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1 April 2014

Dear Gary,

Impact of investment returns on WorkCover solvency position – December 2011 to December 2013

The Law and Justice Committee have asked:

Can the Independent Actuary provide an estimate of the Scheme's performance if there had been no legislation in 2012, using the historical external factors (Discount rates, yields, etc)?

The purpose of this letter is to provide a response to this question.

Original solvency projections at December 2011

At the 31 December 2011 outstanding claims liability valuation, the WorkCover scheme had a deficit of $4.083bn.

The December 2011 valuation report included various projections (referred to in this letter as the original projections) of the Scheme solvency position into future years. These indicated that without either significant premium increases or benefit reform the Scheme was likely to continue to have a material deficit for a number of years. The following graph summarises these original projections:

Figure 1 – Original solvency projections

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These projections assume:

- Premium rates remained unchanged
- Claims experience emerges as per the valuation assumptions. That is, consistent with the recent experience to December2011, without any allowance for any potential future deterioration or improvement.
- Investment return is as per the "long term average" based on WorkCover's asset mix
- Discount rates:
    - June 2011 base scenario – Discount rates remained at June 2011 levels for the duration of projection.
    - December 2011 base scenario - Discount rates remained at December 2011 levels for the duration of projection.
    - Discount rates remained at Dec 2011 level for 3 years before returning to June 2011 level for the remainder of the projection (Dec 2011 scenario 1).
    - Discount rates reduced further by 1% lower than observed at Dec 2011 for 3 years before returning to June 2011 levels for the remainder of projection (Dec 2011 scenario 2).

  Two of the funding projection scenarios produced at December 2011 did assume that discount rates would revert back towards longer term average levels by June 2015, but illustrated that even if this occurred the Scheme was likely to continue to have a material deficit.

As noted in the December 2011 valuation report the Scheme's funding position had deteriorated by $1,720m between June 2011 and December 2011, with the main drivers being:

- $1,083m due to reductions in the risk free discount rate used to calculate the present value of the outstanding claims liability. The risk free discount rate is derived from the observable yields on Commonwealth Government Securities which had reduced significantly over the six month period,
- $460m due to an increase in the assessed insurance liabilities, essentially due to the continued deterioration in claims management experience observed in the lead up to December 2011.

The December 2011 valuation report also noted that the between June 2008 and December 2011 the Scheme has moved from a surplus of $625 million (funding ratio of 104%) to the current reported deficit of $4,083 million (funding ratio of 78%). The relative contributions to the deterioration over that period were:

- Approximately 50% due to external influences impacting investment returns achieved and particularly the "risk free" discount rate used to discount the outstanding claims liability.
- The other 50% was due to deterioration in claims management experience since June 2008. The main payment types which had exhibited deteriorating claims experience during this period were:
    - A significant increase the number of Workplace Injury Damage claims
    - An increase in the number of "top up" payments for Permanent Impairment (Section 66) lump sums, which has also led to an increase in the utilisation of Pain and Suffering (Section 67) lump sums
    - An increase in Medical spend
    - An increase in the number of Weekly benefit claims remaining on benefits.

Revised solvency projections

Investment returns and discount rates

At 31 December 2011, WorkCover's Investment Division was estimating a long term average investment return of 6.58%pa would be earned on the fund's assets.

Since then, WorkCover's investment returns have been significantly stronger than expected. WorkCover's Investment Division has provided the following actual returns for the 2012 and 2013 calendar years for the WorkCover Investment Fund (WCIF).

Table 1 – Actual Investment earnings (WCIF)

Calendar year	Investment return (% p.a.)
2012	10.0%
2013	11.2%

Since the December 2011 valuation, risk free discount rates have also changed significantly. Table 2 shows that yields continued to fall over the 6 months to 30 June 2012, which would have led to a further deterioration in the Scheme's liabilities (all other things being equal). Subsequent to this, yields on Commonwealth Government Securities have increased, which would have reduced the value of the outstanding claims liabilities. We note the discount rates currently remain well below the typical levels observed prior to the GFC.

Table 2 – Yields curves to 30 June 2013

Half year	Dec-11	Jun-12	Jun-13
1	3.83%	3.13%	2.63%
2	3.11%	2.46%	2.45%
3	2.86%	2.13%	2.49%
4	2.95%	2.13%	2.73%
5	3.08%	2.29%	3.01%
6	3.21%	2.45%	3.27%
7	3.34%	2.60%	3.51%
8	3.47%	2.76%	3.73%
9	3.60%	2.90%	3.93%
10	3.72%	3.04%	4.11%
11	3.85%	3.18%	4.28%
12	3.97%	3.31%	4.42%
13	4.09%	3.44%	4.55%
14	4.22%	3.57%	4.65%
15	4.34%	3.69%	4.74%
16	4.46%	3.80%	4.80%
17	4.58%	3.91%	4.85%
18	4.70%	4.02%	4.90%
19	4.82%	4.12%	4.95%
20	4.92%	4.21%	4.99%
21	4.96%	4.29%	5.04%
22	4.96%	4.34%	5.08%
23	4.96%	4.37%	5.13%
24	4.96%	4.39%	5.17%
25	4.96%	4.39%	5.21%
26	4.96%	4.39%	5.25%
27	4.96%	4.39%	5.28%
28	4.96%	4.39%	5.32%
29	4.96%	4.39%	5.36%
30	4.96%	4.39%	5.39%
31+	4.96%	4.39%	5.41%

Solvency trajectory under actual investment returns and discount rates for the period December 2011 to December 2013

We have re-estimated the solvency trajectory of the Scheme, accounting for actual investment returns and discount rates for the the 2 years to 31 December 2013. In this scenario:

- Actual investment earnings for the 2012 and 2013 calendar years have been applied to assets held at 31 December 2011 to estimate the asset position at subsequent projection dates. After 2013, WorkCover's original 6.58% pa average longer term expected return has been maintained.
- Actual discount rates at projection dates to 30 June 2013 have been used. Subsequent to this, we have transitioned over the following 5 years to a longer term equilibrium yield curve (provided by Mercer in their role as WorkCover Investment Disvison's investment advisors). That is, we have assumed that discount rates will revert back to an higher equilibrium level over the medium term.
- Claims experience is expected to emerge as per the assumptions adopted at the 31 December 2011 valuation, without any allowance for any potential future deterioration or improvement. It is worth noting that claims experience up to December 2011 had been deteriorating. Further details can be found in our December 2011 valuation report.
- Premium rates are assumed to remain unchanged from the 1.68% target collection rate assumed in the original projections.

Figure 2 – Re-estimated solvency projection

Figure demonstrates that the solvency trajectory is significantly different after allowing for actual investment earnings over the 2 years to 31 December 2013.

The lower discount rates at 30 June 2012 initially produce a further deterioration in the Scheme's funding position.

However, the higher than expected investment earnings soon improve the Scheme's solvency position as excess returns are earned on the assets backing the liabilities (albeit on a lower starting asset base).

The revised solvency projections indicate that, other things being equal:

- At December 2013 a deficit of perhaps $2.0bn to $2.5bn may have been reported
- By June 2014 this deficit may have reduced to perhaps $2.0bn
- Between June 2014 and June 2018 the deficit may have reduced to $0.5bn. This assumes the mean reversion of current discount rates to longer term average historic levels over the next 5 years in conjunction with average longer term investment returns being achieved.
- The solvency position may have been approaching full funding by 2021.

If I can be of any further assistance in this matter please let me know.

Yours sincerely,

Michael Playford FIAA
Partner