the contributions not yet received could be included in the Defined Benefit plan’s audited assets as a contribution receivable. As separately advised, we expect to be able to include this amount as an asset for calculating the MRBI and VBI. There is a risk that this may not be possible in the future if circumstances change or actuarial professional standards change. This is because these assets are not immediately available to pay benefits.

Investment Risk

1.35 The most significant risk facing the Defined Benefit plan is that investment returns will not be as high as expected which might result in additional contribution calls in the future, which is of particular concern given that the Defined Benefit plan has been closed to new members since 31 December 1993. For example, if the Defined Benefit plan investment return was zero for the 2012 year, the “actuarial shortfall” would be expected to remain in the order of $120 million (excluding contribution tax) as at 1 July 2013 if all other experience was as expected.

1.36 It is recommended that the funding position of the Defined Benefit plan continue to be considered in setting investment policy. If the Defined Benefit plan ever has an “actuarial surplus” reducing the allocation to growth assets may become more attractive to the Board as a means of reducing the risk of subsequent higher contributions being caused by poor investment experience.

Liquidity Risk

1.37 As at 31 December 2011, 43% of the investments are invested in illiquid asset classes which include Private Equity, Infrastructure, Opportunistic Investments and Direct Property.

1.38 We understand that the Board has determined that no further commitments are to be made to illiquid investments and is considering plans to reduce the allocation to illiquid assets to 25-30% over approximately three to five years.

1.39 Given the maturity of the plan, it is recommended that the Board should consider the time frame over which they will reduce the exposure to illiquid assets in the defined benefit plans to zero. Consideration of the liability run off under various scenarios should form part of this consideration.

Asset Risks

1.40 We understand that in preparing the financial statement, Vision Super has determined the Defined Benefit plan assets by deducting the defined contribution assets (or liabilities) from the total Fund assets. This might lead to issues of cross subsidies between the defined benefit and defined contribution plans. There is also a risk that the Defined Benefit plan assets may be under or overstated in the event of unit pricing errors.

1.41 We recommend that the Board should satisfy itself that no cross subsidies are occurring or could occur between the defined benefit and defined contribution plans. Consideration should be given to the Fund segregating the accounting process for defined benefit and defined contribution plans.

Retrenchment Risk

1.42 The retrenchment benefit is larger than the resignation benefit for most members. Also, currently resignation benefits are not fully funded. Therefore, 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. This is also 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.

1.43 As per our recommendations, Vision Super should require top-up contributions to be made by the Authorities to manage this risk.

Reserving Risks

1.44 In the Draft Prudential Standards, there are proposals to require funds to allocate a proportion of assets to an operational reserve. If the Defined Benefit plan assets were used to establish any of this reserve then the VBI, DABI and MRBI would reduce. Authorities would be required to make additional contributions to achieve the VBI of 100%.

Other Risk

1.45 A more complete discussion of these risks and other material risks is included in Section 9.

Standards

1.46 We confirm that this actuarial investigation and report meet the requirement of the relevant Professional Standards and Guidance Notes of The Institute of Actuaries of Australia.

Matthew Burgess
Fellow of the Institute of Actuaries of Australia

Quality Assurance

I confirm that Russell Employee Benefit's Quality Assurance standards have been applied in the preparation of this report.

Gabrielle Baron
Fellow of the Institute of Actuaries of Australia
25 June 2012

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2 INTRODUCTION

2.1 This is the tenth 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 the Superannuation Industry (Superannuation) Act 1993, actuarial investigations are required at intervals of not more than three years. I completed the previous actuarial investigation as at 31 December 2008 and my report was prepared in two parts dated 13 May 2009. This actuarial investigation has been completed at the request of the Trustee of the Fund.

2.4 In accordance with APRA's Modification Declaration No 23 (Mod 23), annual certifications of the Fund's pension liabilities have also been performed, as at 30 June 2009, 30 June 2010 and 30 June 2011.

2.5 This actuarial investigation report covers the three defined benefit plans within the Fund, and in particular the Defined Benefit plan in the body of the report. In the appendices of the report we consider in more detail the:

(a) the City of Melbourne Plan; and

(b) the Parks Victoria Plan (including the former Ports Plan members).

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 Fund;
- to provide advice to the Trustee on the funding arrangements;
- to provide actuarial certification in respect of the funding of pension entitlements; and

- to meet the reporting requirements of SIS Regulation 9.31.

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

- Guidance Note 465
- Professional Standard 400
- Professional Standard 402
- Professional Standard 404.

Funding Arrangements

2.9 As is the case for all defined benefit funds, the ultimate cost of benefits depends on the future experience of the Defined Benefit plan.

2.10 Arrangements for funding the Defined Benefit plan that were introduced effective from 1 July 1997 were updated as part of the actuarial investigation as at 31 December 2008 and the funding review as at 30 June 2010.

2.11 Briefly, these funding arrangements comprise three components:

(a) contributions in respect of each Authority's share of any funding shortfall that arises. This has included any outstanding unfunded liability from the 30 June 1997, 31 December 2002 and 31 December 2008 actuarial investigations;

(b) an additional contribution to cover the increase in liability arising from retrenchment benefits paid after 30 June 1997, plus contribution tax, either payable at the time of retrenchment or by increasing the Authority's contributions under (a) above; and

(c) an ongoing contribution rate, presently 9.25% of current members' salaries, needed to fund the balance of benefits for current members and pensioners.

Actuarial Investigation as at 31 December 2008

2.12 The report on the actuarial investigation as at 31 December 2008 concluded that the three years to 31 December 2008 had been unfavorable and assessed that there was an "actuarial shortfall" of $71 million in the Defined Benefit plan as at that date.

2.13 The report recommended that the Trustee develop a plan to fund the shortfall by 31 December 2013 (ie over a five year period).

2.14 We understand that the Trustee consequently adopted the following funding plan:

- require no additional contribution from Authorities at that time (in respect of the actuarial shortfall) ;
- review the funding plan as at 30 June 2010 and request additional contributions from Authorities if an "actuarial shortfall" remains at that date; and
- update the funding plan to target full funding of the "actuarial shortfall" by 31 December 2013.

2.15 It was also noted in the report that because of the experience of the Fund since 31 December 2008, it is likely that the Fund was in an Unsatisfactory Financial Position and would be close to Technical Insolvency (or may already be so). It was recommended that the funding position be reviewed as at 30 June 2009 so that a new Funding and Solvency Certificate could be issued by 13 August 2009.

Funding Review as at 30 June 2010

2.16 The experience of the Defined Benefit plan over the period to 30 June 2010 had been unfavarouble due to the poor investment returns since 31 December 2008. This led to a deterioration of the Defined Benefit plan's financial position.

2.17 It was recommended that the funding plan be amended so that Authorities contribute:

(a) any outstanding unfunded liability from the 30 June 1997 and 31 December 2002 actuarial investigations;

(b) additional top-up payments for retrenchments;

(c) 9.25% of members' salaries;

(d) $71 million, plus interest at the expected investment return plus contribution tax, be funded by 1 July 2011; and

(e) any remaining "actuarial shortfall" be funded by 31 December 2013, with the funding plan updated no later than following the 31 December 2011 actuarial investigation.

2.18 We understand that Vision Super requested Authorities contribute $71 million, plus interest and contribution tax by 1 July 2011. Authorities have been invoiced with the full amount but are able to make the contributions over a 10 year period. Vision Super includes amounts outstanding as an asset (contribution receivable) in its balance sheet and these amounts are included as an asset in this report. The total contribution receivable in the Fund's 31 December 2011 financial statements was $11.4 million. Any amount outstanding from an Authority in respect of the "actuarial shortfall" as at 31 December 2008 is increased at 8.5% per annum. It is important to note that we may not be able to continue this approach in the future as discussed in 7.38.

Events since the 31 December 2008 Actuarial Investigation

2.19 Since the 31 December 2008 actuarial investigation there has been no legislative change that has materially impacted on the funding of the Defined Benefit plan and no material changes to benefits.

2.20 We note that the Government has legislated to increase the Superannuation Guarantee Charge to 12% of Ordinary Times Earnings. We understand that it is likely that this increase will be provided from the defined contribution plan and we have assumed that this is the case in this investigation. There would be expected to be an impact on the Defined Benefit plan funding if the increase was provided from the Defined Benefit plan.

2.21 The net investment return for the three years since the 31 December 2008 actuarial investigation was 3.0% p.a.. This is well below the expected investment return of 8.5% p.a. and has led to a deterioration of the Defined Benefit plan's financial position.

2.22 Current draft Prudential Standards (SPS 160), if finalized without change, would require actuaries and Trustees to put in place funding plans that would be expected to rectify an unsatisfactory financial position within three years. A funding plan longer than three years would require APRA approval. The potential implications of this for the Defined Benefit plan are discussed later in this report.

31 December 2011 Actuarial Investigation

2.23 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 during the three years since 31 December 2008 compared with the actuarial assumptions used in the 2008 investigation.

- Section 4 considers the asset allocation in relation to the investments 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 31 December 2011.

- Section 7 considers the long-term funding of the Defined Benefit plan.
- Section 8 considers the 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 considers the financial position of the Total Fund at 31 December 2011;
- Appendix H contains the statements required under Regulation 9.31 of the Superannuation Industry (Supervision) Act 1993 for the total Fund;
- Appendix I contains the 31 December 2011 actuarial valuation of the City of Melbourne plan; and
- Appendix J contains the 31 December 2011 actuarial valuation of the Parks Victoria plan (including former Ports plan members).
- Appendix K contains a summary of the valuation results of the City of Melbourne plan and the Parks Victoria plan.

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 31 December 2011 together with details of exits during the period from 1 January 2009 to 31 December 2011. 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 1,241 (or 20.0%) from 6,212 at 31 December 2008 to 4,971 at 31 December 2011. The number of pensioners has decreased by 424 (or 7.6%) from 5,556 to 5,132 over the same period.

Summary of Defined Benefit Plan Membership Data

Active Members	31 December 2008	31 December 2011
Number	6,212	4,971
Average Age	52.5 years	54.1 years
Average Past Membership	21.8 years	24.6 years
Average Salary	$60,638	$70,727
Lifetime Pensioners		
Number	5,556	5,132
Average Age	78.9 years	79.1 years
Average Annual Pension	$5,778	$7,172
Fixed Term Pensioners		
Number	15	15
Deferred Beneficiaries		
Number	2,420	2,212
Average Age	50.2 years	51.7 years
Average Balance	$128,183	$149,842

Salaries

3.4 We have analysed the salary experience of Defined Benefit plan members over the intervaluation period from 31 December 2008 to 31 December 2011. The data showed that the full time equivalent salary of Defined Benefit plan members who remained members as at 31 December 2011 grew by 5.1% p.a. over the three year period. This compares to growth of 5.5% p.a. over the three year period to the 31 December 2008 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 three years to 31 December 2011, AWOTE increased by 4.7% p.a.. It is therefore apparent that, overall, members received salary increases which are similar but slightly higher than those of the wider community, bearing in mind that the 5.1% p.a. salary increase rate would also reflect some element of promotional increases in addition to the inflationary increases.

3.6 Analysis of salary by the age of members suggests some promotional effect for members under age 45. This is consistent with our salary scale assumption for younger members although we assume the promotional effect to cease after age 35. Given that there is only a small proportion of members currently under 45, we have decided to retain the current assumption as 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 three years has been examined for each of the major types of exit. The key results are summarised in the following table:

Actual And Expected Exits Over The Period From 1 January 2009 To 31 December 2011		
	Actual	Expected
Resignation	183	
- Cash 53		
- Deferred 130		319
Retrenchments (< age 55)	37	
Retirements	971	1,274
Deaths	22	43
Disablements	35	64

3.8 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 (during the three years to 31 December 2011) to the "expected" number. "Expected" figures are based on the funding assumptions used in the 2008 investigation.

Ratio Of Actual To Expected Numbers Over The Period From 1 January 2009 To 31 December 2011					
Age Band	Resignation	Resignation & Retrenchment	Death	Disablement	Retirement
21-25	0.0	0.0	0.0	0.0	0.0
26-30	0.0	0.0	0.0	0.0	0.0
31-35	0.7	0.7	0.0	0.0	0.0
36-40	0.4	0.5	0.0	3.0	0.0
41-45	0.6	0.8	0.8	0.0	0.0
46-50	0.5	0.6	0.8	1.2	0.0
51-55	0.7	0.8	0.6	0.6	0.6
56-60	0.0	0.0	0.5	0.4	0.5
61-65	0.0	0.0	0.4	0.0	0.9
Total	0.6	0.7	0.5	0.5	0.8

3.9 The experience for the three years has been lower than expected in respect of all forms of exit from the Defined Benefit plan.

3.10 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

3.11 The table in 3.8 shows that the number of resignations over the period have 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).

3.12 Members resigning from active service have the option to receive their benefit in cash or as a deferred benefit. As shown in table 3.7, 130 of the 183 resignations (71%) elected the deferred option. Therefore, in this actuarial investigation we have assumed that the proportion of resigning members who elect to take a deferred benefit is 70% which is higher than the assumed proportion in the previous valuation in 2008 of 60%. 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

3.13 Under the funding arrangements applying from 1 July 1997, retrenchments prior to age 55 require additional funding by the Authority equal to the excess of the retrenchment benefit over the resignation benefit, plus contribution tax.

3.14 Consequently, retrenchments under age 55 are effectively “resignations” from the perspective of the Defined Benefit plan’s financial position and do not create any new unfunded liability.

3.15 At the 2008 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.

3.16 For these reasons we have also included a combined “resignation and retrenchment” column in the table in 3.8 above. On this combined basis the actual to expected ratio averaged 0.7 to one. This shows that the combined level of retrenchments and resignations was lower than the assumed level. Because on average the resignation benefit is less than the accrued retirement benefit, a lower number of resignations than expected will have had a small detrimental impact on the financial status of the Defined Benefit plan.

3.17 Therefore, we have reduced the resignation rates assumed for this actuarial investigation by 20%. If the new assumptions had applied for the last three years, the actual to expected ratio would have averaged 0.7 to one for resignation and 0.9 to one for resignation and retrenchment combined. We have not reduced the resignation rates assumed to the level of recent experience because the last three years have had lower rates than experienced previously and these low rates may not be sustained in the long term.

Death

3.18 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.

3.19 During the three year period to 31 December 2011, the ratio of actual to expected deaths was 0.5 to one, however it should be noted that mortality experience for the three year period to 31 December 2008 was in line with the current assumptions. On the basis of the experience for this six year period, the small number of deaths and the importance of not understating the number of deaths, we have retained the mortality rates from the 2008 investigation.

Disability

3.20 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.

3.21 The ratio of actual to expected disablements based on the experience of the past three years was 0.5 to one. The recent disablement experience has had a favourable impact on the Defined Benefit plan. Although there is a significantly lower number of actual disablements than expected disablements over the past three years, it should be noted that the assumed disablement rates were reduced by 60% at the previous valuation, therefore we have decided to maintain the same assumed rates of disablement.

Retirements

3.22 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. The actual and expected retirements were similar (an overall ratio of 0.8 to one over the three years) and so we have maintained the retirement rates used for the previous investigation.

3.23 It is also important to note that retrenchments after age 55 are not distinguishable from retirements and are classified as retirements. Consequently retrenchment “top-up” contributions, under item (b) of the funding arrangements outlined in paragraph 2.11, only apply to retrenchments under age 55.

Pension Election

3.24 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.

3.25 For the previous investigation we assumed that 35% of eligible active members elect a pension upon retirement. Over the three years to 31 December 2011, almost 60% of retiring members elected a pension. This result may be explained by the investment uncertainty during the three year period to 31 December 2011 during which times retirees may favor a guaranteed pension option. As a result, we have assumed that 50% of eligible active members exercise this option by converting 50% of their benefit to a pension. The higher take up of pension benefits will have had a negative impact on Defined Benefit plan funding.

3.26 Our analysis shows that the number of deferred beneficiaries who take a pension upon retirement has increased over the last three years to 31 December 2011. To reflect this trend, we have increased the proportion of eligible deferred beneficiaries taking a pension at retirement from 0% to 30%. Members who exercise this option are assumed to take 50% of their benefit as a pension.

Mortality Experience of Pensioners

3.27 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 2008 actuarial investigation. Given the limited experience for female disability pensioners, less certainty can be placed on the analysis for this group and they are not shown.

Ratio Of Actual To Expected Numbers For The Period From 1 January 2009 To 31 December 2011

	Retirement/Spouse Pensioners	Disability Pensioners
Male	102%	117%
Female	126%	N/A

3.28 The analysis over the three years to 31 December 2011 shown in the above table shows that the actual number of deaths had been higher than expected. This is consistent with the previous experience reported on in the 31 December 2005 and 31 December 2008 investigations. The higher than expected pensioner mortality had a small positive effect on the financial position of the Defined Benefit plan.

3.29 The assumed levels of pensioner mortality were also compared to the Australian Life Tables 2005-2007 which reflect the mortality of the Australian population during the 2005-2007 period. The assumed female pensioner mortality is considerably lighter than the mortality of the Australian female population. The assumed male pensioner mortality is generally lighter than the mortality of the Australian male population except for ages between 69 and 81.

3.30 The Defined Benefit plan pensioners are likely to have lighter mortality than the Australian population because the pensions are voluntary at retirement so they are likely to be selected by only healthy members. However, the average age of pensioners is 79.1 years and increasing. At older ages the impact of the mortality selection at retirement is likely to be greatly reduced.

3.31 We do not believe that the female pensioner mortality experience at this time justifies a change to the assumptions and the 2008 assumptions for the female group have been retained for this investigation. On the basis of the comparison of the recent experience with the Australian Life Tables 2005-2007, the male pensioner mortality rate has been reduced from the rates assumed in the previous investigation as at 31 December 2008 to be in line with the Australian Life tables 2005-2007. Making this change will result in a small increase in the expected future pension payments from the Defined Benefit plan. The rates of mortality assumed for pensioners are summarised in Appendix D.

Administration Expenses

3.32 In the 31 December 2008 investigation, the administration expense was assumed to be of the order of 1.0% of salaries plus 2.0% of pensions in payment. The actual expense over the three years has been higher than expected.

3.33 Vision Super has advised that the administration expense for the next three years is expected to average about $6 million a year. Therefore we have increased the assumed level of expenses to 2.0% of salaries plus 2.0% of pensions in payment.

Investment Returns

3.34 The rate of return (net of tax and investment expenses) earned by the Defined Benefit plan for the period from 1 January 2009 to 31 December 2011 was 3.0% p.a..

3.35 Comparison of the 3.0% p.a. return for the intervaluation period with the average salary increase rate (from paragraph 3.4) of 5.1% p.a. shows a real return of approximately negative 2.0% p.a. which is significantly lower the 4.25% p.a. real return assumed in the 2008 investigation.

3.36 In respect of pension liabilities, pension increases averaged 2.7% p.a., providing a real return of 0.3% p.a. which is significantly lower than 6.25% p.a. assumed in the 2008 investigation. There is no investment tax paid on investments used to provide pensions, so the real return is actually higher than this, but will still be lower than the assumed return. These two real return items have had a negative effect on the Defined Benefit plan's financial position.

4 ASSETS AND INVESTMENTS

Assets

4.1 Copies of the Fund's unaudited financial statements as at 31 December 2011 were supplied by Vision Super for the investigation together with details of investments at 31 December 2011. We understand that they were prepared consistently with the relevant accounting standard (AAS25). A summary of cash flows over the period 1 January 2009 to 31 December 2011 is set out in Appendix C.

Asset Allocation

4.2 The Fund invests in a wide range of asset classes such as equity, property and fixed interest investments. The following table shows the Strategic Asset Allocation and the current Actual Asset Allocation as at 31 December 2011. A new strategic asset allocation has been adopted after 31 December 2011, which is also shown in the following table.

Asset Class	Actual Asset Allocation 31 December 2011 (%)	Strategic Asset Allocation 31 December 2011 (%)	2012 Strategic Asset Allocation (%)
Australian Equity	23.0	24.0	26.5
International Equity	17.9	21.0	21.0
Private Equity	12.6	8.0	8.0
Infrastructure	15.5	13.0	13.0
Absolute Return Strategies	1.8	2.0	2.0
Direct Property	8.7	9.0	9.0
Opportunistic Investments	5.9	5.0	5.0
Fixed Interest	11.8	15.0	10.0
Cash	2.8	3.0	5.5
Total	100.0	100.0	100.0
Allocation to Illiquid Assets	42.7%	35.0%	35.0%
Allocation to Growth Assets	73.5%	71.0%	73.5%

4.3 The Strategic Allocation to Growth Assets as at 31 December 2011 was 71%, including Australian Equities, International Equities, Private Equity, Opportunistic Investments, Absolute Return Strategies and a portion of the Core Property and Infrastructure asset classes. This has increased slightly to 73.5% in 2012 as a result of the recent changes.

4.4 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.

4.5 We believe that the 73.5% allocation to growth assets is among a range of allocations that could reasonably be used by the Defined Benefit plans.

4.6 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. If the Defined Benefit plan ever has an “actuarial surplus” reducing the allocation to growth assets may become more attractive to the Board as a means of reducing the risk of subsequent higher contributions being caused by poor investment experience.

Liquidity

4.7 The Strategic Allocation to illiquid assets is 35%. As at 31 December 2011, 43% of the investments are invested in illiquid asset classes which include Private Equity, Infrastructure, Opportunistic Investments and Direct Property.

4.8 In the 31 December 2008 actuarial investigation it was recommended that:

> “The liquidity requirements resulting from the expected benefit payments should also be considered as part of future reviews of the Strategic Asset Allocation because of the Defined Benefit plan’s maturity.”

4.9 Vision Super undertook such a review in 2010. Stress testing has shown that should a significant shock occur, the illiquid asset allocation could become a very significant portion of the three defined benefit plan assets. Because the three defined benefit plans are closed to new members, liquidity modeling has shown 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.

4.10 We understand that the Board has determined that no further commitments are to be made to illiquid investments. We also understand that Vision Super is considering plans to reduce the allocation to illiquid assets to 25-30% over approximately three to five years.

4.11 In any event, eventually the defined benefit plans will require full liquidity. Therefore, we believe that Vision Super should consider the time frame over which they will reduce the exposure to illiquid assets in the defined benefit plans to zero. Consideration of the liability run off under various scenarios should form part of this consideration.

Unit Pricing

4.12 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 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.

4.13 However, we understand that in preparing the financial statement, 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 60% 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.

4.14 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, consideration should be given to the Fund segregating the accounting process for defined benefit and defined contribution plans.

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.

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 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 made 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 2008 actuarial investigation were:

- 4.25% p.a. real investment return over salary inflation. This comprised an 8.5% p.a. net of tax investment return assumption and a 4.25% p.a. salary inflation assumption.
- 6.25% p.a. real investment return over price inflation. This comprised a 9.0% 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 been reduced from the 31 December 2008 investigation to reflect a lower expected return.

CPI Increases

5.14 Russell and Frontier's CPI estimate is of the order of 2.5% - 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.. Therefore, 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 broadly in line with AWOTE (refer 3.4-3.5). As the average age of Defined Benefit plan members is now 54.1 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 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 2011 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 In determining these assumptions the views of the Board were considered, particularly in respect of salary increases.

5.19 The same promotional salary scale as adopted in the previous actuarial investigation has been used. This assumes no promotional salary increases for the vast majority of Defined Benefit plan members. Therefore, for most members the inflationary salary increases of 4.25% p.a. are the only salary increases assumed.

5.20 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 1.0% has been assumed. This discount rate includes a reduction of 0.75% to allow for investment management fees and administration costs.

Demographic Assumptions

5.21 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 2009 to 31 December 2011. The recommended changes to the demographic assumptions are discussed in Section 3. Appendix D summarises the demographic assumptions adopted for this investigation.

Benefits

5.22 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 30% 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

5.23 In the previous investigation we adopted the approach of market value of assets for all purposes. In Section 6 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.

5.24 The market value of the Defined Benefit plan assets as at 31 December 2011 used in the investigation was $1,692.2 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

5.25 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.

5.26 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 all 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 (9.25% of salaries) 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.

5.27 This projection is known as the aggregate funding method, which is considered to be appropriate for a closed fund. Application of this general method has been modified to reflect the funding arrangements outlined in paragraph 2.11.

5.28 The key question to be answered by this investigation is whether the current ongoing Authority contribution rate of 9.25% of members' salaries, together with future member contributions and the market value of assets, will be sufficient to fully fund the benefits for current members, including deferred beneficiaries and pensioners.

5.29 Under the proposed new prudential standard (SPS 160), it is expected that APRA will require superannuation funds to fully fund their vested benefits within three years if the fund's assets are less than the vested benefits, also known as being in an "Unsatisfactory Financial Position"

5.30 The shortfall relative to vested benefits is likely to vary from the actuarial shortfall 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 restore the fund's Vested Benefits Index (VBI) to 100% within the timeframe required by APRA. Additional contributions can be made to target a VBI of 100% but where these contributions are higher than the 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.

5.31 We understand that it is the intention of the Board to seek an exemption from APRA to extend the timeframe for funding vested benefits to more than three years.

5.32 In the next section we review the financial position as at 31 December 2011 (including the shortfall relative to vested benefits) and then we return, in Section 7, to the adequacy of the long term funding arrangements.

6 FINANCIAL POSITION AT 31 DECEMBER 2011

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.

6.3 For the purpose of the indices as at 31 December 2011 (reported in the following paragraphs in this section) assets have been taken as the assets reported in the 31 December 2011 Fund's unaudited accounts. The market value of Defined Benefit plan assets was $1,692.2 million as at 31 December 2011.

Vested Benefits Index

6.4 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 thus 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.

6.5 This method is consistent with the new Professional Standard 400 (revised in August 2010) of the Actuaries Institute which covers actuarial investigations and requires Vested Benefits to be calculated taking into account the value of pension and deferred benefits. This professional standard also requires "best estimate" assumptions to be used, including realistic assumptions about the proportion of members who take a pension or deferred benefit.

6.6 Historically, the vested benefits in the LASF financial statements have been calculated by Vision Super and subject to audit. For contributing members and deferred members the calculation assumed that members took the immediate lump sum option. We cannot use this approach in this investigation, given the requirements of the new professional standard.

6.7 The Vested Benefits Index is calculated as follows:

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

6.8 Vested Benefits as at 31 December 2011 are:

Defined Benefit plan assets ($m)	$1,692.2
Vested Benefits ($m)	
Active Members	$1,516.4
Life-time Pensioners	$357.6
Fixed term Pensioners	$2.2
Deferred beneficiaries	$334.8
Total Vested Benefits	$2,211.0
Vested Benefit Index	77%

6.9 The calculated VBI for the Defined Benefit plan at 31 December 2011 is 77%. This compares with a VBI of 104% at the 31 December 2008 investigation. Note that this VBI was calculated consistently with Fund financial statements as described above. The previous approach differed from the current VBI calculation (in which it is assumed that a proportion of members would take up a pension or deferred benefit).

6.10 The VBI for the Defined Benefit plan has decreased from 31 December 2008 to 31 December 2011 primarily due to lower than expected investment returns during the period, the change in financial assumptions and the different methodology adopted as discussed in paragraph 6.4 to 6.6.

Discounted Accrued Benefits Index

6.11 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, deferred resignation and retrenchment benefits – 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 resignation multiple at the calculation date) with allowance for future salary growth up to the assumed resignation date.

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

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

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

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

6.15 Discounted accrued benefits as at 31 December 2011 are:

Defined Benefit plan assets ($m)	$1,692.2
Discounted Accrued Benefits ($m)	
Active Members	$1,328.5
Life-time Pensioners	$357.6
Fixed term Pensioners	$2.2
Deferred beneficiaries	$334.8
Total Discounted Accrued Benefits	2,023.1
Discounted Accrued Benefit Index	84%

6.16 The calculated DABI for the Defined Benefit plan at 31 December 2011, based on the "best estimate" assumptions, used in this investigation, is 84%. The DABI was estimated to be 100% at the 31 December 2008 investigation. The reduction in DABI was mainly due to the poor investment returns and the change in financial assumptions adopted.

6.17 Because the DABI is less than 100%, it means current assets are not expected to be sufficient to provide the benefits of members' accrued benefits based on service to 31 December 2011.

Minimum Requisite Benefits Index

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

6.19 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.

6.20 We understand that the MRBs for Defined Benefit plan have not been configured on the administration system, on the basis that the Defined Benefit plan's benefits exceed the MRBs. Therefore, for the purposes of this valuation, I have estimated the MRBs. While the estimates are of the right order they are not precise.

6.21 Previously, the MRB for deferred beneficiaries and pensioners were estimated based on the vested benefits for these members. Vision Super has sought legal advice from DLA Piper regarding the determination of the MRB for deferred beneficiaries and pensioners. DLA Piper stated their view 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.

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

(a) For deferred beneficiaries, their MRBs are based on their resignation benefits (ie the immediate cash benefit which is the MRB defined in the Benefit Certificate for employee members under age 55); and.

(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. Based on the data available, we have estimated the proportion of MRB benefits relative to the retirement pensions to be 65% for all current pensioners.

6.23 The Minimum Requisite Benefit Index is calculated as follows:

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

6.24 Minimum Requisite Benefit as at 31 December 2011 are:

Defined Benefit plan assets ($m)	$1,692.2
Minimum Requisite Benefits ($m)	
Active Members	$1,099.5
Life-time Pensioners	$232.5
Fixed term Pensioners	$2.2
Deferred beneficiaries	$163.5
Total Minimum Requisite Benefits	1,497.7
Minimum Requisite Benefit Index	113%

6.25 As at 31 December 2011 we estimate that the ratio of the market value of assets to the amount of Minimum Requisite Benefits was approximately 113%. This compares with a MRBI of 106% at the 31 December 2008 investigation using the old approach. The increase in the MRBI was mainly due to the change in the methodology. This was slightly offset by a lower investment return.

6.26 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).

6.27 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

6.28 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.

6.29 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"

6.30 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."

6.31 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.

6.32 On retrenchment, members are entitled to the lump sum accrued retirement benefit. As at 31 December 2011, the ratio of the market value of assets to the amount of retrenchment benefits was 75%. The corresponding index as at 31 December 2008 investigation was 83%. This decrease in the index was mainly due to the poor investment returns during the period.

6.33 For members under age 55, an additional contribution is required from the relevant Authority in respect of each retrenchment so that there is no additional financial strain on the Defined Benefit plan under the current funding plan. The funding of retrenchments is considered further in Section 7.

6.34 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 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 31 December 2011 is likely to be approximately $190 million, which would result in a 6% lower VBI (i.e.reducing the 77% VBI to 71%).

6.35 In Appendix E the Defined Benefit plan's asset allocation is shown and there is currently a 43% allocation to illiquid assets. The funding indices have been calculated based on the valuation of these assets at market value from the 31 December 2011 unaudited 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 7%.

6.36 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). Outstanding amounts are included in the market value of assets as contributions receivable. If these amounts are not paid the funding position would be materially worse than set out in this report. The total contribution receivable in the Fund's 31 December 2011 financial statements was $11.4 million, however only a portion of this amount relates to the Defined Benefit plan. This means that the exclusion of contributions receivable would reduce the indices by well under 1%.

6.37 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 4% and 2% respectively.

7 ASSESSING THE ADEQUACY OF THE FUNDING ARRANGEMENTS

The Present Funding Arrangements

7.1 Since 1 July 1997 the Authority funding arrangements for the Defined Benefit plan have comprised three 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).

(b) an additional contribution to cover the increase in liability arising from retrenchment benefits paid after 30 June 1997, plus contribution tax; and

(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.

7.2 We have not reviewed the 9.25% of salaries Authority contribution rate on the basis that the funding impact of doing so is small, because the average employee's future service is low.

Assessment at 31 December 2011

7.3 Our calculations at 31 December 2011 using the "best estimate" funding assumptions show that the present funding arrangements are inadequate to meet the expected Defined Benefit plan liabilities.

7.4 As at 31 December 2011 there was an actuarial shortfall of $406 million (excluding contribution tax). This means that the current value of assets plus expected future contributions is less than the value of expected future benefits and expenses by $406 million, assuming that the Authorities continue to contribute at 9.25% of salaries. Full details of these calculations are set out in Appendix F.

7.5 At the previous actuarial investigation dated 31 December 2008, there was an "actuarial shortfall" of $71 million (excluding contribution tax). The movement from an "actuarial shortfall" of $71 million at 31 December 2008 to a significantly greater "actuarial shortfall" of $406 million at 31 December 2011 is shown in the following table:

Changes in Funded Status	Net of Tax ($m)
Funding Status as at 31 December 2008	(71)
Investment return lower than expected	(239)
Salary inflation higher than expected	(36)
Additional contributions	80
Other	(2)
Funding Status as at 31 December 2011 (Old Assumptions)	(268)
Change to demographic assumptions	(5)
Change to expense assumption	(16)
Reducing discount rates from 8.5%pa to 7.5%pa (gross: 9%pa to 8.25%)	(117)
Funding Status as at 31 December 2011 (New Assumptions)	(406)

7.6 The increase in actuarial shortfall is mainly caused by the poor investment return over the three years to 31 December 2011 and the lower expected return in the future.

7.7 The components of this experience and changes to the funding assumptions have been discussed in detail in earlier sections.

7.8 The existing funding arrangements are not expected to be adequate and additional contributions are expected to be required.

7.9 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

7.10 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 shortfall" to the financial assumptions is considered below.

7.11 The key financial assumption is the differential or "gap" between the investment return and the growth in salaries. If the actual experience for the "gap" varies from the assumed "best estimate" assumption of 3.25% p.a., it can have a very significant effect on the ongoing contribution rate and any unfunded liability contributions (as demonstrated in this investigation relative to the last investigation). Similarly for pensioners, the differential or "gap" between the investment return and the price inflation is the key factor which drives the funding cost.

7.12 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.

7.13 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.

7.14 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 shortfall" as at 31 December 2011.

Impact of Changes in Key Assumption	
	Actuarial Shortfall $ Million
Best estimate assumptions	406
Decrease the gap by 1%	558
Increase the gap by 1%	276
100% of entitled members elect deferred and pension option	451

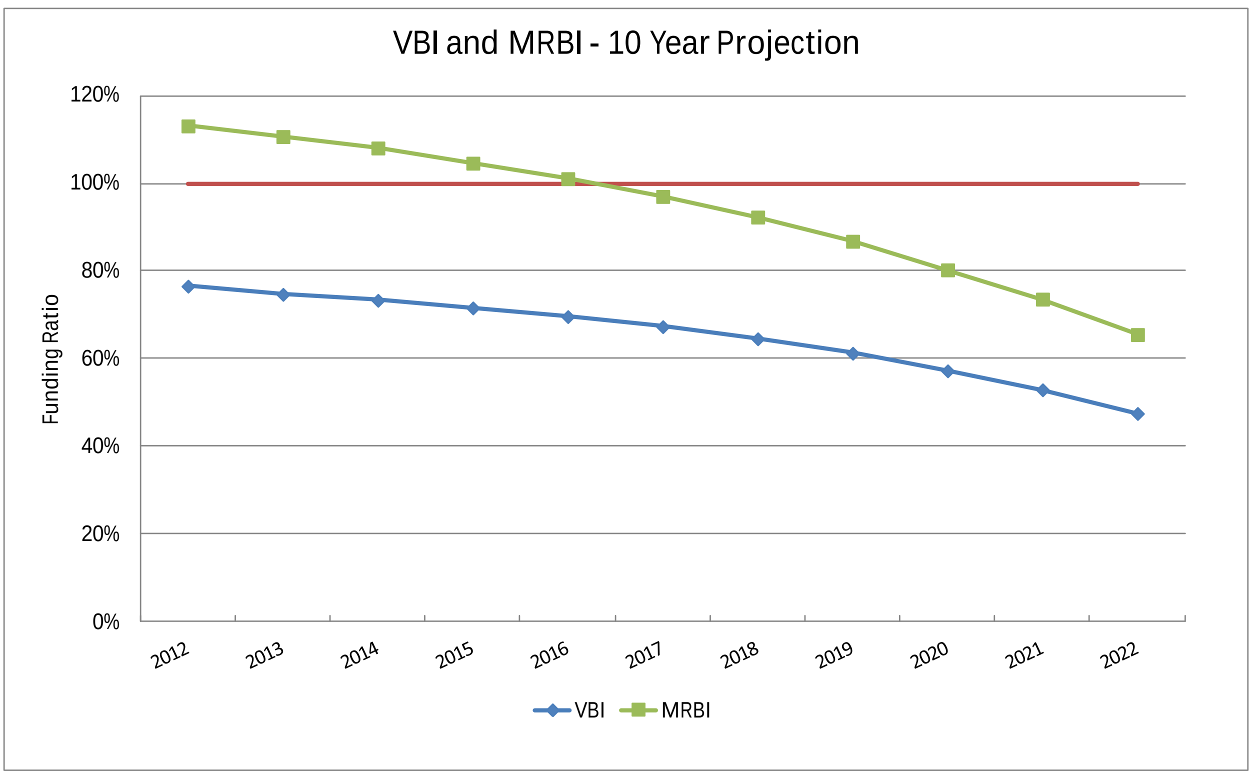
7.15 The table shows that a variation in the “gap” has a very significant impact on the actuarial surplus or shortfall. It is possible that the actual “gap” may vary from our best estimate assumption by significantly more than 1% and the impact would be greater than what was shown in this sensitivity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

7.16 There is also a risk that the demographic experience may differ from our assumption which would lead to a lower or higher funding cost (as demonstrated in the table above when the percentage of eligible members who elect the deferred benefit or the pension is increased to 100%).

Projection of VBI Funding Levels

7.17 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 only contributions of 9.25% of salaries are made in the future.

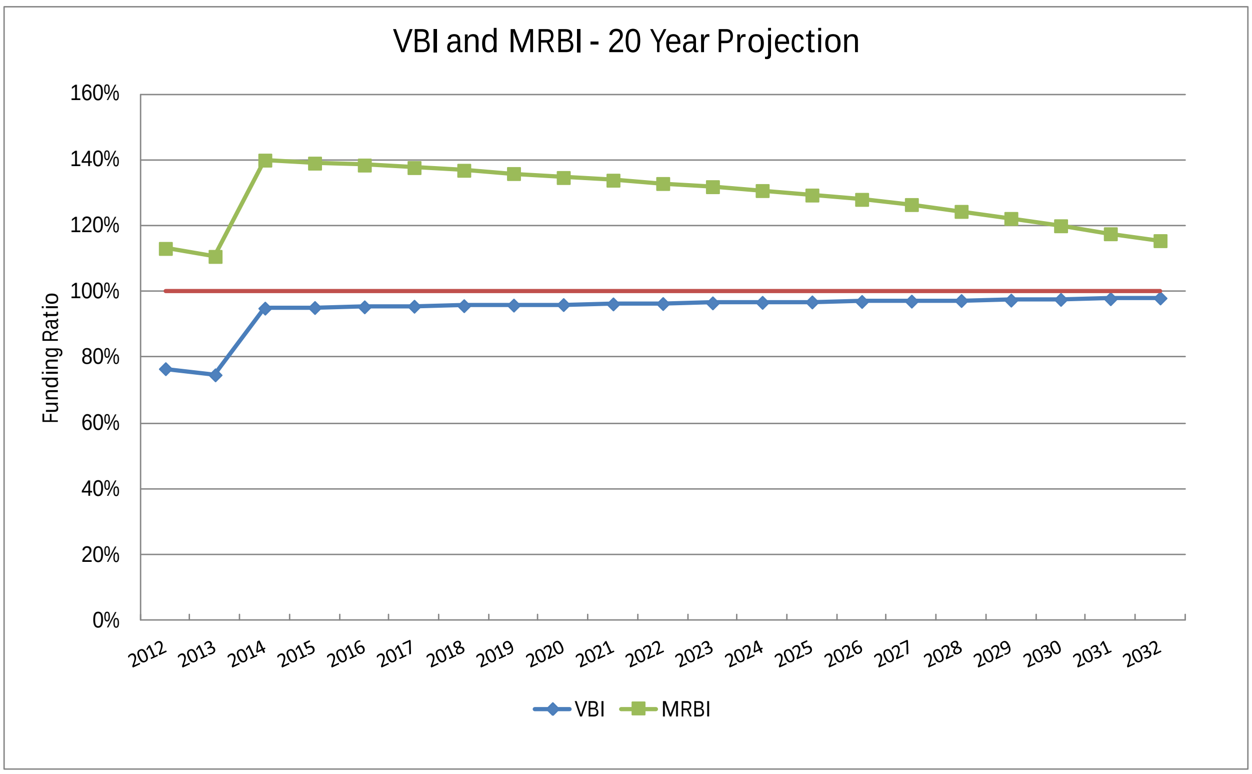
7.18 The following projection of the various funding indices (refer to Section 6) shows that the vested benefits (VBI) and Minimum Requisite Benefits (MRBI) are expected to deteriorate quickly in the future without additional contributions.



7.19 The chart shows that there is a significant risk of Technical Insolvency until additional contributions from Authorities are received. Technical Insolvency occurs when a Fund's assets are not sufficient to cover members' Minimum Requisite Benefits.

7.20 If the Fund is Technically Insolvent, legislation requires Special Funding and Solvency Certificates to be issued annually. Among other requirements, the Special Funding and Solvency Certificates must contain a plan by which additional contributions restore solvency within 5 years from its commencement.

7.21 The chart below shows the projected funding indices if Authorities make an additional contribution of the amount of the actuarial shortfall of $406 million (plus contribution tax and interest) at 1 July 2013.



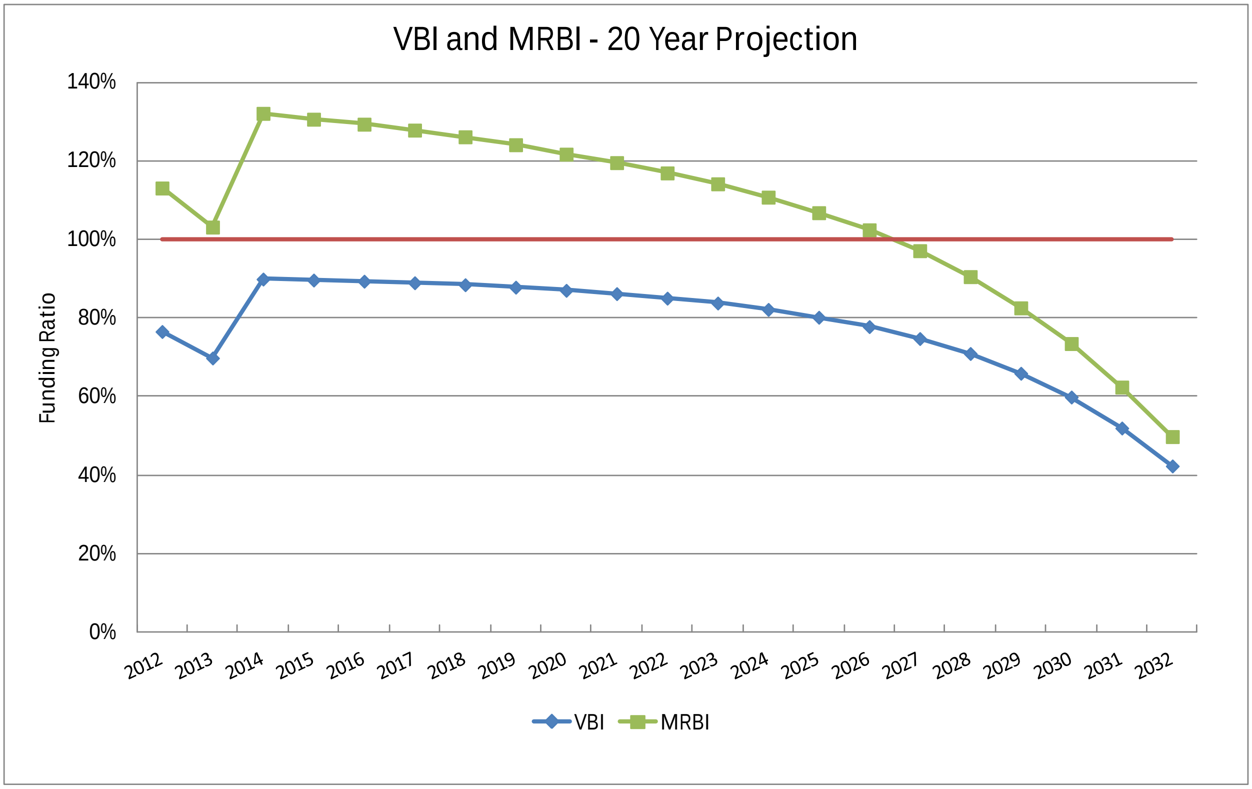
7.22 As shown in the chart above, the additional contribution of $406 million will reduce the likelihood of technical insolvency and provide an adequate margin for the MRBI to remain above 100% in the future.

7.23 The VBI is expected to increase to 95% with the additional contributions. The projected VBI is expected to increase to 100% over the very long term. However, on the basis of the best estimate assumptions, it is expected that the VBI will not quite reach 100% within the projection period.

Other Funding Issues

7.24 The Defined Benefit plan is mature and its funding is very sensitive to future experience. As shown in Section 7.14,a lower than expected investment return would significantly increase the “actuarial shortfall”.

7.25 The chart below shows the impact on the VBI and the MRBI if the return is 0% next year (assuming that the additional contribution of $406 million, plus interest and contribution tax is made by 1 July 2013).



7.26 If the return is 0% in 2012, the top-up contribution of $406 million will not be sufficient to fund the shortfall. Additional amounts may be required to avoid Technical Insolvency and to restore the fund’s VBI to 100% within a reasonable timeframe. In this scenario, the “actuarial shortfall” as at 1 July 2013 would be in the order of $120 million (excluding contribution tax) if all other experience was as expected.

7.27 On the other hand, if experience is favourable a large “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.

Consideration of a funding plan

7.28 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…."

7.29 The Board has advised that in framing the funding plan, they wish to encourage the Authorities to pay their deficiency quickly where they are able to do so, but that the funding plan should also take into account the special nature of the Authorities as an arm of Government.

7.30 On this basis, the following funding plan has been proposed, whereby the Authorities will pay:

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

(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 multiplied by the benefit), plus contribution tax;

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

(d) 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.

7.31 The top up contributions to be invoiced of $406 million (plus contribution tax and 7.5% p.a. interest from 31 December 2011 to 1 July 2013) are expected to be sufficient to fully fund members' current and future benefits by the time they are paid.

7.32 Recognising the impact that this contribution requirement will have on some Authorities, it is proposed that the Authorities will also be given the option of paying their share over a period of no more than 15 years. A minimum annual payment will be required from those Authorities that do not pay the entire amount immediately. In order to encourage the Authorities to pay these contribution requirements more quickly, the amounts outstanding from Authorities will be increased at 7.5% p.a..

7.33 It should be noted that an amount of $519 million (plus contribution tax), rather than $406 million, is expected to be required as at 31 December 2011 in order that the Defined Benefit plan was no longer in an unsatisfactory financial position. It is proposed that the Trustee not invoice this higher amount initially, recognising that it is not expected to be required to fully fund members' current and future benefits by the time they are paid, if future experience is as expected. It would create inequity between Authorities if some Authorities were to immediately pay their share of this higher amount and future experience meant that the funding was excessive when some Authorities had not paid their share.

7.34 It is also recognised that future experience may be better or worse than expected. In the case that experience is better than expected, the initial top up contribution may be sufficient so that the Defined Benefit plan is no longer in an unsatisfactory financial position. If experience is worse than expected then additional top up contributions are likely to be required from the Authorities in order for the Defined Benefit plan to no longer be in an unsatisfactory financial position.

7.35 We believe that the proposed funding plan above meets the requirements of the current legislation on the basis that there is no maximum term for restoring a Fund to a VBI of 100% in the current legislation. However, we note that the proposed funding plan may not meet the requirement of the draft Prudential Standard (SPS 160) to restore a Fund to a "satisfactory financial position" within three years (which is due to take effect from 1 July 2013). We understand that it is the current intention of the Trustee to seek an adjustment or exclusion from this requirement from APRA in order to continue with this proposed funding plan after 1 July 2013.

7.36 If APRA approval is not provided, the Board may need to require Authorities to pay:

(a) Their share of the $406 million "actuarial shortfall" within three years; and

(b) Additional amounts needed to increase the VBI to 100% within three years.

7.37 Therefore, if the Board considers there is a significant risk that APRA will not provide approval for the proposed funding plan then it needs to consider an alternative funding plan immediately.

7.38 We understand that under the proposed funding plan, although Authorities would be able to spread their contributions over 15 years, the contributions not yet received could be included in the Defined Benefit plan's audited assets as a contribution receivable. As separately advised, we expect to be able to include this amount as an asset for calculating the MRBI and VBI. There is a risk that this may not be possible in the future if circumstances change or actuarial professional standards change. This is because these assets are not immediately available to pay benefits.

7.39 From a funding perspective this reinforces the need to gain APRA approval to the funding plan. If a material amount of contributions are outstanding the Technical Insolvency risk may remain high beyond 1 July 2013 even if experience to that time is favourable.

7.40 While it is acknowledged that it is likely many Authorities would pay their contributions quickly, spreading the contributions over 15 years also raises the question of whether the Defined Benefit plan assets could be exhausted within that time. If future experience is poor then we assume additional contributions would be required. Therefore, we considered the scenario of:

(a) All deferred members receiving their benefits at the earliest age possible (i.e. age 55);

(b) A 20% increase in the rates of resignation and retirement; and

(c) All members electing a lump sum upon retirement rather than a pension.

7.41 In this scenario, assuming the additional contributions are spread evenly over 15 years and other experience was as expected, the Defined Benefit plan assets are expected to be sufficient to pay benefit payments as they arise.

7.42 Retrenchments can pose a risk to both funding and liquidity. Currently, when a member under age 55 is retrenched, Authorities are required to make a top-up contribution equal to the difference between the amount of the retrenchment benefit and the immediate resignation benefit (plus contribution tax). However, this does not provide any additional funding to reflect that immediate resignation benefits may not be fully funded or when a member over age 55 is retrenched. For this reason the proposed funding plan requires a top up contribution for all benefits paid as a consequence of retrenchment when the VBI is less than 100% and for this top up contribution to be the difference between the retrenchment benefit and the funded benefit that would normally be payable (i.e. VBI times resignation benefit or retirement benefit as applicable) plus contribution tax. The inclusion of top up contributions with respect to members over the age of 55 will assist in protecting liquidity should a large retrenchment program occur.

Events subsequent to 31 December 2011

7.43 Vision Super has advised that the Defined Benefit plan investment return from 1 January 2012 to 8June 2012 has been 2.8%. While this is below the assumed investment return of 7.5% per annum, it is not materially below. Given the current volatility in investment markets we do not consider it necessary to revise our calculations to reflect this difference.

7.44 Except for the release of draft Prudential Standard (SPS 160) as discussed in Section 7.35 and the legislation to increase the Superannuation Guarantee Charge to 12% as discussed in 2.20, we are not aware of any other event subsequent to 31 December 2011 that would materially impact upon the results of the actuarial investigation of the Defined Benefit plan.

Recommendation

7.45 The experience of the Defined Benefit plan over the three year period to 31 December 2011 has been unfavourable. Based on revised assumptions there is an “actuarial shortfall” of $406 million in the Defined Benefit plan.

7.46 We recommend that the proposed funding plan (described in 7.29 to 7.34) be adopted. However, we note that this funding plan may need to be revised if it does not meet the requirement (if finalised) to restore a Fund to 100% VBI within three years set out in draft Prudential Standard (as discussed in Paragraph 7.35) unless an adjustment or exclusion from this requirement is provided by APRA for the Defined Benefit plan. We recommend that the funding plan is revised immediately if the Board believes there is a significant risk that APRA will not allow such an adjustment or exclusion.

7.47 If the “best estimate” assumptions described above are borne out in practice, then the funding arrangements outlined in paragraph 7.29 are expected to be adequate to meet the expected liabilities of the Defined Benefit plan.

7.48 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.

7.49 It is also recommended that the funding position of the Defined Benefit plan continue to be considered in setting investment policy (refer to Section 4 for more information).

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. This continues to be appropriate in light of the Fund's size, experience, present membership and benefit levels.

8.2 The death and disablement benefits are funded by 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 3.8 showed that over the three years to 31 December 2011 there were 0.5 deaths for every one expected and 0.5 disablements for every one expected. On average, the total death and disablement benefits paid (past and future service) in each of the three years was approximately $6.3 million compared to expected benefits of approximately $11.6 million per annum. We believe the funding arrangements allow adequately 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 31 December 2011.

Statistics as at 31 December 2011	
Net Assets Available[1] (Defined Benefits plan assets available to meet benefits)	$973.9m
Expected Annual Future Service death and disablement benefits to be paid for 2012[2]	$5.6m
Total Future Service death benefits[3]	$1,173.7m
Maximum death or disablement Future Service Benefit of any Member	$1,926,181

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 t which is in excess of the "funded" accrued retirement benefit. Hence the future service death benefits quoted in this Section include the underfunded portion of the accrued retirement benefit.

8.5 Because of the large number of members, 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 2012 year, additional benefits of approximately $5.6 million would be expected to be paid. This represents 0.6% 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 31 December 2011				
	Total Future Service Benefits $ million	% of Total Future Service Benefits	Number of Members	% of Total Defined Benefit Membership
Nil	-	-	0	0%
$1 - $99,999	66.1	6%	1,738	35%
$100,000 – $249,999	194.7	16%	1,122	23%
$250,000 - $499,999	560.2	48%	1,573	32%
$500,000 - $999,999	303.1	26%	476	9%
$1,000,000 or more	49.6	4%	40	1%
TOTAL – all plan members	1,173.7	100%	4,949	100%
Oldest 10% of members	12.1	1%		
Youngest 10% of members	244.1	21%		
Highest salaried 10% of members	264.1	23%		
Largest 10% of future service benefits	341.5	29%		

8.7 This table shows that:

(a) 90% of members have future service death and disablement benefits of $500,000 or below and that the aggregate for these members' benefits is 70% of the total amount;

(b) the average future service benefit is approximately $237,000; 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 $237,000 for each member, the total claim amount would be approximately $23.7 million. This represents 2.4% of net available assets and is therefore considered a manageable risk.

8.10 No explicit allowance has been made in this investigation for either delays in processing of claims or incurred but not reported claims. Any such allowance is unlikely to be greater than 1.0% of the assets.

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 adverse the Authorities will be required to make additional contributions. Furthermore, it may take longer than expected for the Fund's VBI to return to 100% and the "actuarial shortfalls" to reduce to zero, depending upon the additional contributions made.

Technical Insolvency

9.2 Because the MRBI is only 113% there is a risk the Defined Benefit plan could become Technically Insolvent. The risk is expected to reduce once the additional $453 million (plus contribution tax) expected to be received from 1 July 2013 is included in the assets.

Investment Risk

9.3 The **most significant risk** facing the Defined Benefit plans is that investment returns will not be as high as expected.

9.4 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

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

9.6 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

9.7 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.

9.8 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 is likely to put further significant strain on the funding.

Pensioner Longevity Risk

9.9 At 31 December 2011 there were 5,132 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.

9.10 In the 31 December 2011 actuarial investigation it was found that the mortality assumptions adopted were lighter than the experience of the Fund. Pensioner longevity risk is less significant than investment risk and salary risk.

9.11 Vision Super includes 15 fixed term pensioners. As at 31 December 2011 the assets held in respect of these pensioners was $1.4 million and the liabilities were valued at $2.2 million. This means there is a $0.8 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

9.12 In Section 4 liquidity risk is discussed. Also, Section 6.35 considered the potential impact on funding of having to liquidate investments at a discount.

9.13 We believe that Vision Super should consider a plan to reduce their exposure to illiquid assets in the Defined Benefit plan to zero over time given the maturity of the plan.

Assets

9.14 We understand that in preparing the financial statement, 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 60% 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.

9.15 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, consideration should be given to the Fund segregating the accounting process for defined benefit and defined contribution plans.

Retrenchments

9.16 The retrenchment benefit is larger than the resignation benefit for most members. Also, currently resignation benefits are not fully funded. Therefore, 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. This is also 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.

9.17 We have recommended that such top-up contributions are made by the Authorities to manage this risk.

Prudential Standard SPS 160

9.18 In the Draft Prudential Standards (SPS 160), there are proposals to require the full funding of Vested Benefits within three years, which may impact on the recommended funding plan in this report (and future funding plans) because it is not expected to achieve full funding of Vested Benefits within this timeframe (refer to Section 7.34 to 7.36).

9.19 We understand that Vision Super is seeking an exemption from APRA in relation to the impact of this funding requirement on the funding plan recommended in this report. There is a risk that the exemption might not be granted which is likely to result in further contribution calls to fund the vested benefits within three years of 1 July 2013 by all of the Authorities.

9.20 In the Draft Prudential Standards, there are proposals to require funds to allocate a proportion of assets to an operational reserve. If the Defined Benefit plan assets were used to establish any of this reserve then the VBI. DABI and MRBI would reduce. Authorities would be required to make additional contributions to achieve the VBI of 100%.

9.21 In the Draft Prudential Standards there is a proposal for self insured defined benefit plans to maintain a self insurance reserve. The Vested Benefits calculated in this report do not include an allowance for any Incurred But Not Reported (IBNR) death or disablement claims. Because the average age of members is approaching 55, the estimated annual cost of providing death and disablement benefits is in the order of $5 million per annum (refer Section 8). This means that any reserve required is likely to be small relative to the size of the Defined Benefit plan.

Other Legislation Risk

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

(a) The Government has legislated to increase the Superannuation Guarantee Charge to 12% of Ordinary Time Earnings. This will materially impact Fund benefits if this increase is provided from the Defined Benefit plan;

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

(c) Changes to tax may impact funding;

Other

9.23 Operational risks (eg. unit pricing and administration) are not considered in this report.

9.24 The risks associated with a higher take up of deferred benefits on resignation and pension benefits on retirement is discussed in Section 6.37.

9.25 There are many other risks in respect of the funding of the Defined Benefit plans but we have not included those 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.

Defined Benefit plan

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).

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 at 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.

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

Superannuation Guarantee

The benefits are subject to a superannuation guarantee minimum. Like all defined benefit members, the minimum is based on salary as defined in the Trust Deed. If Ordinary Time Earnings is higher than salary then top-up contributions are made to an accumulation account within the Fund and do not need to be considered from a funding perspective.

City of Melbourne plan

Membership

The City of Melbourne Plan was established in 1995 following the transfer of the City of Melbourne Superannuation Fund into Vision Super. The benefits are set out in the City of Melbourne Fund Trust Deed, and now incorporated in the Fund's Trust Deed. This plan is closed to new members.

Contributions and Accrual Rate

Members are allowed to contribute at a rate between 0% and 9% of salary. The accrual of member's benefit multiple is dependent on member contribution rate, as follows:

Contribution Rate (%)	Accrual Rate Post 30 June 1993 (%)	Accrual Rate Pre 30 June 1993 (%)
0	7.7	9.00
1	9.50	11.00
2	11.25	13.00
3	13.00	15.00
4	14.75	17.00
5	16.50	19.00
6	18.25	21.00
7	20.00	23.00
8	21.75	25.00
9	23.50	27.00

Accrued Benefit Multiple (ABM)

The sum of accrual rate for each year of membership in accordance to the table above.

Retirement Benefit

The accrued retirement benefit calculated as Accrued Benefit Multiple x Final Average Pay (FAP).

Death Benefit

The lump sum benefit is calculated as the sum of:

(i) ABM based on pre 30 June 1993 accrual rate x FAP; and

(ii) 21% x Prospective Service to age 60 x FAP

Total and Permanent Disablement Benefit

The lump sum benefit is calculated as the sum of:

(i) ABM x FAP; and

(ii) 21% x Prospective Service to age 60 x FAP

Retrenchment Benefits

The accrued retirement benefit.

Resignation Benefit

The lump sum benefit of either:

(a) Immediate benefit equal to:

— If member resigns before reaching age 50:

ABM_5 x FAP + C_5

— If member resigns between age 50 and 55:

$$\frac{[\,(ABM_5 \times FAP + C_5\,) \times (55 - age) + (ABM \times FAP) \times (Age - 50)\,]}{5}$$

ABM5 – Accrued Benefit Multiple five years ago

C5 – contributions over the last five years plus credited investment returns

(b) Retained Benefit

Members can elect to retain their benefit within the fund and upon reaching age 55 members are entitled to the greater of the two benefits below:

— Resignation Benefit adjusted with investment earnings; or

— Accrued Retirement Benefit at the date of exit adjusted with CPI indexation

Salary Continuance Benefit

On temporary disablement or illness, members may receive 70% of salary payable up to two years after a 90-day waiting period.

Superannuation Guarantee

The benefits are subject to a superannuation guarantee minimum. Like all defined benefit members, the minimum is based on salary as defined in the Trust Deed. If Ordinary Time Earnings is higher than salary then top-up contributions are made to an accumulation account within the Fund and do not need to be considered from a funding perspective.

Parks Victoria plan

The benefits and conditions for Division E members are those which applied as at 31 October 1995, as set out in By-Law No. 235 of the Melbourne and Metropolitan Board of Works Act 1958, as amended, and now incorporated in Division E of the Fund's Trust Deed.

Division F of the Local Authorities Super Trust Deed ("the Deed") makes provision for miscellaneous members of the Fund. In particular it covers members who were former members of the Transport Superannuation Fund (now the Transport Scheme in the State Superannuation Fund) and the Revised Scheme in the State Superannuation Fund..

In accordance with the current Trust Deed, the benefit accruals and benefit entitlements for Division F Members continue to have the same status, operation and effect as they would have had under the 1988 Act pursuant to section 120 of the Port Services Act 1995 (Vic).

APPENDIX B - MEMBERSHIP MOVEMENTS

Defined Benefit Plan

Membership as at 1 January 2009		6,212
Adjustments*		7
Exits		
▪ Retirement	971	
▪ Retrenchment	37	
▪ Death	22	
▪ Total and Permanent Disablement	35	
▪ Resignation (Cash payment)	53	
▪ Resignation (Deferred benefit)	130	
Total exits		1,248
Membership as at 31 December 2011		4,971

* These were members who were not included at the last valuation as at 31 December 2008 but were recorded as exits during the period or active members at 31 December 2011. They were active at 31 December 2008, hence they have been accounted for in the adjustment item above. This includes a small number of transfers from the City of Melbourne plan who transferred to the Defined Benefit plan when they changed employer.

Pensioners

Pensioners as at 1 January 2009		5,556
Adjustments*		33
New pensioners		
▪ Retirement of active members	361	
▪ Disablement of active members	13	
▪ Spouses of deceased pensioners	211	
▪ Children of deceased pensioners	0	
Total new pensioners		585
Pensions ceasing		
▪ Death	1,041	
▪ Other	1	
Total pensions ceasing		1,042
Pensioners as at 31 December 2011		5,132

*These were pensioners who were receiving a pension at 31 December 2008 but were not included in the 31 December 2008 actuarial investigation.

APPENDIX C - SUMMARY OF CASH FLOWS FROM 1 JANUARY 2009 TO 31 DECEMBER 2011

		($ '000)
Market Value at 1 January 2009		3,630,432
Plus		
Net Investment Revenue		424,882
Contribution Revenue		1,327,062
Other Revenue		4,338
		1,756,282
Less		
Benefits paid		862,512
Administration Expenses		53,285
Superannuation Contribution Surcharge		7
Insurance Premium		27,779
Taxation Provision		125,847
		1,069,430
Market Value at 31 December 2011		4,317,284
Comprised of:	Defined Benefit Plan	1,692,173
	City of Melbourne	52,403
	Parks Victoria including Ports*	31,617
	Accumulation Accounts & Reserves	2,541,091

* This includes contribution receivable of $1.96 million.

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.^

    ^ For Parks plan, an additional salary increase rate of 6.0%p.a. immediately after 31 December 2011 in addition to the assumed long term rate of 4.25%p.a.

- pensioners:
  - investment returns (gross of tax; expenses) — 8.25% p.a.
  - CPI increases — 2.75% p.a.

Other financial assumptions used are:

- administration expenses:
  - Defined Benefit plan — 2.0% of salaries and 2.0% of pension payments
  - COM plan — 2.0% of salaries
  - Parks plan — 3.0% of salaries

- "promotional" salary scale:
  - see table below (under "Other Assumptions")

For Fixed term pensions a real investment return of 1.0%p.a. has been assumed.

Other Assumptions

Active Members

The table below illustrates the decrement rates and the promotional salary scale assumed for active members. The decrement rates represent the percentage of members leaving the plan each year by each cause. The salary scale represents the annual rate of salary increase at that age for reasons other than salary inflation.

Year of Age	Deaths %	Disablements - COM %	Disablements - Defined Benefit and Parks %	Resignations %	Retirements %	Salary Scale %
20	0.03	0.05	-	13.42	-	7.1
30	0.02	0.14	0.01	6.48	-	1.5
40	0.05	0.35	0.05	3.77	-	0.0
50	0.14	0.60	0.27	2.44	-	0.0
60	0.43	2.37	0.82	-	15.0	0.0
64	0.66	0.00	0.00	-	15.0	0.0

The table below illustrates the age based premium rates for City of Melbourne's salary continuance benefits.

Annual Premium Per $1000 of Annual Benefit		
Age	**Male Premium ($)**	**Female Premium ($)**
Up to 30	1.5	2.0
35	1.8	2.4
40	2.6	3.5
45	4.2	5.8
50	7.3	9.4
55	13.0	14.4
60	22.9	20.6
65	6.6	5.0

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 70% of those who resign will take the deferred benefit option.

Pension Option – Defined Benefit plan

It has been assumed that 50% of active members and 30% 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.   Deferred benefits are assumed to be accessed at age 60.

APPENDIX E - ASSET ALLOCATION

Asset Class	Actual Asset Allocation 31 December 2011 (%)	Strategic Asset Allocation 31 December 2011 (%)	2012 Strategic Asset Allocation (%)
Australian Equity	23.0	24.0	26.5
International Equity	17.9	21.0	21.0
Private Equity	12.6	8.0	8.0
Infrastructure	15.5	13.0	13.0
Absolute Return Strategies	1.8	2.0	2.0
Direct Property	8.7	9.0	9.0
Opportunistic Investments	5.9	5.0	5.0
Fixed Interest	11.8	15.0	10.0
Cash	2.8	3.0	5.5
Total	100.0	100.0	100.0
Allocation to Illiquid Assets	42.7%	35.0%	35.0%
Allocation to Growth Assets	73.5%	71.0%	73.5%

Vision Super classifies 73.5% of the assets as growth under the strategic asset allocation. The defensive assets are the fixed interest, cash and 40% of the Infrastructure assets and 65% of the direct property investments.

The actual asset allocations shown are for the Defined Benefit plan. The asset allocation of the remaining defined benefit assets were broadly similar.

APPENDIX F - VALUATION RESULTS

Defined Benefit Plan

The calculation of the Authority funding rate in respect of active members, deferred beneficiaries and current pensioners (including fixed term pensioners) in the Defined Benefit plan at 31 December 2011 based on the assumptions set out in Appendix D is as follows:

		($million)
Present Value of Active Member Liabilities		1,625.5
▪ Retirement	1,425.6	
▪ Death	42.2	
▪ Disablement	55.3	
▪ Resignation	102.4	
plus Deferred Beneficiary Liability		334.8
plus Present Value of Life Time Pensions		357.6
plus Present Value of fixed Term Pensions		2.2
less Family Offset and Surcharge Account balances		(7.4)
plus Present Value of Future Expenses		48.9
plus Allowance for tax on Contributions		15.9
Total Benefit Liability		**2,377.5**
Compared to:		
Assets		1,692.2
plus Value of ongoing member contributions (6%)		109.8
plus Value of ongoing Authority contributions (9.25%)		169.3
Total Assets		**1,971.2**
Shortfall of Total Assets over Total Benefit Liability		(406.3)

The Shortfall of Total Assets over Total Benefit Liability makes no allowance for contribution tax needed to fund the shortfall.

APPENDIX G - FINANCIAL POSITION OF THE TOTAL FUND

Individual financial positions for the defined benefit plans are detailed in Section 6 and Appendices I and J of this report. This appendix sets out the financial position of the total Fund.

The value of the accumulation liabilities has been provided by Vision Super. Members' accounts in the accumulation sections are unitized and credited with actual investment returns. The accumulation liabilities are expected to have no impact on the defined benefit plan funding.

Vested Benefits Index

The solvency position of the total Fund has been assessed by considering the vested benefits index for the total Fund.

Vested benefits are defined as the benefits which would be due and payable if all the members resigned at the investigation date. In relation to the Defined Benefit plan:.

- For active members, the Vested Benefits are thus 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.

This method is consistent with the new Professional Standard 400 (revised in August 2010) of the Actuaries Institute which covers actuarial investigations and requires Vested Benefits to be calculated taking into account the value of pension and deferred benefits. This professional standard also requires "best estimate" assumptions to be used, including realistic assumptions about the proportion of members who take a pension or deferred benefit.

The Vested Benefits Index for the Fund is calculated as follows:

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

The vested benefits for Vision Super Saver members are equal to the balances of these accounts. The VBI for the total Fund at 31 December 2011 is 89%. The VBI as at 31 December 2008 was 102%.

A funding plan has been recommended to restore the funding position, which is set out separately for each of the three defined benefit plans within the Fund.

Discounted Accrued Benefits Index

For the "Discounted Accrued Benefits Index" (DABI), the "Accrued Benefit" means the benefit payable at future exit accrued in respect of service to the investigation date. 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:

- Retirement, disablement, deferred resignation and retrenchment benefits – 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.

- 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.

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

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

The Discounted Accrued Benefits Index is calculated as follows:

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

The DABI for the total Fund at 31 December 2011 is 93%. The DABI as at 31 December 2008 was 100%.

Minimum Requisite Benefits

We have also considered the asset coverage of members' Minimum Requisite Benefits (i.e. Superannuation Guarantee Benefits). This is the Minimum Requisite Benefit Index (MRBI).

We understand that the MRBs for Defined Benefit plan have not been configured on the administration system, on the basis that the Defined Benefit plan's benefits equal or exceed the MRBs. Therefore, for the purposes of this valuation, the MRBs have been estimated. While the estimates are of the right order they are not precise.

Based on the legal advice from DLA Piper, we have estimated the MRB for deferred beneficiaries and pensioners on the following basis:

- For deferred beneficiaries, their MRBs are based on their resignation benefits (ie the immediate cash benefit which is the MRB defined in the Benefit Certificate for employee members under age 55); and.

- 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. Based on the data available, we have estimated the proportion of MRB benefits relative to the retirement pensions to be 65% for all current pensioners.

The MRBI for the total Fund at 31 December 2011 is 105%.

If the MRBI for the entire Fund falls to below 100% it 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 Funding measures

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.

Also, on retrenchment Defined Benefit plan members are entitled to an accrued retirement benefit. It is proposed in this report that an additional contribution be required from the relevant Authority in respect of each retrenchment from the Defined Benefit plan so that there is no financial strain on the Fund. As at 31 December 2011, the ratio of the market value of plan assets to retrenchment benefits is 88%.

Section 6 of this report discusses the potential reduction in the VBI of the Defined Benefit plan that would occur if the life-time pensioners were outsourced to a life insurance company or if the illiquid assets had to be sold immediately. This impact would flow through to the Fund VBI.

In Appendix E the asset allocation for the Defined Benefit plan is shown and there is currently a 43% allocation to illiquid assets. The funding indices have been calculated based on the valuation of these assets at market value from the 31 December 2011 unaudited 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 significantly lower funding ratios.

The Authorities have several years to make each of the three lump sum contributions requested by Vision Super (as at 30 June 1997, 30 June 2002 and 30 June 2011). 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. The total Fund contributions receivable as at 31 December 2011 was $11.4 million.

Probability of making Pension Payments

In order to satisfy the requirements of Modification Declaration No. 23 to certify that "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.

(1) 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.

(2) 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:

   (a) Under clause A.21.1(b), a participating employer in Division C 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.

   (b) 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.

(3) 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.

(4) 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:

 (c) 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.

 (d) If there were 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.

Legal advice has been obtained by the Fund from DLA Piper that confirms the Employers cannot avoid their contribution responsibilities.

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.

We believe that, given the nature of the Employers, 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.

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.

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.

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

In conclusion, this analysis allows us to provide the required certification under Regulation 9.31(1)(ba).