Summary of the Actuarial Investigation of UniSuper as at 30 June 2020

The latest actuarial investigation of UniSuper was conducted as at 30 June 2020, and the results presented in our "Report on the Actuarial Investigation as at 30 June 2020" dated 12 November 2020 (the '30 June 2020 Report') by Kate Maartensz, FIAA and Andrew West, FIAA. This attachment provides a summary of the 30 June 2020 Report and our opinions as to UniSuper's financial position.

The 30 June 2020 Report has been prepared in a manner consistent with the Professional Standards issued by the Institute of Actuaries of Australia and Prudential Standard SPS 160 issued by the Australian Prudential Regulation Authority (APRA).

Assets and Membership Data

UniSuper's audited financial statements stated that the fair value of assets as at 30 June 2020 was $83,222.3 million. The net market value of the assets at 30 June 2020 was $82,984.5 million (i.e. the fair value of $83,222.3 million less disposal costs of $237.7 million). The net market value was used in assessing UniSuper's financial position at 30 June 2020.

The net market value of assets as at 30 June 2020 in respect of the Defined Benefit Division (DBD) including indexed pensions was $26,554.7 million. To derive the assets in respect of the DBD, we have relied on the information provided by UniSuper on accumulation account balances (for Accumulation 1 members, Accumulation 2 members, the DBD members, Personal Accounts and Account Based Pensions) and reserves.

Membership data provided by UniSuper was used to determine the liabilities of DBD members and pensioners. We have also determined a liability amount for exited members who had been recorded and treated as DBD deferred members.

The following table summarises the membership and assets at 30 June 2020 (the date of the last investigation to which this summary relates) as well as 30 June 2019 (the date of the actuarial investigation to which the previous summary related):

	30 June 2020	30 June 2019
Number of Members		
▪ DBD active and deferred members	92,068	89,702
▪ DBD pending deferred members	852	1,160
▪ DBD pensioners	10,367	10,064
Assets		
UniSuper Assets at Net Market Value	$82,984.5m	$80,549.7m
Less Accumulation Account Balances[1]	$43,547.2m	$40,800.5m
Less Account Based Pension Balances	$12,435.4m	$11,483.5m
Less Reserves	$447.2m	$414.4m
DBD assets (including active, deferred, pending deferred and DBD pensions)	$26,554.7	$27,851.2m

[1] Accumulation account balances for Accumulation 1 members, Accumulation 2 members, the DBD members and Personal Accounts

Assumptions

In setting assumptions for future financial experience it is the assumed excess (or “gap”) of the investment return above salary inflation and price inflation that is most important. The financial assumptions adopted for the 30 June 2020 actuarial investigation are set out below. The assumed rates of investment return are unchanged from those adopted for the 30 June 2019 actuarial investigation, however the assumed salary and price inflation assumptions have changed.

	Best Estimate Assumptions (% p.a.)	Funding Assumptions (% p.a.)
Investment Return for active members and pensioners (except Commercial Rate Indexed Pensioners)		
▪ Net of tax	5.5	4.3
▪ Gross	6.1	4.8
Investment Return for Commercial Rate Indexed Pensioners	2.4	2.4
Salary inflation		
▪ Short term, three years to 30 June 2023	2.25	2.25
▪ Long term	2.75	2.75
Price inflation (CPI)		
▪ Short term, three years to 30 June 2023	0.5	0.5
▪ Long term	2.0	2.0

In this investigation we also reviewed the demographic assumptions, i.e. those relating to the rates of exit (e.g. resignations, retirements, deaths and disablements), pension elections and the profile of expected new members, based on the actual experience during the period since this analysis was last undertaken in the 30 June 2017 actuarial investigation. Allowance was also made for the possible COVID 19 impact on membership movements in the short term.

Based on the DBD’s recent experience and expectations for the future, some changes have been made to the demographic assumptions since the previous triennial actuarial investigation at 30 June 2017. These changes include reductions to assumed post age 65 retirement rates and the assumed rates of disablement, adjustments to the assumed resignation rates and profile of new members and an increase to the rate at which members entitled to a pension option are assumed to elect a pension.

No changes were made to pensioner mortality rates except for the standard adjustments made annually to allow for future mortality improvements, consistent with the approach adopted in previous years.

Insurance

The DBD self-insures the excess in value of Death and Disablement benefits above Resignation (or Retirement, if eligible) benefits. The Temporary Incapacity benefit is also self-insured.

The death and disablement claim experience over the three years to 30 June 2020 was reviewed as part of the demographic analysis and based on this the assumed rates of disablement were reduced, though still retain some margin to reflect the inherent volatility of claim experience and some uncertainty around future claim rates. The assumed death rates are unchanged.

An allowance has been made in the assessment of the liabilities for delays in processing of notified claims and claims incurred but not reported.

As the DBD continues to contain a large pool of geographically spread members, it is reasonable to conclude that self-insurance continues to be suitable. The DBD is large enough to bear the volatility risk (with appropriate contingency reserves) and it is likely to be more cost-effective over the longer term.

Accrued Benefits

Accrued benefits measure the amount of assets expected to be required to pay members' benefits arising in respect of membership before 30 June 2020 as they fall due. For all DBD members of UniSuper (including DBD pensioners), the accrued benefits were calculated using the "best estimate" assumptions contained in the report. They have not been subjected to a minimum of the vested benefits, which is consistent with the methodology used in the previous actuarial investigation.

Method of determining accrued benefits

In determining the value of accrued benefits, the benefits of DBD members need to be apportioned between past membership up to 30 June 2020 and future membership after that date. The method of apportioning benefits to past membership is as follows, effectively recognising the portion of future benefits arising due to membership to date:

1 Retirement benefits – the past membership benefit (based on accrued lump sum and pension multiples) at 30 June 2020, with allowance for future salary growth and increases in accrual rates to the assumed retirement date.

2 Death and disablement benefits – the total benefit value multiplied by membership to 30 June 2020 over the period of membership to the assumed date of death or disablement.

3 Resignation Benefit – the past membership benefit at 30 June 2020 with allowance for future salary growth and increases in the lump sum accrual rates up to the assumed resignation date.

Accrued Benefit Index

The ratio of net market value of DBD assets to accrued benefits is called the Accrued Benefits Index (ABI).

The following table shows the accrued benefits of UniSuper relating to the Defined Benefit Division including indexed pensioners as at 30 June 2020 and the ABI. In determining the ABI, the value of accumulation accounts has been excluded from both the assets and the accrued benefit liabilities.

	Best Estimate Assumptions	Funding Assumptions
Net Market Value of DBD Assets at 30 June 2020	$26,554.7m	$26,554.7m
Accrued Benefits for DBD members DBD Pension Liabilities Total DBD Accrued Benefit Liability	$15,599.2m $5,698.9m $21,298.1m	$17,010.1m $6,493.0m $23,503.0m
DBD Accrued Benefits Index (ABI)	**124.7%**	113.0%

As the ABI calculated using the "best estimate" assumptions was greater than 100%, the DBD's assets were expected to be sufficient to meet future payments in respect of benefits accrued at 30 June 2020.

When calculated using the more conservative "funding" assumptions, the ABI is also above 100%. Therefore, the probability of the DBD's assets being sufficient at 30 June 2020 was more than 70%.

Vested Benefits

The vested benefits of contributing DBD members are the total of the DBD benefits that would be payable if all members voluntarily left the service of their Participating Institutions on 30 June 2020.

The ratio of net market value of DBD assets to vested benefits is called the Vested Benefits Index (VBI).

The following table shows the vested benefits of UniSuper relating to the DBD (including indexed pensioners) as at 30 June 2020 and the resulting VBI. For the purpose of determining the VBI, the value of accumulation accounts has been excluded from both the assets and the vested benefits.

	Best Estimate Assumptions	Funding Assumptions
Net Market Value of DBD Assets at 30 June 2020	$26,554.7m	$26,554.7m
Vested Benefits for DBD members DBD Pension Liabilities Total DBD Vested Benefit Liability	$16,343.1m $5,698.9m $22,042.0m	$16,794.0m $6,493.0m $23,287.0m
DBD Vested Benefits Index (VBI)	120.5%	**114.0%**

As at 30 June 2020 there was a surplus of DBD assets over vested benefits on both the "best estimate" and "funding" assumptions. The VBI on the "funding" assumptions is usually reported to the UniSuper Board. UniSuper was not found to be in an Unsatisfactory Financial Position as at 30 June 2020, in terms of Superannuation Industry (Supervision) Regulation 9.04.

With the VBI at the levels reported, members' Minimum Requisite Benefits (required for compliance with Superannuation Guarantee legislation) continue to be fully covered by the assets with some margin.

Statement of Financial Condition

The employer and member contribution rates to fund the DBD benefits are specified in the UniSuper Trust Deed. The actuarial investigation considered the current contribution arrangements, including the arrangements introduced from 1 July 2006 whereby DBD members have flexibility in respect of their rate of contribution.

The investigation also recognised the changes to DBD benefits effective from 1 January 2015. While there is a positive funding impact from the changes, as they only applied from 1 January 2015 the funding impact as at 30 June 2020 is as yet slight. The favourable impact of these changes will gradually emerge over time as post 1 January 2015 benefits accrue. However the Clause 34 changes do immediately affect the assessment of the adequacy of future contributions to fund future benefit accruals.

In respect of the long-term financial condition of the DBD:

- The DBD's assets and future fixed contributions are expected to be more than sufficient on both the "best estimate" and "funding" assumptions to provide the future benefits of all existing members; and

- For new entrants, the expected average new entrant contribution rate is approximately 19.1% under the "best estimate" assumptions. Under the more conservative "funding" assumptions, the expected average new entrant contribution rate is 21.2%. Consequently, the member contribution rate of 7% plus fixed employer contribution rate of 14% that applies for members contributing at the standard rate of 7% (equalling an overall contribution rate of 21%) is expected to be slightly inadequate on the "funding" basis, but sufficient on the "best estimate" basis for new DBD members.

  Analysis also shows that the financial position of the DBD (measured on funding assumptions) is reasonably indifferent to whether all members continue to contribute or reduce their contribution rates.

Material Risks

The report on the actuarial investigation at 30 June 2020 sets out the key actuarial risks relating to the DBD. It also recognized that the DBD's funding is dependent upon future experience. Adverse experience could mean that the fixed contributions are not adequate to provide future benefits for new and existing members. It could also have an adverse effect on the financial position of the DBD, for example a VBI above 100% may fall below 100%, it may take longer than expected for a DBD VBI that is below 100% to return to 100%, or it may again become necessary for the Trustee to reduce benefits in accordance with Clause 34.

Adverse financial experience may relate to:

- Investment risks - The most significant risk facing the DBD is that investment returns will not be as high as expected – either because of poor investment performance over protracted periods or because of changes to the inherent nature of investment markets.

- Salary and price inflation risks - Salary increases or price inflation exceeding expectation will have a negative impact on funding.

- Self-insurance risks - Largely because of the geographic spread of the DBD membership, there is a low risk of a catastrophe causing a significant number of self-insured benefits to be paid because of a single event, which could have a material impact on funding. However, higher than expected death, disability (or terminal medical condition) and temporary disablement benefits could put a strain on funding. A margin in the assumed disablement rates has been retained to allow for potentially adverse experience.

- Pensioners longevity risks - There is a risk that continued increases in life expectancies could be larger than assumed. This will have a negative impact on funding.

- Selection risks - Eligible new employees have 24 months to elect between the DBD and Accumulation 2. This introduces a risk that only members who will be advantaged by being in the DBD (e.g. those who expect high salary increases) may remain members.

The experience of the DBD in relation to these risks is examined as part of the regular triennial actuarial investigations and assumptions about future experience are then modified where considered appropriate.

Other risks include:

- Re-balancing and crediting rate approximations within the Accumulation section can impact DBD assets adversely. This risk is managed.

- Material retrenchment programs or other large downsizing of the DBD membership, including closure of the DBD and transfer of DBD members to other arrangements, while the VBI is less than 100%. This is a risk because each benefit payment further erodes the VBI. A similarly adverse impact could also arise if a large number of members were to voluntarily resign or the DBD were to be closed and members transferred while the VBI is below 100%. This risk is currently mitigated by the fact the VBI is comfortably over 100%. Further, any decision to close the DBD and transfer members would be subject to actuarial oversight and be unlikely to occur at a time that was adverse to the overall funding of the DBD.

- The long term financial stability of the DBD is based on Clause 34 operating effectively at the end of the monitoring period if required. The exercise of Clause 34 relies in part on APRA approval, as well as appropriate and timely Trustee actions and decisions. While there is no reason to doubt the operation of Clause 34, to the extent that a course of action appropriate under Clause 34 is hindered or constrained, Clause 34 may not operate properly to maintain the DBD as financially viable over the longer term.

- Allowing members to voluntarily transfer from the DBD (other than on resignation) while the VBI is less than 100% would adversely affect the VBI, as each such transfer further erodes the funding. UniSuper is appropriately managing this risk.

Investment Experience since 30 June 2020

The investigation report notes that investment experience since 30 June 2020 to 30 September 2020 has been poorer than expected, and in isolation is expected to have had a slightly adverse impact on the DBD VBI. The ABI and coverage of minimum benefits would also be expected to have slightly reduced but remain comfortably above 100%.

Clause 34

Based on the results of this investigation, the Trustee is not required to take any action under Clause 34 at this time.

Other Matters

We recommend that the Trustee continues to regularly monitor the DBD's financial position as well as the funding triggers or other issues which may impact the expected adequacy of contributions.

The next triennial actuarial investigation is due no later than 30 June 2023. Annual investigations are also conducted at each 30 June with the next one due as at 30 June 2021.

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27 November 2020

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DO: KM | CR, ER, TR: AB

http://aptct.internal.towerswatson.com/clients/661913/BENAUSUniSuper20/Documents/04.01_Actl_Valn/3. Deliverables/Report to Members on Actuarial Investigation 30 June 2020.docx

COPY OF APPENDIX I OF 30 JUNE 2020 REPORT

Appendix I – Superannuation Industry (Supervision) Act 1993 Requirements Under Prudential Standard SPS 160

UniSuper Valuation at 30 June 2020

I.1 Compliance with Prudential Standard SPS 160 (SPS 160) relating to defined benefit matters is mandatory from 1 July 2013. UniSuper is currently not subject to certain of these aspects of SPS 160, reflecting that employer contributions are fixed in relation to DBD funding (i.e. the DBD is not underwritten by employers). Below we report on relevant sections of SPS 160.

I.2 This appendix provides the information which must be contained in the report of an initial or regular actuarial investigation, in accordance with paragraph 23 of SPS 160.

I.3 The market value of the assets as at the investigation date, 30 June 2020, was $82,984.5 million, including reserves of $447.2 million. This value was used for the value of assets for the purpose of the actuarial valuation. The assets attributable to DBD contributing members and life-time pensioners, excluding the DBD's Operational Risk Financial Requirement (ORFR) amount, is determined to be $26,554.7 million.

I.4 The projected likely future financial position of the DBD (with pension liabilities valued at each point on the "funding" assumptions) during the three years following the valuation date, using simulated investment returns during each year based on those underlying the best estimate assumptions, is as follows. Details for the projection are covered in Section 13 of the report.

Date	Vested Benefit Index
30 June 2020	114.0%
30 June 2021	117.6%
30 June 2022	120.0%
30 June 2023	122.5%

I.5 In my opinion, the value of the DBD assets of UniSuper at the investigation date is adequate to meet the liabilities in respect of vested and accrued benefits of DBD members of UniSuper. For this purpose liabilities have been valued using "best estimate" assumptions and accrued benefits are not subject to a minimum of members' vested benefits.

I.6 At 30 June 2020 the value of the liabilities of the DBD in respect of minimum requisite benefits of the members of the DBD is $17,409.6 million. The minimum requisite benefits for the entire UniSuper fund are estimated to be $73,392.2 million, however this is a conservative estimate as the full account balance for Division C members has been used whereas the MRB for these members is less than this amount. Similarly, the full pension entitlement is included as the MRB, whereas a lesser benefit may in fact apply.

Details on the minimum requisite benefits are covered in Section 10 of the report.

I.7 Given that the projected DBD VBI is above 100% in the three year period to 30 June 2023, I expect to be able to certify that UniSuper will be Technically Solvent (with an MRBI no less than 100%) in any Funding and Solvency Certificate required during the three year period to 1 July 2020.

I.8 In respect of the three-year period immediately following the investigation date, we recommend that participating institutions should contribute to the Defined Benefit Division (DBD) in accordance with the prescribed contribution rates set out in the UniSuper Trust Deed. Contributions in respect of Division A and Division B are:

a at a rate of 14.0% of salaries in respect of members who contribute 7.0%, 6.55%, 5.55%, 4.55%, 3.55% or 2.55% of salary;

b at a rate of 17.0% of salaries in respect of members who contribute 4.45%, 4.00%, 3.00%, 2.00%, 1.00% or 0.00% of salary; and

c at a rate of 7.0% of salaries in respect of members who contribute 3.5% of salary.

Contributions should be made to Division C and Division D in accordance with the Trust Deed.

I.9 UniSuper's financial position at 30 June 2020 was not unsatisfactory in terms of SIS Regulation 9.04.

I.10 Funding and Solvency Certificates for UniSuper covering the period from 1 July 2017 to 30 June 2020 required by the Superannuation Industry (Supervision) Act have been provided. In my opinion, the solvency of UniSuper is likely to be able to be certified in any Funding and Solvency Certificate required under the Superannuation Industry (Supervision) Regulations during the three-year period following the valuation date 30 June 2020.

I.11 In my opinion, at the investigation date, 30 June 2020, there is a high degree of probability that UniSuper will be able to pay pensions as required by the Trust Deed.

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12 November 2020

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